

WINIR 2016 Symposium on Property Rights,

Property rights and development in extra-legal low-income settlements: Evidence from informal settlements in Zambia

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Abstract

Recent debates on "possession", "economic rights" and "legal rights" exemplify the illusive nature of property rights. Focusing on outcomes from property rights, this paper examines three interrelated questions. Firstly, what is the effect of property rights on development in extra-legal low income settlements? Secondly, what are the underlying mechanisms and processes by which these physical developments are produced? Thirdly, what is the relationship between formal and informal institutions and organisations in the development of extra-legal low income settlements? Viewed from an institutional perspective, this study examines development of two extra-legal low income settlements, one with semi-legal and the other with legalised property rights in Kitwe, the second largest city in Zambia. The aim is to demonstrate how possession and economic and legal rights, conflated into "property rights", have contributed to development in extra-legal settlements. Empirical data was collected using household surveys, focus group discussions, semi-structured interviews and observations. The study finds that the quality of physical development has been improving with strengthening property rights, despite their illegal genesis. Furthermore, the study finds that different strengths of property rights are associated with different mechanisms and processes in the development of these settlements. Finally, the study finds that where property rights are extra or semi-legal, successful development requires that there be facilitative interaction between formal institutions of the State at one hand, and informal institutions and organisations at the other.

1. Introduction

Hodgson (2015a) argues that property rights economics devalue legal rights. However others such as Allen (2015) and Barzel (2015) disagree with this assertion, thus igniting debate on "possession", "property rights", "economic rights" and "legal rights" (Hodgson, 2015a, 2015b; Allen, 2015; Barzel, 2015; Cole, 2015). In this debate. Benito Arrunada seems to support Hodgson's (2015a) position because he also asserts that economic analyses of property rights has disregarded the key advantages of legal property rights (Arrunada, 2012). Arrunada (2014, 7) though links "possession as evidence for titling", hinting that there is another angle to this debate; that is, there is a "continuum" from possession to titling. Thus the question within the context of this debate is, at what point do "property rights" actually emerge? Which rights are actually "property rights"?

Using evidence from two settlements on a trajectory towards legalisation, this paper argues that discrete points are still recognisable within this continuum; that is, possession and economic and legal rights. Thus although possession is the entry point in this continuum, this study contends that it still underpins other stages, because one cannot exercise economic or legal rights without "possession" or "control" (Arrunada, 2014). This paper then argues that "economic rights" go beyond "possession" but are different from "legal rights". Hence this paper contends that physical development in extra-legal settlements do not necessarily need legal rights to commence, however the quality of physical development or emergence of a property market at any point in time will be influenced by the amount of private rights captured at that point.

Zambia has a long history with extra-legal settlements and squatter upgrading projects (Seymour, 1975). The enactment of the Housing (Statutory and Improvement Areas) Act of 1974 was to try and regularise the high number of “African” settlements that had sprang up around the main urban centres before independence due to the segregation policy of the colonial government (Ogura, 1991). Independence further allowed people to travel freely into urban areas, compounding the already apparent problem of housing shortage. Extra-legal settlements have thus continued to emerge even after independence. The government’s attitude towards informal settlements was that they were a disturbance and a source of all sorts of illegalities. Seymour (1975) for instance reports that the first Zambian government had a similar attitude towards squatters just like the colonial regime they had replaced, as they also condemned these extra legal settlements as illegal and unauthorised. The current government seems to have taken a similar stance of total intolerance to informality on land with the recent reported² demolition exercises undertaken in Kitwe (Mindolo North) and Mufulira (Kalukanya) on the Copperbelt Province (Times of Zambia, 2014).

This study is based on low income settlements in the City of Kitwe, one of the cities in the Copperbelt Province of Zambia. The *2010 Census of Population and Housing* shows that Kitwe has had an annual population growth rate of 3.3% over the period 2000 to 2010, increasing its population from 376,124 in 2000 to 522,092 in 2010 (CSO, 2011). However unofficial statistics indicate that the population may be as high as 700,000 while transient

² Demolitions of about 300 houses were undertaken in Mindolo North, Kitwe in June 2014 and another 150 houses in Mufulira’s Kalukanya Township in August 2014.

population could even increase it to as high as 1.2 million during daytime (UN-HABITAT, 2009). This increase in Kitwe's urban population is manifested in serious accommodation problems and an increase in extra legal settlements. Kitwe has 28 unplanned settlements, one is legalised (Ipusukilo), seven are regularised and approved for upgrading while the rest are classified by city authorities as illegal (KCC, 2005, 2012; UN-HABITAT, 2009).

The rest of the paper is organised as follows: Section 2 examines the literature that links extra legal property rights to physical development outcomes. Section 3 outlines the methodological approach for this study while Section 4 presents evidence from two extra legal settlements in Kitwe, to demonstrate how possession, economic and legal rights, conflated into "property rights", have contributed to development in extra-legal settlements. Section 5 is the conclusion and points to areas of policy consideration.

2. Literature review: extra-legal property rights and urban development

This study finds that very few recent empirical works explain physical development in extra-legal settlements from a property rights perspective. Part of the reason could be related to the debate alluded to at the opening of this paper; that is, on the question whether what developers have in these extra legal settlements can rightly be called "property rights" in the real sense which would warrant an economic analysis approach. The study for instance notes that much of the literature on property rights is focused on areas other than physical developments in urban areas.

As an example, Cousins et al (2005) questions whether formalisation of property rights in South Africa can reduce poverty in the "second economy". Platteau (2000) investigates the allocation and enforcement of property rights by comparing formal and informal mechanisms in Sub Saharan Africa; however this comparison is on agricultural land. Aryeetey and Udry (2010) discusses the creation of property rights in Ghana while Chimhowu and Woodhouse (2006) compares customary and private property rights in Sub Saharan Africa with particular emphasis on the dynamics and trajectories of "vernacular" land market in rural areas. Kyessi and Tumpale (2013) look at formalising property rights in informal settlements in Dar es Salaam, Tanzania with particular focus on poverty reduction. This research also finds many studies generally on informal settlements and squatter upgrading in urban areas or on land rights in customary areas, which have little relevance to this research.

Having said that, the study notes studies based on informal settlements in South American cities of Peru, Brazil, Ecuador and others. There also seems to be a moderate number of studies on property rights and development in Asia such as Zhu (2002), Han and Wang (2003) for China and Kim (2004) for Vietnam. Much of this literature though either has a weak or no link to physical development.

Nonetheless, this research finds relevance in a selected number of studies. For instance, Wanjohi (2007) investigated the effects of property rights formalisation on property markets in informal settlements in Dar es Salaam, Tanzania. By comparing properties sold in two settlements, one formalised (Manzese) and the other informal (Mimara), the study found that title registration and issuance of residential licences had limited effect on the behaviour of actors in informal real estate markets. This study highlight on the need to look deeper than title registration to understand what motives developers at the lower end of the "continuum of property rights" to develop and make improvements to their properties amidst very high insecurities.

Kihato et al. (2013) also looked at the multiple land regimes in Maputo, Mozambique. Using survey data from peri-urban areas of Luis Cabral and Hulene B, the study examined how ordinary urban dwellers access, hold, transact and manage land. Their findings are that a land market that is technically outside of the legal system exists. The study further concludes that despite their illegal status, land practices are organised, sophisticated and regulated. It gives an example of the low incidence of land conflicts as evidence that these governance practices are relatively functional. The study points to self-governance and its effects on order through reduced disputes.

Using a case study of Zandspruit informal settlement in Johannesburg, South Africa, Royston and Narsoo (2006) investigated the operation of the land market at a local level. The research site had 1200 transit households, 3600 private sites on invaded land and 440 official site and service plots in the Mayibuye Project. With a planned formalisation, approximately 2000 were unlikely to benefit out of the 5240 households needing accommodation in Johannesburg. The study argues that due to insiders and outsiders or qualifiers and non-qualifiers, conditions of conflict and scarcity will likely result in the emergence of local land markets with its own rules and procedures. The study concludes by identifying the

importance of gathering and synthesising material on local land markets, on which it argues, little is known and understood. While the study points to the emergence of a land market based on local rules and regulations it does not link the market to the quality of any physical outcomes.

Investigating property rights and investments in slums in Peru, Field (2005), examined the effects of changes in tenure security on residential investments in urban squatter neighbourhoods. The study uses an approach called *difference-in-difference* where it compares household investments in housing before and after a titling programme. The study concludes that strengthening property rights in urban slums has a significant effect on residential investment.

Other studies such as Jones (2012) examined the question of why there is a permanency of squatters and informal settlements in Pacific Inland Cities (PICs). Jones (2012) argues that approximately 40-50% of the urban population in Pacific towns and cities, especially Melanesia, reside in squatter settlements. The study thus explores the drivers of squatter and informal settlements but does not go further into the details of its production in terms of the actors, how informal rights affect their decisions or indeed on the operation of the informal market in the production of land and buildings in these settlements.

Literature on China provides a comparable environment with most developing countries both in terms of ambiguity in property rights and economic orientation. For instance, Zhu (2002) examined how changes in formal property rights can provide incentives for developers to participate in physical development through the property market. Using Shanghai property market in China, Zhu found that since the 1980s, Shanghai's urban growth was primarily led by market forces formulated with social relations shaped by gradual institutional change. Zhu (2002: 41) then asserts that before 1980 "the ideologically-charged central planning buttressed by the centralised state ownership of urban land without mediation of a land market, did not put incentives in place to motivate agents". Institutional reforms, particularly on property rights on land, led to the creation of incentives for the private developers who could now claim profits from production based on their own decision making. Zhu (2002: 41) further argues that "property rights which were not contentious under the system of central control where the state played the dual-role of producer and principal, have entered the arena

of competition in the course of the gradualist reforms". Zhu's study therefore supports the assertion that formal property rights play a key role in the development of the formal urban built environment and economic growth.

China's situation is comparable to the Zambian case where, from 1975 to 1991, all economic production in the country was either directly in the State or quasi-state organisations called *parastatals*. Zhu (2002: 42) therefore concludes that "agents motivated by self interest are encroaching upon property rights in an open domain, and this has become the driving force behind the unprecedented large-scale urban physical development of many of China's coastal cities in the 1990s".

One further finding from Zhu's study is that in the absence of deliberate government reforms, institutions emerge which help reduce uncertainty and promote the interaction of participants in the physical development process. In China's case, this resulted in what Zhu (2002) calls ambiguous property rights and *danwei*-enterprises. *Danwei* or SOEs (State-Owned Enterprises) are comparable to parastatals in most developing countries such as Zambia. In China's system after decentralisation (separation of ownership and control), local authorities and SOEs have become more powerful and able to make their own decisions over assets independent of central control. This has created three main bodies which are able to grant user rights on land, that is central state, local governments and SOEs. This creates ambiguity in property rights as problems of principal-agent emerge. Zhu (2002: 45) for instance notes that "during the transition the extent to which property rights over state assets should be delegated from the state principal to local government and *danwei* agents has not been clearly established, and thus some economic rights are falling in open domain". This has led to ambiguity in the property rights structure in China.

This literature again emphasises the illusiveness of defining property rights at the theoretical level. However in practical terms, physical development outcomes in towns and cities hint on the fact that development agents are pinging their actions on some underlying institutional structure, though not clearly visible but nonetheless perceivable. Examples from the two extra legal settlements in Zambia highlight this point.

3. Research methodology and case settlement profiles

As stated earlier, property rights in this study were conceptualised to include possession and economic and legal rights. In this context, property rights were classified as semi-legal and legalised to capture the transitive state of these rights. *Semi-legal property rights* represent rights to land in *regularised*³ settlements. They are classified as semi-legal because while the allocating authority is legally appointed as an agent of the Commissioner of Lands, the allocation of this particular right is not supported by any statute. It may thus be perceived to include both "possession" and "economic rights" although not yet legal. Holders of this right are given 10-year land record cards which grants them the right to occupy, thus develop and use the property.

Legalised property rights, although now legal emerged from possession or just squatting on land just like economic rights. These rights though have now legal backing and are granted in settlements which have been declared improvement areas under the Housing (Statutory and Improvements area) Act of 1974. This entails the grant of a 30-year occupancy licence, which after cadastral surveying, can be upgraded to 99-year subleases. Holders of this licence thus have rights to develop, use, let, sell, bequeath and even mortgage (Hansungule *et al.*, 1998; Roth and Smith, 1995). However the key point for this study is that by the time these rights are actually legalised, physical development in these settlements would have already started, hence the main question for this research was what effect do property rights have on development in extra-legal low income settlements. As already stated, these rights have entry through possession, hence supporting the case that legal rights or more correctly titling is not always necessary for physical development. Borrowing Arrunada's (2013, 3) argument "informality may be appropriate for low-value assets" as is the case in these case study settlements.

³*Regularisation* is an administrative process initiated by the management of the local authority who carries out periodic assessments of illegal settlements with the objective of legalising them. During this stage property rights entitlement for residents are not clearly spelt out, hence classifying them as *semi-legal* in this study. *Legalisation* is a legal process provided for within the provisions of the Housing (Statutory and Improvement Areas) Act of 1974. On approval, the Minister issues a *declaration order*, a legal instrument declaring the settlement as an "improvement area" under the Housing Act. Property rights can thus be classified as *legalized* to capture the fact that they were formerly illegal hence differentiate them from those in formally constituted municipal townships.

Two low income settlements were selected for investigation in the city of Kitwe, that is Chipata (with semi legal rights) and Ipusukilo (with legalised rights). *Chipata informal settlement*, established in 1966, is situated right on the banks of the Kafue River on the eastern side of Kitwe and bound on the western side by Riverside Extension, a medium cost residential area. The settlement has an estimated population of 6,012 and 907 households on an area measuring 36 hectares giving it a population density of 167 people per hectare and a household density of 6.6 persons per household. Chipata was approved for regularisation in 2011, which is the first step towards legal recognition. Until this point, the settlement was illegal, meaning that most of the physical developments were built during its illegal state. For the purpose of this research, it forms the transitional mid-point from illegal to legal.

Ipusukilo improvement area, declared as such under Statutory Instrument (SI) No. 93 of 2011 within the Housing (Statutory and Improvement Areas) Act of 1974, initially started as an illegal settlement in 1970. The settlement can now be said to have legalised property rights. It is made up of the old unplanned informal settlement and the new planned settlement. The township is situated on the north-eastern side of Kitwe and bound by the Kafue River on the eastern side, other townships (specifically Riverside Phase IV, Kwacha and Bulangililo) on the western side and Musonda informal settlement on the southern side. It has 4,717 households, covers an area of 148 hectares and a population of 33,019 (KCC, 2014⁴) giving it a population density of 223 people per hectare and a household density of 7 persons per household. Ipusukilo has had several waves of public involvement both legal and physical.

Empirical data for this study was collected through household surveys (structured questionnaire administration), semi-structured in-depth interviews, focus group discussions and observations. Sampling of respondents for household surveys proceeded through three stages: (i) selection of settlements, (ii) determination of the sample size, and (iii) selection of respondents.

Different statistical tests were done in order to establish and test various relationships. SPSS was used to calculate both univariate and bivariate statistics. In order to establish the strength

⁴ Unpublished KCC internal documents from Department of Housing and Social Services.

and direction of association of various variables identified, the study also used chi-square tests particularly for variables measured at nominal and ordinal levels. The study also used ANOVA analysis for variables measured at interval-scale level. The One-way ANOVA was specifically used to test the effect of property rights, as independent variables, on representative variables of physical development outcomes, as dependent variables.

4. Results and discussions

The first phase of data collection focused on household survey through questionnaire administration. The study interviewed a combined total of 552 respondents from the two settlements, 271 for Chipata and 281 for Ipusukilo. These were split between 57% owner occupiers and 43% renters in Chipata while Ipusukilo had 62% owner occupiers and 38% renters. The discussion which follow thus focuses on providing some evidence to the current debate on the nature of property rights, its effects in extra-legal development and its influence on mechanisms and processes. An extension to this debate is on the enforcement of these contracts. The study also provides evidence on how extra-legal property rights are supported in the absence of direct government involvement.

4.1. Property rights in the Zambian context

Firstly the study endeavoured to capture the perception of respondents on what they thought about their rights. As noted from the property rights debate, what constitutes property rights is still a matter of tense discussion. Results revealed that most respondents in both settlements felt that they had all the rights to use, develop, let, give away, however this varied within the settlements and between them as presented in Tables 1 and 2 below. Chi square results at 95% confidence level in Table 2 confirms that differences in rights to sell or let between settlements is statistically significant with p values of 0.0000. However the difference between rights to develop or right to use is not significant between settlements with p values of 0.606 and 0.345, respectively.

Table 1 Property rights

OWNER		PROPERTY RIGHTS		Total
		SEMI-LEGAL	LEGALISED	
Use it	Count	154	172	326
	% within PROPERTY RIGHTS	100.0%	99.4%	
Develop it	Count	149	169	318
	% within PROPERTY RIGHTS	96.8%	98.6%	
Let it out	Count	34	94	128
	% within PROPERTY RIGHTS	22.1%	54.3%	
Sell it	Count	21	74	95
	% within PROPERTY RIGHTS	13.6%	42.8%	
Give it away	Count	6	5	11
	% within PROPERTY RIGHTS	3.9%	2.9%	
Total	Count	364	514	878

Source: Household survey, 2014

Table 2 Chi-square results: Property rights and settlements

	Value	Df	Asymp.sig (2 sides)
Use it	.893	1	.345
Sell it	33.561	1	.000
Let it out	35.588	1	.000
Develop it	.266	1	.606
Give it away	.254	1	.615

Source: Household survey, 2014

Prima facie, the implication of the results on the right to develop is that there should be no difference in physical development between settlements since there is no difference in perceptions on these rights, and yet there are differences. It is thus important at this stage to delve further on what rights to develop mean in these settlements and to reiterate some points. On further examination of this right, the study found that despite the broad categorisation of these rights as semi-legal and legalised, documents to support these rights also varied. Most titling programmes, such as the one reported by Mlonda (2009) in Manzese informal settlement in Dar es Salaam, Tanzania argue that title deeds increase security of tenure and empower beneficiaries through access to loans from financing institutions. Thus the understanding is that documentation has an effect on security of property rights, which is supported in property rights theory (for instance Feder and Feeny [1991] discusses land tenure and property rights in detail). Furthermore, documents support both rights claimed on the land and also regulate developers' behaviour through the accompanying terms and conditions generally referred to as *covenants*. Thus the study investigated how many residents had any form of document and whether this had an effect on security of property

rights. Chipata (semi-legal rights) results show that about 60% had either land record cards or official letters from Kitwe City Council confirming their occupancy. Land record cards though are documents issued for administrative purposes only during the regularisation process by the local authority⁵ but have no legal backing, i.e. their issuance is not backed by any statute. However since the local authority is also an agent of the Commissioner of Lands, the cards can be said to protect the residents' occupancy.

Ipusukilo, as an improvement area with legalised rights, gives residents the rights to obtain occupancy licences, and after cadastral surveying, certificates of title. An occupancy licence is granted by the local authority and gives the holder the right to build, use, let or sell improvements on land in a “declared” improvement area. Results show that 53% of respondents have already obtained these licences. These results thus show difference in documentation on property rights between the two settlements, with Ipusukilo having stronger rights than Chipata. This has an effect on security of property rights and can also be said to influence developers' behaviour differently.

Table 3 Evidence of supporting documents

OWNER		PROPERTY RIGHTS		Total
		SEMI-LEGAL	LEGALISED	
None	Count	63	49	112
	% within PPTY RIGHTS	40.9%	28.3%	51.0%
Others (e.g. RDC sale agreements)	Count	0	0	0
	% within PPTY RIGHTS	0.0%	0.0%	2.2%
Land record cards (incl. KCC letters)	Count	91	30	121
	% within PPTY RIGHTS	59.1%	17.3%	26.4%
Occupancy licence	Count	0	91	91
	% within PPTY RIGHTS	0.0%	52.6%	19.8%
Council certificate of title	Count	0	3	3
	% within PPTY RIGHTS	0.0%	1.7%	0.7%
Total	Count	154	173	327
	% within PPTY RIGHTS	100.0%	100.0%	100.0%

Source: Household survey

How is this perception of settlers on property rights and documentation translated in terms of security of tenure? The chi square test results in Table 4 reveal that there was a relationship between security of property rights and documentation even in these extra-legal settlements, with Chipata results showing a *p* value of 0.195 at 95% confidence level and to a lesser extent in Ipusukilo (with *p* value of 0.43 at 95% confidence level). Results show that at least

⁵ Although interviews at the Kitwe City Council revealed that very few officials were aware of its exact nature.

40.9% had no single document in Chipata and 28.3% in Ipusukilo. In Chipata, 14.2% felt very insecure compared to only 4% in Ipusukilo. Ipusukilo having only been legalised in 2011, some residents are still holding land record cards or just confirmation letters from Kitwe City Council, which makes them feel less secure than those with occupancy licences. Thus comparatively, Ipusukilo has more official (legal) documents than Chipata which is also reflected in the level of security of property rights and also influences the behaviour of residents on physical development. These results thus confirm the literature (Feder and Feeny, 1991; Mlonda 2009) which argue that documentation enhances security of tenure, but it does appear that documentation is not the only thing that has an effect on security of property rights as residents are not entirely afraid to develop despite the absence of documents.

Table 4 Security of property rights and documentation

		PROPERTY RIGHTS		
		SEMI-LEGAL	LEGALISED	TOTAL
Pearson Chi-Square	Value	12.340	25.571	30.442
	<i>Df</i>	9	15	15
	Asymp. Sig. (2-sided)	.195	.043	.010
N of Valid Cases	Value	271	281	552

Source: Household survey, 2014

Comparing results on *de facto* with *de jure* property rights it was found that while about 41% of Chipata residents are illegal, since they have no single document, the majority of the respondents believed that they had most of the rights, although these are in varying degrees. Semi-legal property rights only allow holders of land record cards to develop and use the improvement, although most respondent felt they also had the other rights. For Ipusukilo, with legalised property rights, the law also allows for the mortgaging of improvements on land, but in practice financial institutions do not accept it nor did any respondents claim to have that right. While the implication of the difference in rights to sell or let is clear, the indifference in rights to develop means that there should be no difference in physical developments outcomes between settlements, and yet the outcomes are different.

Why the difference in physical development outcomes when income levels are the same and all residents claimed the right to develop? This study posits that the answer is to be found beyond the primary rights to the deeper constituent elements of these rights. It is often

residents' interpretation of these rights, in relation to the formal law, which has more effect on their behaviour. Thus between the extreme points of taking possession (squatting) and legal titles, residents hold various interpretations of their entitlement on the land. It is this interpretation which then became important in motivating economic behaviour resulting in specific development activities and outcomes. This interpretation is in relation to perceived security or insecurity of property rights, documentation, etc, including support mechanisms within the settlement and interaction between formal and informal institutions and organisations. For instance, in the eyes of the law residents in Chipata have no rights to exchange or transfer, meaning a market in undeveloped land should not exist, and yet most residents bought land and built houses themselves; meaning that at this point residents have captured a level of private use or alternatively some economic rights on land have emerged.

Theory on property rights argues that undefined or ill-defined or ambiguous property rights (see Zhu, 2002 in the case of China) contribute to increased uncertainties, thus discouraging development. Results in Table 5 confirm that there is a difference in the level of security between settlements with more residents in Ipusukilo (legalised property rights) feeling secure than those in Chipata (semi-legal). This difference is significant with chi square results showing a *p* value of 0.000. Results show that at least 91% of respondents in Ipusukilo feel either a bit secure or very secure which is higher than Chipata which recorded 83% for the two categories.

Table 5 Security of occupancy

OWNER		PROPERTY RIGHTS		Total
		SEMI-FORMAL	LEGALISED	
Secure	Count	37	61	98
	% within PPTY RIGHTS	24.0%	35.3%	30.0%
A bit secure	Count	91	96	187
	% within PPTY RIGHTS	59.1%	55.5%	57.2%
Insecure	Count	4	9	13
	% within PPTY RIGHTS	2.6%	5.2%	4.0%
Very insecure	Count	22	7	29
	% within PPTY RIGHTS	14.3%	4.0%	8.9%
Total	Count	154	173	327
	% within PPTY RIGHTS	100.0%	100.0%	100.0%

Source: Household survey, 2014

It can however be noted from these results that overall there are very few residents who feel totally insecure, otherwise development could not take place. These results can thus be linked

to the earlier point that the interpretation of rights by residents has more impact on their behaviour and physical development outcomes and that this interpretation is in relation to formal law.

This discussion highlights a number of important aspects of property rights considered relevant for physical development in extra legal low-income settlements of Kitwe. These include the nature of rights in terms of rights to develop, use, sell, let, bequeath or mortgage. The comparison showed that while almost all residents in the two settlements felt that they had the rights to develop and use, the rights to sell or let were not universal. Fewer residents in Chipata (semi-legal rights) than Ipusukilo (legalised rights), felt they could also sell their properties. This trend was also evident in other areas, for instance Chipata residents who had fewer documents, felt more insecure in their stay and felt more threatened with evictions than their counterparts in Ipusukilo. Evidently this did not prevent them from proceeding with development. This study asserts that these differences simply result in weaker property rights which will still yield physical developments weighed against these rights and incentives, hence the differential outcomes between settlements. It can thus be concluded that between the two settlements of Chipata and Ipusukilo (with provision for 99 year certificates of titles), possession is constant. However at a certain point tradable economic rights emerge which facilitate market exchange and intensified physical development. By the time 99 year legal titles are issued, the settlement is virtually developed, thus direct government involvement only comes in to improve the settlements.

4.2. Property rights and its effects

A further assertion for this study was that different strength of property rights support different mechanisms contributing to differential physical development outcomes. The study also recognises that the effects of property rights extend beyond physical outcomes to other economic outcomes which also support the physical development. The study thus isolated development outcomes to include house sizes, number of rooms, construction material, property prices, monthly rentals, and social order.

The One-way ANOVA is used to test the effects of property rights, as an independent variable, on house sizes and number of rooms as dependent variables. Results are shown in Tables 6 and 7 below.

Table 6 One-way ANOVA hypothesis testing: Physical development outcomes

		N	Mean	Std. Deviation	Std. Error	95% confidence interval for mean	
						Lower	Upper
House sizes	Chipata	271	61.45	34.42	2.09	57.33	65.57
	Ipusukilo	281	73.58	34.88	2.08	69.49	77.68
No of living rooms	Chipata	271	4.41	1.371	.08	4.24	4.57
	Ipusukilo	281	5.02	1.216	.07	4.88	5.16

Source: Household survey, 2014.

Table 7 One-way ANOVA Tests of significance on physical developments

		Sum of Squares	df	Mean Square	F	Sig.
House sizes	Between Groups	19543.19	1	19453.19	16.097	.000
No of living rooms	Between Groups	52.25	1	52.25	31.197	.000

Source: Household survey, Jan-Aug, 2014.

House sizes - The physical appearance of structures in low-income settlements is the focus of most research. Most of the literature simply argues that these settlements have inadequate living space (see for instance Adler, 1995; UN-HABITAT, 2006, 2008, 2012; Weeks *et al.*, 2007; Wekesa *et al.*, 2011). This study though observed differences in house sizes with Chipata having slightly smaller houses than Ipusukilo. The implication is that there is a relationship between property rights and houses sizes in that those with legalised rights have bigger houses than those with semi-legal. However the study found that despite this relationship, residents in Ipusukilo did not simply build big houses at the onset, rather these houses have been extended overtime or “grown”, a room at a time, as property rights strengthened through an incremental building process.

Number of rooms - Number of rooms was found to be a common measure both in terms of physical development and charging of monthly rentals. Although related to house size, this was also analysed separately in this research. The comparison showed that there was a difference in the average number of rooms with Chipata having a lower average than Ipusukilo, which supports the earlier findings on house sizes. Thus developers with legalised rights have more rooms than those with semi-legal rights, again pointing to an incremental building process based on a room at a time. This reinforces the point on houses “growing” with strengthening of property rights discussed above.

Building material – The quality of houses is another characteristic often emphasised in studies on these low-income settlements. The study found that residents select building material to use in relation to the perceived strength of their property rights, with Chipata building more with mud blocks than Ipusukilo (with legalised right) where properties are more of burnt or concrete block walls and better finishes such as plastering. The logic is that in an environment of high risks and uncertainties, a prudent developer will not risk building with expensive material which could be demolished anytime by the State, however with increased certainty developers are able to undertake such risk.

Property rights theory generally argues that stronger property rights will results in increased market transactions and higher property values. Thus complementary to physical development outcomes, the study isolated property prices and monthly rentals, as representative variables for market outcomes (see results in Tables 8 and 9 below)..

Table 8 One-way ANOVA hypothesis testing: Market outcomes

		N	Mean	Std. Deviation	Std. Error	95% confidence interval for mean	
						Lower	Upper
Offer/bid prices	Chipata	20	34980.00	16900.37	3779.03	27070.38	42889.61
	Ipusukilo	47	46011.70	13326.29	1943.83	42098.95	49924.44
Monthly rent	Chipata	114	138.64	63.33	5.93	126.88	150.39
	Ipusukilo	107	160.60	82.00	7.92	144.88	176.32

Source: Household survey, 2014.

Table 9 One-way ANOVA Tests of significance on market outcomes

		Sum of Squares	df	Mean Square	F	Sig.
Offer/bid price	Between Groups	2985973521.91	2	1492986760.95	4.994	.009
Monthly rent	Between Groups	37483.73	1	37483.73	6.433	.012

Source: Household survey, 2014.

Offer/bid prices - Price is an important indicator and outcome of a functioning real estate market. The theory in institutional economics argues that the more value attributes captured in property rights the higher the value of the property (see for instance Barzel, 1989). In the current economics of property rights debate, these would represent economic rights. This then means different strengths of property rights will results in different house prices, with stronger rights having higher prices than weaker rights. The study found that sellers and buyers were willing to pay/accept higher prices for properties in Ipusukilo than Chipata.

The study then explored further the question of what really constitutes price (or value) in these informal markets. Group discussions in Ipusukilo revealed that plots and houses nearer the Kafue River which are prone to environmental problems, such as perennial flooding, fetched less (around K7, 000) than those nearer the market (which is the origin of the settlement) and Bulangililo municipal township which would fetch up to K20, 000; meaning that market participants factor in the location and condition of the plot in their bid or sell prices – this exemplifies normal market behaviour. Results also showed that “stronger” houses (in terms of building material) also contribute to the value of the property, just like the size of the house and number of rooms.

Monthly rentals - Rent is the price for the use of space in the market. Thus monthly rentals are equally an outcome of a market process. Findings in this study showed that there are differences in average monthly rentals between the two, although the difference is narrow. However these results still reinforce the fact that prices whether for purchase purposes or renting purposes are higher in settlements with stronger property rights than those with weaker rights.

4.3. Property rights, mechanisms and processes

Evidence also revealed that informal real estate markets, local hierarchies and social networks are important mechanisms through which residents in low-income settlements of Kitwe acquire land for physical development. Findings showed that informal real estate markets are the prominent mechanisms in all settlements followed by local hierarchies. Emergence of these markets is often spontaneous. It begins with simple personal trading in land, often on illegally acquired land. However, evidence of sustained buying and selling of land and property in a settlement indicates the functioning of informal real estate markets.

These findings though showed that there is a difference in the operation of informal real estate markets in terms of market activities and information flow. For instance, results showed that there were more building activities in Chipata than Ipusukilo. The logic is that during the initial stages of development, when property rights are more informal and uncertain (equivalent to possession only), the focus is on building or “growing the village” as focus group discussions revealed. Market activities at this stage showed more buying of vacant land as the primary activity. However as rights on land strengthen, for instance due to

the acceptance by the State to regularise the settlement, secondary market activities such as selling and letting intensify.

Local hierarchies, constituted as offices of chairmen, elected councillors, etc. were another important mechanism through which land for development is acquired. Findings showed that chairmen and councillors are more important in informal settlements than in semi-legal and legalised ones. The role of local leaders in allocation of development land seems to reduce as property rights strengthen or become more formal. This reinforces the findings that the informal real estate market is the prominent organisational arrangement in low-income settlements that contributes to the production of the built environment in Kitwe. It is because of the market's pervasive nature to dominant which has lead neo-Marxists, such as Burgess (1978), Ramirez et al (1991) and others, to conclude that no mode of housing production can beat the capitalist development mode.

Acquisition of development land through kinship relations, though minimal overall, seemed to be more pronounced in Ipusukilo than Chipata. However from an institutional economics perspective, social network perform more functions beyond facilitating acquisition of development land. The research found that networks of friends, relatives and/or neighbours are helpful in a number of other ways within these settlements. For instance it was found that social networks were also important in providing property information on what is being sold, let or built, in authenticating agreements, provision of immediate protection and in dispute resolution.

While the incentive effect is the most central influence in this research, the study nonetheless recognises that as institutions, property rights together with organisational arrangements also indirectly contribute to spatial outcomes, reduction in uncertainty and attainment of social order within the settlements. This study isolated plot sizes and number of disputes as evaluative variables from hierarchical arrangements.

Plot sizes - One of the outcomes from local hierarchies, that is also essential for physical development is the use and size of plots. Settlements of the nature being studied in this research are by default unplanned, hence their spatial arrangements are often perceived as chaotic. In fact a number of studies argue against informal settlements in that they lack control in standards of both houses and plots. Thus this study examined plot sizes as an

outcome of the hierarchical arrangement to complement physical and market outcomes discussed earlier. The study found no significant difference in average plot sizes between settlements. However, this too has implications in that despite their spontaneity and independent emergences, the difference in plot averages were minimal. This indicates a common source of ideas at the time of acquiring and demarcating plots for themselves. Results showed that the average sizes of these plots (336m² for Chipata and 353m² for Ipusukilo) were not far off the stipulated standards in the planning guidelines for low cost plots in urban areas of around 288m².

Number of disputes - One indicator of order or disorder in a settlement is the number of disputes involving its residents, in this case disputes on land. The study found that there was very little evidence on disputes resulting from the fact that rights on land and organisational arrangements were informal. Nonetheless a number of respondents agreed that there were more disputes on boundaries and ownership on land during the initial occupation period, which had since subsided. This then confirms that every community has a way of organising itself that reduces conflicts in the interaction of its residents and results in social order; as also argued by Ellickson (1991), North et al. (2013) and others.

The study also found that the number and type of disputes change with changes in property rights. In the initial phase of settling on the land, disputes mainly involved boundaries but these reduce as property rights strengthen. However other types of disputes later emerge such as disputes on unpaid rental and disagreements on sales terms. Overall though, there seems to be no much difference between settlements in terms of disputes that respondents have been involved in. This then supports the notion of "order without law" as argued by Ellickson (1991) where residents rely more on "neighborliness" to solve disputes within the community than relying on the letter of the law or Benson (1988) who also asserts that order is evident even in so-called "primitive" societies as long as customs and social mores are widely accepted and obeyed.

As corollary to the discussion on number of disputes is *social order* within the settlements. Although quantitative data was thin on reduction of uncertainty and attainment of social order in these low-income settlements, discussions and observations on the ground provided a basis on which this study can comment. As stated earlier, insecurity/uncertainty was higher

amongst residents with semi-legal property rights in Chipata (particularly without documentation) than Ipusukilo with legalised property rights, respectively. A number of other factors are at play in order to reduce uncertainty and insecurity in these low-income settlements. Institutional economics points to rules as an important means in the reduction of uncertainty in the interaction of individuals within a society. Thus rules are seen as the lowest level in property rights analysis and thus important in facilitating interaction during the development process, particularly in building agreements.

4.4. Formal and informal institutions and their interactions

The study also observed that there is a lot of assimilation of formal rules into *de facto* rules which are only discernible through the actions of residents. For example, it was revealed during focus group discussions that selling of undeveloped land was not prominent in informal settlements during the period 1975 to 1991; this is the same period when statute law prohibited such sales on state land. However after the lifting of the ban in the early 1990s by the Movement for Multiparty Democracy (MMD) government and the resurgence of land sales on state land, selling of land in informal settlements also intensified. It is thus ironic that while these markets are illegal in law, they still to a limited extent respond to changes in formal law as was the case on the ban of selling undeveloped land. This again supports the assertion in this study of the constant “pinging” of informal institutions against formal one.

The involvement of State and local agencies was also found to contribute to security and certainty in extralegal low-income settlements of Kitwe. For instance, results showed that a considerable number of residents pointed to the local authority as both their biggest source of eviction threats and also as the immediate protection. In probing further, the study found that this may be due to the fact that officially the local authority issues threatening media notices of eviction and demolition while individual officers and political officials (both from ruling and opposition political parties) who interact with these residents unofficially assures them of their stay. The study also found that even in the worst case scenario, such as residents on private land, some respondents indicated that they did not feel threatened at all. The study observed that even during the data collection exercise, respondents keenly inquired on what data collectors knew about their stay in an area. It can thus be concluded that the interaction between civic and political authority and residents takes place at two levels, officially and

unofficially. Thus residents are able to gauge the level of threats by carefully observing the nuanced actions of both the local authority and its officials.

Government protection, which involves the Police, courts and local authority, is another important factor contributing to the reduction of insecurity in these settlements. This takes different forms such as through the state or political functionaries and actions at local level or direct government pronouncements. However the study found that government intentions on informal settlements are not always explicit. For instance observations during data collection in Kitwe revealed that government intervention can take the form of government tolerance, recognition, or approval. *Government tolerance* refers to the State's tolerating of informal settlements, partly due to the realisation that the state does not have immediate solutions to the problem of urban housing shortage which these settlements are helping to bridge. *Government recognition* refers to acknowledging that particular settlements exist, at which stage government starts planning their upgrading. This action by government also reduces the threat of eviction on residents as is currently the case with Chipata. In Kitwe only seven settlements are recognised as such, one is legalised while the other 20 are just being tolerated. Occasionally the Kitwe City Council moves in to demolish or threaten demolition. Upgrading programmes however do not always include improvement on security on property rights but focus on improving living conditions within the informal settlements. *Government approval*, as the third level, is the granting of official permission or formal recognition as a township, a part of the city. Ipusukilo Township is an example where government permission has been granted through legalising as an improvement area.

Order in institutional economics also refers to the way activities are organised (North, 2005). Because of its composite nature and relativity in application, it was difficult to find a single variable that measures order in these settlements – this research thus discussed the absence of disputes/conflicts on land as an example of orderly interaction. However the general perception of this study is that physical development would not take place in a chaotic environment, the fact that these low-income settlements exhibit some functional order indicate a way of organising within the settlements. Thus this research further linked the absence of uncertainty to the attainment of social orders within settlements.

The study thus concludes that reduction in insecurity/uncertainty on property rights is as a result of *de facto* rules which develop and are communicated amongst residents themselves with the aim of creating a peaceful living environment. Formal enforcement mechanisms, such as Police and courts, are also used by residents to ensure peace in these settlements which also contributes to attaining social order. The study then argues that a reduction in uncertainty and increase in security further contributes to physical development. Statistical tests for instance revealed that insecurity was highest amongst residents with no formal documents who then use building material mostly of mud blocks and house sizes were smallest. The implication is that residents are not oblivious to the ever present risk of eviction, thus they build with material that would result in minimal losses on eviction. Roofing material is mainly corrugated iron which could easily be removed, packed and carried to the next site. However this Hobbesian mentality is gradually minimised by the strengthening of property rights and reduction in insecurity/uncertainty.

Ipusukilo is often cited by the local authority as a classic example of how property rights and informal arrangements and social networks have collaborated with local hierarchies in the production of the urban built environment in Kitwe. Having started as an illegal settlement way back in the 1970s, Ipusukilo has experienced a number of administrative, legal and infrastructural interventions such that from 2011 the settlement was declared an “improvement area” under the Housing (Statutory and Improvement Areas) Act of 1974. This now makes the settlement a legal low-income housing area and entitles its residents to 30-year occupancy licences, and after land surveying, to 99-year certificates of title.

This study thus asserted that situations of extra-legal property rights require State mechanisms for physical development to take place. This necessitates that there be some interaction between formal and informal structures. Throughout this study, the emphasis has been that *de facto* property rights and rules are interpretations resulting from constant interaction between residents in low-income settlements and the formal law. It is this interpretation which influences economic behaviour that results in the production of the built environment.

5. Conclusion

This paper contributes to the debate on economics of property rights and argues that while in theory it is easy to differentiate between possession, economic rights and legal rights, in practice these are often conflated in some form of "property rights". This study was thus able to show that physical development in extra-legal settlements in most developing countries does not necessarily need legal rights to commence. However despite these developments and the emergence of the real estate market over time, these developments are often of poor quality due partly to high tenure insecurity. Legal title improves security of tenure and results in improved quality of developments and a more buoyant real estate market.

These findings have policy implications. For instance the study found that clarifying of property rights, even when rights permitted are minimal, will contribute to security of occupancy and result in improved housing. Furthermore, it found that retention of some of the informal arrangements will help internal administration of these informal settlements, which relieves the local authorities of everyday supervision of activities in these settlements. As a rider to internal administration, the study argued that all administrative structures come with costs. It is no wonder that even where the legalisation process is complete, like in Ipusukilo, the processing of the actual documents is still incomplete mainly due to funding limitations. However, self-organised communities often are self-financed. For instance, none of the current Block chairmen or secretaries in Ipusukilo draw any income, and yet they mobilise the community at that lower level and, although unrecognised officially, are used informally by local authority settlement officers operating in the area.

The major Acts dealing with informal settlements in Zambia are the Town and Country Planning Act and the Housing (Statutory and Improvement Areas) Act. The harmonisation of the two Acts would help support the "enabling" provision enshrined in the Housing Act. The study further noted that residents themselves can build houses which suit the current building standards. However in the absence of the interaction between the local authority and residents, these standards are created by the residents themselves by mimicking formal structures. Therefore facilitative interaction will relieve the local authority of constant supervision of these settlements, which they have so far failed to do in view of all the other urban problems. In addition the study also contributes to the understanding of the linkage between tenure rights and house types and investments.

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