Cadastral Entrepreneurs
Recognizing the Innovators of Sustainable Land Administration

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SUMMARY

The role of entrepreneurship in land administration remains relatively unexplored. Whilst the opportunity for the private sector is understood, with Statement 5 of Cadastre 2014 being a notable example, amongst other reports on the role of public-private partnerships (PPPs), the scale and impact of cadastral entrepreneurs is not always widely acknowledged. Cadastral literature tends to have a 'top-down' focus, closely examining the role and activities of the public sector. A 'bottom-up' viewpoint, driven by non-for-profits and civil society organizations, is also evident, tending to critique the activities of the former. However, in many jurisdictions, private sector actors increasingly complete large amounts of cadastral work – and behind these SMEs sit cadastral entrepreneurs, or *'cadastrepreneurs'*. Core activities including cadastral adjudication, surveying, demarcation and mapping may be entirely privatized – with the public sector concentrating on policy, law, monitoring, and enforcement. Recognizing the importance of cadastral entrepreneurs seems important in emerging market-based economies, particularly those seeking to establish underpinning and sustainable land administration systems – where scaling and sustaining initiatives remain challenging, even in the era of fit-for-purpose. If services are intended to be delivered via the market, including cadastral services, then enabling policies, laws, fiscal controls, and educational offerings, for cadastral entrepreneurs and SMEs to prosper within, require fostering in parallel. In the 30-50 countries maintaining complete cadastres, good evidence of these enabling environments exists. However, such environments must be implemented responsibly, avoiding the (re)creation of privatized monopolies and rent seeking behavior. In other contexts, development projects have arguably not been sustainable due to a focus on government, and the failure to inspire and enable cadastral entrepreneurs – towards the common good. This paper seeks to ignite debate on the opportunities, challenges, and limitations of cadastral entrepreneurship – and to set an agenda for how to better incorporate the benefits of cadastral entrepreneurship into sustainable land administration.

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1. INTRODUCTION

The role of entrepreneurship in land administration remains relatively unexplored. Whilst the opportunity for the private sector is understood, with Statement 5 of Cadastre 2014 being a notable example (Kaufman and Steudler, 1998), and debates on PPPs again on the agenda[1], the scale and impact of cadastral *entrepreneurs* is not always widely acknowledged.

Cadastral literature has tended to have more of a 'top-down' government focus, closely examining the role and activities of the public sector – the conventional custodian of the cadastre and related transactions (*c.f.* Dale and McLaughlin, 1999; Williamson *et al*, 2010). In more recent times more bottom-up perspective has emerged – driven by inputs from NGO and CSO sectors. In this vein, more recent land sector related developments, such as Voluntary Guidelines[2] (Seufert, 2013), the World Bank's Land Governance Assessment Framework (Deininger, 2011) applications, and the UN Sustainable Development Goals (SDGs)[3] – have largely been driven, developed and applied by these sectors (i.e. NGOs and CSOs), with less apparent input from entrepreneurs, if not the private sector.

However, in many jurisdictions – especially in the post-1980s 'new public management' era (*c.f.* Ferlie et al, 1996) – private sector actors increasingly complete large amounts of cadastral work; and behind these SMEs (and sometimes much larger organizations) sit cadastral entrepreneurs, or what might be termed '*cadasterpreneurs'*. Core activities including cadastral adjudication, surveying, demarcation and mapping may be entirely privatized – with the public sector concentrating on policy, law, monitoring, and enforcement: Cadastre 2014 identified the increasing trend during the mid-1990s[4].

Debates about the relative merits of privatization aside, recognizing the importance of cadastral entrepreneurs seems important – particularly in the context of emerging market-based economies, where the establishment of underpinning and sustainable land administration systems remains challenging: many systems remain embryonic, under development, or even states of decay (Zevernbergen *et al*, 2013; 2015). Recognizing that land administration systems are an important ingredient to support of market-based economies (Deininger, 2003), *cadastrepreneurs* are arguably an essential element for scaling and sustaining cadastral services

[1] https://www.menaherald.com/en/economy/real-estate-construction/dubai-land-department-partners-world-bank-organise-global
[2] http://www.fao.org/tenure/voluntary-guidelines/en/
[3] https://www.un.org/sustainabledevelopment/sustainable-development-goals/
[4] Although, it should be recognized that not all national mapping and cadastral agencies have moved heavily towards privatization

- after all the development donors have left and the project work completed. Consequently, creating enabling policies, laws, fiscal controls, and educational environments – for cadastral entrepreneurs and SMEs to prosper within – require fostering in parallel to grass-roots and government focused work. In the 30-50 countries maintaining complete cadastres, good evidence of these enabling environments exists: these contexts have been able inspire and regulate cadastral entrepreneurs to contribute to the common good.

In response to the above, this paper merely seeks to re-ignite discussion on the role of entrepreneurship in the delivery of sustainable land administration systems. Our position is that the contemporary nature of entrepreneurship needs to be re-explored by surveying profession, in order to ensure the benefits of entrepreneurial activities are experienced within the profession, and society more broadly – particularly in the contexts of sustaining and scaling land administration approaches – and the achievement of the SDGs. First, the drivers to 'scale' and 'sustain' fit-for-purpose land administration approaches are explained. Second, we argue achievement of scale and sustainability has been difficult due to the inherent mindsets and approaches used in land administration development projects. Third, the opportunity for entrepreneurship and entrepreneurial thinking is offered, as a means of enhancing scalability and sustainability of land administration development programs. In this discussion we also outline potential concerns and challenges, warning that greater entrepreneurialism is not without drawbacks. Finally, we plot an agenda for where further work could be undertaken, in order to responsibly infuse entrepreneurial activities into the land administration agenda.

2. THE TWIN PROBLEMS OF 'SCALING' AND 'SUSTAINING'

The oft repeated global figure that 70-75% of land tenure rights remain unrecorded or unrecognized by governments (Zevenbergen *et al*, 2013) puts starkly the challenge confronting the surveying profession in the early 21st century. The lack of accurate and available information impedes citizens and government alike in terms enhancing social, economic, and environmental development. Without secure rights, and information about those rights – access to credit, easier land dealings, land dispute resolution, land value capture, and land management activities are all made more difficult (Henssen, 2010). The achievement of large numbers of SDG indicators hinge on land issues: identifying land rights, recognizing land users, and putting in place sustainable land practices – are considered to underpin no less that 70% of the indicators[5]: without establishing or enhancing supportive land administration systems, the SDGs cannot be achieved.

The surveying community has already been active for well over a decade on initiatives to fast track land administration system development, in responsible ways: The Global Land Tool Network (GLTN)[6] develops a suite of tools to support cheaper and more flexible land recordation. Perhaps mos prominently, 'Fit For Purpose Land Administration' (FFP) (Enemark

[5] https://www.gim-international.com/content/article/supporting-the-profession-with-expertise-proposals-solutions-and-platforms
[6] https://gltn.net

et ak, 2014), as a both a philosophy and toolkit, has emerged as a key pillar. In this regard, exemplary cases such as those found in Rwanda (*c.f.* Zevenbergen et al, 2015), Ethiopia, amongst several others, provide useful lessons and inspiration.

However, in many cases, FFP initiatives – like other donor initiatives – are often at the level of pilot or demonstrator – involving a necessarily limited number of stakeholders, finance, and strict timelines. Even if these pilots succeed, scaling the initiatives to regional or country level represents a major challenge: the complexity of policy, legal, capacity, and technical issues grows exponentially – as do the timelines and finances required. In sum, it seems that whilst the surveying community already has already developed the necessary technical and administrative tools (e.g. FFP), to rapidly increase delivery of land documentation and formalized records, the key challenge is to enable 'scaling' and 'sustaining' of these innovative approaches.

3. MOVING BEYOND 'TOP-DOWN' AND 'BOTTOM-UP'

Despite GLTN and FFP being relatively new land sector initiatives, the drive to map and record land rights goes back decades – being linked to dozens of development cooperation initiatives driven by World Bank, Asian Development Bank, and other prominent donors. Moreover, the idea of low-cost and faster approaches to data capture and record dissemination finds its origins *at least* in the early 1990s (*c.f.* Fourie & Nino-Fluck, 2000). The question of why it has taken so long to complete the task of mapping and recording land interests – across so many disparate country contexts – has been asked and answered *ad nauseum*. Scholars and practitioners alike are able to point to global, national, and local impediments – including issues of political, legal economic, social, technological, and environmental natures (i.e. disaster, climate) – that shroud or undermine efforts (*c.f.* Bogaerts and Zevenbergen, 2001 (amongst many others)).

However, in our view, there is an area that may merit further consideration. It can be described as the 'Top Down' versus 'Bottom Up' approach to land sector interventions and projects (*c.f.* Bennett et al, 2017). 'Top-Down' refers to those projects instigated as collaborations between large-scale donors (*i.e.* global and national) and recipient country governments. These necessarily often focus on building relationships, establishing initiatives, and building capacity within governmental ranks. Where private sector is involved, it is more prominently those private sector actors from the donor country. 'Bottom-Up' refers to those initiatives driven by NGO networks or CSOs, and tend to work at the grass-roots level with specific communities and problem cases. Whilst collaboration is sometimes evidenced, as witnessed through GLTN since the mid 2000s, and LANDac[7] in the Netherlands; the two approaches often operate independently in the field, although are acutely aware of the activities of each other. In terms of the global land sector 'community' or 'dialogue' – the actors sitting in each camp are active players when it comes to lobbying for global initiatives and developments within the sector (*e.g.* see SDGs development process, and/or UN-GGIM framework development[8]).

[7] http://www.landgovernance.org
[8] http://ggim.un.org/UN-EG-LAM/

Private sector entrepreneurs are arguably less visible – sitting somewhere between the 'Top-Down' and the 'Bottom-up'. For both cases, the private sector actors from the recipient country, whilst potentially involved, often play more of a subcontractor role, being less involved in the design and development of projects – and perhaps playing some limited role in delivery and implementation. These actors – start-ups and entrepreneurs – seem to be given less attention and, perhaps by their very nature, are expected to get things going independently. There are many reasons for this, not the least being that in many contexts it remains the role of government to exclusively survey and map lands rights. However, where market-based economies are the modus operandi within a jurisdiction, it necessarily becomes an onus for government to pass on work to the private sector – where it can responsibly do so, with regards to good governance: indeed, in the era of new public management, it is the role of government to set policies and legal frameworks, whilst private sector actors tend to complete the work (Ferlie et al, 1996). That being said, in many contexts, the developed private sector (and associated middle-class), may not yet have the size, capacity, and scale to ensure high enough levels of competition, essential attributes for ensuring a healthy market-based system. Undeniably, in numerous contexts, it is argued that it is the private sector surveyors that actually scuttle innovation, progress, and competition in the land surveying sector – as they concentrate on maintaining high barriers to entry and rent seeking (*c.f.* McLaren, 2011).

All the above being said, both 'Top-Down' and 'Bottom-Up' approaches could potentially benefit from more comprehensively incorporating entrepreneurial mindsets and entrepreneurs into initiatives and projects – with a view to tackling the 'scaling' and 'sustaining' challenges of land administration. In this vein, perhaps adding 'the middle way' or 'from the centre' could be useful addition to the discourse.

4. THE ENTREPRENEURIAL OPPORTUNITY

Over the previous decades, as referenced above, much work has gone into developing fair and responsible land policies, working towards legal recognition of all people and land rights, and developing technical tools to create and enforce those rights. This has been occurring at global, national, and local levels. Much can be said to have been achieved. However, a certain bottleneck remains: realizing and applying those land policies, laws, and technical tools in a sustainable fashion, and at scale. On this, we argue entrepreneurs – and the related private sector – should be framed as an opportunity, not a hindrance. We also argue that several global forces suggest private sector entrepreneurs will play an increasing role in developing contexts when it comes to land tenure recordation: a disruption to the status quo may be on the cards.[9]

First, population changes and **demographics** are key[10]: many countries with poor functioning land administration systems are demographically young, with large percentages of the

[9] This is despite private sector actors previously being argued as an inhibitor to faster and cheaper land rights recordation in many developing contexts.
[10] https://www.unfpa.org/swop-2018

population being under 30, or even 20. These youth are increasingly well educated and technically savvy, with mobile device proliferation and internet access at relatively high levels. Brought up in market-based economies, these actors have high levels of business and financial acumen (*c.f.* Afutu-Kotey et al, 2017), are digitally connected to the global community, and represent a large grouping of native entrepreneurs – ready to disrupt underperforming sectors.

Second, the **changing nature of work**[11] – as influenced by technology – represent another opportunity. A look across other sectors, including IT, finance (i.e. mobile money), professional services, and the creative industries, shows that workers are increasingly mobile and independent. More actors also take part in the so-called gig-economy and are self-employed. The trend coincides and enforces another trend: that of outsourcing, offshoring and downsizing being undertaken in both government and established large-scale enterprises. These trends are being replicated in developed and developing contexts alike – and the land administration community, albeit historically underpinned by national or local governments, would be complacent to consider itself immune. Already small-scale initiatives like Brickx.com[12] and various Blockchain initiatives, appear to begin the 'PropTech' (c.f. Bennett *et al*, 2019) trend in the land sector.

Third, **FFP approaches** are gaining in attractiveness. These call for flexibility when it comes to tool selection with regards to social and spatial data capture. The range of tools now available to identify positions and record boundaries has grown substantially over the last three decades. Moreover, the cost of the tools, and the training needed to use them (in terms of timing), has reduced considerably in the same period (Bennett *et al*, 2012).

Fourth, looking beyond the global forces above, and **looking historically**, examination of a high economically performing OCED countries, where by no coincidence land administration systems are complete and up-to-date, it is difficult to argue that private surveyors have not played a central role in the completion, update, and upgrade of cadastral systems over long periods (Dalrymple *et al*, 2003). This is particularly evident in former colonies in Australia, New Zealand, and Canada. The cadastral entrepreneurs worked collectively (via a licensed profession) with (and sometimes against) the governments of the day – to ensure the cadastral fabric was constructed and maintained with integrity, and at an appropriate cost. It would not have been possible to map these jurisdictions without utilization of the private sector: the size and scope of government would simply not have allowed for it. The foundational work completed by the early surveyors enables land markets in these countries to function into the modern era.

In summary, the converging forces of – youthful and business savvy demographics; the changing nature of work; low-cost digital and spatial technologies – all coupled with FFP, suggest an opportunity to support the scaling and sustainable – through entrepreneurialism – the challenge of recording the 70% of unrecognized land rights globally. Tempering these statements, it is worth recognizing that not all contexts that might benefit from

[11] https://www.weforum.org/reports/the-future-of-jobs-report-2018
[12] https://www.brickx.com

entrepreneurialism might be equipped for it. Moreover, for those that potentially are, careful consideration of supportive and responsible policies and laws is needed: yesterday's entrepreneurial disruptors can be tomorrow's rent seekers and creators of sectoral inertia.

5. A WAY FORWARD

To move the discussion forward, beyond awareness raising of the abovementioned challenges and opportunity for entrepreneurialism in the land sector, we propose several initiatives that invite undertaking by the surveying profession:

- First, develop better understandings of the linkages between the domains of land administration and entrepreneurship, with a view to **better acknowledge** the impact and importance of '*cadastrepreneurs*' – historically, in contemporary times, and for future scenarios;

- Second, support the above efforts by creating a **case repository** of qualitative (case studies) and quantitative data, with a view to identifying lessons (positive and negative; do's and don'ts) with regards to entrepreneurship in the land sector;

- Third, get better acquainted with modern entrepreneurialism theories, concepts and tools[13], including benefits and drawbacks, with a view to considering its **incorporation into training** and capacity building programs – and land administration projects more generally;

- Fourth, establish or **create professional links** with entrepreneurial networks and those from the land sector, with a view to creating shared learnings, communication channels, and co-developed toolkits; and

- Fifth, explore the concept of a 'middle way' or '**from the centre**' for the land sector, as opposed to 'top-down' vs. 'bottom-up', inspired by a role for entrepreneurialism. In this vein, also consider potential scenarios for governance arrangements, business models, social requirements, and technological necessities.

6. SUMMARY & LOOKING AHEAD

In this brief paper, we argued that the role of entrepreneurship in land administration is perhaps neglected, at least in the academic literature: whilst the opportunity for the private sector is understood, the scale and impact of cadastral entrepreneurs have had, *and could have*, could have more attention paid to it. We argued that the two main challenges facing contemporary land administration are delivering FFP (or equivalent approaches) at scale – and in a way that

[13] The study area of 'entrepreneurship' has developed considerably over previous decades – new theory, approaches, and tools – are worth understanding, exploring, and potentially embedding in surveyors training

sees them sustained for decades, if not more. We suggested that the almost dichotomous 'top-down' and 'bottom-up' structure of the land sector means local entrepreneurs within developing countries are oft left-out of design and development discussions, when it comes to establishing a reliable and sustainable land administration sector. Meanwhile, it was suggested that technically savvy, business aware, youthful demographics – coupled with the emergency of FFP, low cost spatial data tools, and the gig economy – provide the opportunity for a new generation of *cadastrepreneurs*. In this vein, we suggested recognizing the importance of cadastral entrepreneurs seems important in emerging market-based economies, particularly those seeking to establish underpinning and sustainable land administration systems. Moreover, we showed the approach is hardly new, with the private sector in many jurisdictions increasingly complete large amounts of cadastral work. Overall, we hope to see increased debate, if not appreciation, of the importance of incorporating entrepreneurial mindsets and skills across the broader land administration and cadastral surveying sectors.

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BIOGRAPHICAL NOTES

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