THEORISING URBAN FORM IN DEVELOPING COUNTRIES: INFORMAL PROPERTY MARKETS AND THE PRODUCTION OF THE BUILT ENVIRONMENT

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Abstract

Using the paradox of the relative stability of urban form and illegality of property rights held by many individuals as an analytical entry point, this paper uses tools of new institutional economic theory to develop a conceptual framework linking informal property markets and the production of the built environment in developing countries. Conventional theory on urban location and structure is critically reviewed and shown to be inadequate or inappropriate for explaining urban form in these countries. In contrast, the conceptual framework developed in this paper is argued to be more theoretically sound, leading to a more appropriate policy disposition for more effective urban management.

Key words: Informal property markets, Informal property rights, Transaction costs, Urban built environment, Urban form.

1. The paradox of order amidst illegality – informal settlements and urban form

A casual observer of the urban landscape in the Global South might be intrigued by the relative stability of the built environment, given the illegality, or informality, with which the underlying rights to property are held. The empirical puzzle is framed by the paradox of stability of informal settlements, and of urban form more generally, despite two potential sources of threats to that stability, one internal and the other external. Firstly, given that the property rights are held informally or illegally, holders of these rights, in their transactions with each other, have no recourse to the enforcement capabilities of the State. The resulting uncertainty and insecurity should lead to market failure and chaos, but evidently does not. Secondly, the existence of these settlements is, by definition, patently illegal in terms of the formal law. These settlements exist in a permanent shadow of State disapproval, making for a precarious existence, at least in theory.

Given the foregoing, one might expect that the norm in informal settlements would be a good deal of instability. This due to the fact that agreements made by individuals are not legally enforceable, the State itself does not recognize the rights in property held by individuals (the settlement or houses could be demolished any time) and individuals may be prone to predatory behaviour by others. The contrary, however, tends to be the norm. Thus, rather than a veritable Hobbesian world of land disputes, dysfunctional markets and widespread State evictions, informal settlements for the most part exhibit relative stability. This stability is evidenced by the general social order manifest in these settlements, respect given by the market participants to informal property rights, the functioning of the informal

property market itself (where these rights are traded) and the actual production of the built environment, where market activities such as development, transfer, use and renting are undertaken.

It is precisely because of the relative stability of informal settlements that most urban growth in developing countries is accounted for by these settlements. Statistics by UN HABITAT in their *State of World Cities Reports* (2012, 2008 and 2006), for instance, show that informal parts of urban areas have been growing faster than the formal (UN HABITAT, 2008). In fact in many developing countries the formal part has stagnated (UN HABITAT, 2008).

Yet, and despite these facts, the relationship between informal property markets and the production of the urban built environment has remained under-theorised. This paper aims to close this lacuna in the literature. This paper develops a conceptual framework that links the informal property market (and other institutions of governance), informal property rights and transaction costs to the production of the urban built environment. The framework is based on the theoretical understanding that informal property markets and property rights, as institutions, structure the behaviour of informal settlers by constraining or enabling their actions. The informal institutional framework thus created reduces uncertainty in human actions and results in the creation, growth and continued stability of the urban built environment.

The rest of the paper is arranged as follows. Section 2 outlines conventional theories of urban form or location, followed by a critique of these theories in Section 3. As a scaffold to the conceptual framework, Section 4 presents key concepts primarily from institutional economic theory, but also from structure-agency theory and critical realism. Section 5 contextualises property markets in institutional terms. The conceptual framework linking informal property markets and urban form is developed in the penultimate section. The final section draws out the implications of this framework for research and urban policy.

2. Property markets and the production of the built environment - conventional theory

Two theoretical frameworks dominate the explanation of urban form, namely those by classicists (such as Johanne von Thunen, Ernest Burgess, Homer Hoyt, Chauncy Harris, Edward Ullman and Robert Haig) and another by neo-classicists (such as William Alonso, Richard Muth and Martin Beckmann) (see Alonso, 1964; Beckmann, 1972; Hoyt, 1964). The general theory on location and urban land economics has traditionally been used as the theoretical foundation for explaining urban form. Its origins can be traced to Johanne von Thunen's concentric zone model (von Thunen, 1826). Von Thunen studied the production structure of a one-point plain agricultural city and concluded that physical and spatial developments align themselves around the city in rings in accordance with the price and transport cost of

each particular product cultivated (Beckmann, 1972; Isard, 1949). Von Thunen's ideas provided the basis for the conventional understanding of the relationship between land use and land value in urban spatial structure.

The initial theories derived from this understanding were the models on location and land use, namely: (i) the concentric zone model by Burgess (1925) which posits that urban cities grow outwardly in concentric land use rings (ii) the costs of friction hypothesis, developed by Haig (1926) which emphasizes the relationship between site rents and transport costs for business locations (iii) the wedge or radial sector theory developed by Hoyt (1939) which focuses on location of housing within the city structure (iv) the radial or axial development theory which focused on incorporating physical features such as rivers and mountains or man-made features such as highways and railway line in the plain city model, and (v) the multi-nuclei theory which argued for sub-centres as growth points within the city (Harris and Ullman, 1945).

Models by William Alonso and Richard Muth (referred to as neoclassical models by Alonso [1964] and Hoyt [1964]) were a progression to try and overcome the shortcomings of the earlier models by Burgess, Hoyt, Haig and others (also collectively referred to as classical models). These approaches could also be broadly categorised in terms of *structural* (alternatively *rent*) theory and *historical* (alternatively *social ecology*) theory (Alonso, 1960, 1964; Dotzour et al, 1990; Walter, 1976). Historical approaches (or social ecologists) explain urban form by examining and describing growth patterns over time while structural approaches (or rent theorists) explain the same growth pattern as resulting from the workings of the (property) market. The *structural-historical* classification is based on Alonso's explanation of the suburbs in preference for more land (Alonso, 1964). Alonso argues that the "explanation of the more-land-but-less-accessibility phenomenon may be called structural to distinguish it from the Burgess-Hoyt historical explanation in that it represents the working out of tastes, costs, and income in the structure of the market" (Alonso, 1964: p. 230).

From Alonso's argument, structural explanations do not rely on the historical process per se although this process is undeniable and has been a strong influence reinforcing the structural forces. Put the other way, the rich move to the suburbs because of choice guided by their tastes, costs and incomes and expressed within the workings of the property market; therefore the importance of accessibility to the CBD reduces in the decision making of wealthy market participants as opposed to that theorised in historical theory. Although accessibility is desirable, as people become wealthier they buy less of it because they prefer to

substitute it for something else, which is more land. The operation of the property market, through the process of urban renewal or individual developers' actions of (re) developing, then becomes more prominent in the growth and shaping of the city.

The biggest difference between the Burgess-Hoyt and the Alonso-Muth models was the presence of urban expansion which worked to reverse the factors that were more influential in urban growth. Rather than agricultural land use having greater value, other uses became more valuable, resulting in a reverse relationship from that envisaged in Thunen's agricultural model. The argument was that the old historical theories were failing to explain urban growth and spatial structure because of urban expansion which was now prevalent in most cities; therefore a "new" structural theory was needed (Alonso, 1964).

Social ecological approaches, like the historical approaches, identify land use patterns over time, with no reference to the market (Dotzour et al., 1990; Walter, 1976). The same examples of Burgess, Haig, Hoyt and Harris and Ullman are given as falling under this approach. The *rent theorists* (Alonso, Muth, and Beckmann) on the other hand focus on analysing location decisions as determined by the distance to the major business centres. They focuses on the cost and benefit on the land. Dotzour et al (1990, p. 19) explains that "rent theorists offer an analytical land use model that is based on location decisions determined by the distance to a major activity center. The cost of interacting with that center influences the land use and thus the return to the land. Therefore land use is economically determined in the marketplace by the ability of competitive user groups to pay rent for the land". Once again the existence and operation of the market is acknowledged in relation to location decisions but not on the actual production of land and buildings which has always been taken as a given. This clearly indicates that the market has had a significant role to play in the current urban form of most cities, however theories from the time of Von Thunen have always focused on the relationship between the market and location/land use leaving out the production of the urban built environment.

3. Failure of conventional theory in explaining urban form

Conventional theory, summarised above, is either inadequate or inappropriate for the explanation of the production of the built environment, and of urban form, in developing countries. This stems from inappropriate fundamental assumptions underlying much of conventional theory, on one hand, and the characteristics of developing country environments on the other. With regard to the former, conventional theory, in keeping with its classical and neoclassical foundations, suffers from a number of weaknesses that renders it inadequate for explaining urban form.

The earlier models, specifically those before 1960s categorised as *historical-social ecological* approaches (e.g. Burgess-Hoyt models), suffered from the neglect of not perceiving the operation of the market in the location of sites within the cities. The emphasis of these models was on aging of house structures, sequential occupation of houses by income levels, and population growth with little or no mention of the operation of the market in the production of the urban form (Alonso, 1964). For instance, Haig's costs of friction hypothesis while emphasising the relationship between site rents and transport costs for business locations simply assumes the production of the built environment as a given. Haig (1926, p. 422) argues that the spatial structure attained by a city is the result of "the forces of competition" but does not detail these forces, nor the role property markets play in the production of urban form. This can equally be said for the wedge or radial sector theory developed by Hoyt (1939) which focused on location of housing, but not on its production; the radial or axial development theory which focused on simply incorporating physical features such as rivers and mountains or man-made features such as highways; or the multi-nuclei theory which argued for sub-centres as growth points within the city (Harris and Ullman, 1945) but not on how the built environment within these sub-centres is provided.

Conventional theory after the 1960s, such as Alonso-Muth models (*structural-rent theorists*), is that urban form is a product of competition between land uses and land users for the most accessible space, with accessibility defined in terms of profitability for firms and utility for households. It therefore extends the assumptions of the equilibrium theory such as utility maximisation by consumers, profit maximisation for firms and rational choice, in the selection of sites within the city. However in the real world, individuals do not always act rationally nor do firms always focus on profit maximisation, therefore outcomes in the real world are always different from the ones envisaged in the normative general equilibrium model. Further implicit in this fundamental neoclassical economics doctrine of equilibrium is that urban form represents equilibrium in spatial markets. While there is much to be said in its favour, the problem with the notion of equilibrium is that it directs attention to outcomes, or end-states, and not to the processes that create those outcomes. Because of this normative approach, the equilibrium model uses Pareto optimality as a measure of output efficiency as opposed to explaining actual economies.

The *structural-historical* theories of urban form thus have similar weaknesses. Despite their identification of site rents and transportation cost as important location decision factors, they do not look at how these decisions eventually lead to the physical development of the city. Thus while these theories have helped to highlight the importance of property markets in assigning land uses and growth of cities, it can be argued that they have generally neglected "the processes that are responsible for the provision of the built

environment" (van der Krabben and Lambooy, 1993: p. 1392), or simply assumed them in the spirit of neo-classical equilibrium theory.

The inadequacy of assumptions within *structural-historical* theories can also be analysed from the transaction cost perspective. The relationship between transport costs, distance to markets and rent are central to conventional theories of urban location. The general premise is that revenue potentially realisable on specific sites in urban areas must be split between site rents and transportation cost to markets, or amenities in the case of households. It is axiomatic that the quantum of site rent is a residual amount, represented by the difference between the revenue–generation capacity of sites and transport costs to markets which are, in the main, taken as the centre of the urban area; but could also refer to decentralised nodes. The differences in the ability of different sites, land uses and users to generate this residual is taken as the basis of competition for sites, with the site going to that use or user able to extract the highest residual.

The computation of residual rent requires information about three parameters, relating to both specific sites of interest *and* alternative competitive sites. These are revenue generation capacity, production and/or transformation costs, and transport costs to markets. It is for this reason that conventional location theory in turns assumes, or requires, that firms and households, in making their location decisions, be fully knowledgeable about the quantum of relative costs and benefits of alternative urban sites and be capable of getting into transactions in order to bring about their location preferences.

The assumption of full information and zero transaction costs is one of the central pillars of neoclassic economic theory and is implicit in conventional theory on urban location and structure. The failure by extant theory to account for the effects of information and transaction costs makes it unrealistic, weakening its applicability to the actual world of location decision-making. It is an obvious fact that, in selecting and acquiring specific sites, households and firms have to contend with transaction costs – namely search and information costs, bargaining and decision costs, and supervision and enforcement costs (Mooya and Cloete, 2007). Any theory that did not take these costs and their implications into account would have limited predictive and explanatory power.

In addition to the foregoing, conventional theory on urban location and structure suffers from the problem of relevance to developing countries. It can be argued that these theories, developed mostly in British and American contexts, require a set of conditions largely absent in the former. These conditions include clearly specified property rights that lend legality and legitimacy to market activity, and an effective state and other institutions capable of proper delineation, protection and enforcement of these rights. Under the conditions of strong private property rights and an effective state, competitive markets emerge to be the primary architect of the urban spatial structure. That is to say, urban structure is largely the equilibrium outcome of competition between land uses and land users, as tempered by the State by its exercise of planning and other control mechanisms.

The general context of developing countries is however patently different. For example, the character of the institutional environment, reflected in things like constitutions, property rights regimes, political power and patronage, social norms, corruption, market rules, etc is very different from the American and British context informing much of conventional theory. Developing countries tend to be characterised by the dominance of political power in the state, and dominance of the state in the economy. Institutions, such as formal property rights tend to be weak, ambiguous or arbitrary. Indeed, one of the defining features of the social and economic environment in developing countries is the preponderance of informal property rights, which ironically are mostly illegal in terms of the formal law of these countries. Relatedly there is a paradoxical contrast between the strong political coercive powers of the State and its weak enforcement capabilities in the sphere of economic transactions.

To summarise, developing countries tend to be characterised by the dominance of informal property rights in economic transactions, an elevated role for political power in social-economic relations and ineffective formal institutions of governance. Under these conditions it is not formal competitive markets which are the primary determinant of the character of urban land use. Rather, urban land use in developing countries is, in the main, explained by structural causes, especially institutional influences. To the extent that conventional theory ignores, downplays or fails to account for structural causes, it can only prove a partial or largely inappropriate explanation.

4. Causal explanation - elements of heterodox theory

The conceptual framework developed in section 6 draws primarily from the tenets of new institutional economics, infused with allied perspectives drawn from critical realism and structure-agency theory. In addition to a focus on *institutions* as a theoretic construct, new institutional economics is built around the theoretical pillars of *property rights* and *transaction cost*. As a precursor to their subsequent application in the development of the conceptual framework, it is necessary to provide an overview of these concepts.

In institutional theory, *institutions* are defined as "rules of the game in a society, or more formally, the humanly devised constraints that shape human interaction" (North, 1990: p. 3). Institutions, as rules, are understood as both an outcome of human behaviour, as well as a shaper of human behaviour (Hodgson,

2000; Lawson, 1994, 1997). These rules could either be formal or informal. Their function is to reduce uncertainty in human interaction, by channelling behaviour into predictable pathways.

The formal rules include constitutions, statutes, common law, and other governmental regulations (Pejovich, 1999). They determine the political system (i.e., the governance structure and individual rights), the economic system (i.e., property rights and contracts), and the enforcement system (i.e., the judiciary and the police). Governmental authorities enforce formal rules by means of sanctions such as fines, imprisonment, and execution (Pejovich, 1999).

Informal institutions on the other hand have been defined as "private constraints stemming from norms, culture and customs that emerge spontaneously" (Williamson, 2009: p. 372). These are not designed or enforced by government (Williamson, 2009). They constitute "socially shared rules, usually unwritten" (Helmke and Levitsky, 2004: p. 727). They both enable and constrain individual actions and are communicated through imitation, oral tradition and teaching. Hayek (1937, p. 107) observed that "all that we call civilization has grown up on the basis of that spontaneous order of actions which is made possible by the delineation of protected domains of individuals and groups".

Property rights are an example of an institution and are defined as socially recognized rights of action (Alchian and Demsetz, 1973; Anderson and Hill, 1975; Demsetz, 1967, 2002). Others define them as "sanctioned behavioural relationships *among men*" (Anderson and Hill, 1975: p. 163) or "set of rules and sanctions" (Mitchell, 2003: p. 11). Definitions of property rights denote rules and constraints on human behaviour. These rules establish the power to exclude or limit the claims that others may have on that particular object. Demsetz (1967) describes property rights as an instrument of society which helps humans to interact with others in particular or expected ways. From this theoretical understanding, informal property rights are institutions and work the same way as formal rules; they enable actors in informal settlements to interact in ways that produce stable or predictable outcomes. Informal property rights can therefore be defined as user rights on land whose legitimacy is obtainable within society but outside formal laws.

In a market system, the exchange of these property rights is usually done through the market which Lindblom (2001, p. 4) defines as "a system of society-wide coordination of human activities not by central command but by mutual interactions in the form of transactions". Coase (1960) also defines markets as institutions that exist to facilitate exchange (*coordination*) and that they exist to reduce transaction costs. Through rules and regulations, the market governs or structures the behaviour of market participants. Williamson (1995, p. 174) refers to markets as "institutions of governance" and emphasizes

that a transaction is the "basic unit of analysis" (Williamson, 1981: p. 548). One of the key dimensions used for characterizing transactions is that of uncertainty (Williamson, 1975).

Institutional economics posits that *transaction costs* will be incurred in any exchange, be it through market mechanisms or other alternative arrangements (Arrow, 1969; Coase, 1960, 2005; Williamson, 1975). These costs will relate to searching, bargaining, monitoring, contracting, enforcement and protection (Eggertsson, 1990). Williamson (1975) argues that transactions under conditions of certainty can be arranged using any governance structure; however no transaction in reality is free from uncertainty. North (1990) and Williamson (1975) then illustrate that the level of uncertainty will affect the level of transaction costs, hence high transaction costs may prevent a transaction from taking place leading to market failure. Therefore the form of governance structure adopted will have an impact on transaction costs in an economy. The ill-defined nature of informal property rights in informal settlements implies high transaction costs as insecurity on such rights is high and should ordinarily result in market failure. However, literature reviewed for this paper has established that property markets are functional in these settlements, hence there is need to reconcile high uncertainty in informal property rights and the fact that informal property markets exist and operate.

While markets are an important means of governance, alternative governance structures such as *networks* and *hierarchies* (or bureaucracies) also exist and aid the functioning of markets. Each mode of governance may be regarded as a response to a specific transaction-cost environment but will in turn affect the transaction costs that may be incurred. *Hierarchies* can be defined as coordination by administrative order (Rhodes, 1996). Therefore while price is the coordinating mechanism for the market; *authority* is the coordinating mechanism for hierarchies (Adler, 2001). The emphasis here is on the use of command or what Adler (2001) calls *legitimate power* which implies design and strict, purposeful guidance by the decision makers. Government is an immediate example of a bureaucracy. The observation in most informal settlements is that while the state does not sanction the establishment of these settlements, over time local hierarchies are created which assist in establishing relations with local authorities and government. These may at times take the form of political functionaries.

Networks, as a third form of governance system, are defined as "coordination characterized by informal social systems rather than by bureaucratic structures" (Jones et al., 1997: p. 911). They rely more on loyalty, reciprocity and trust for the coordination of transactions (Thompson, 2003). Networks therefore put emphasis on local attributes, rules, conventions, routines, standards and qualities of networks. Transactions using networks are structured by relationships, thus networks are relationships created

through humans' existence and interaction with each other (Thompson, 2003). This form of governance then becomes complementary to the operation of property markets in environments where formal governance structures are weak, such as in informal settlements.

Structure-agency theory and critical realism provide useful complementary insights to that of institutional economics. All three – institutional economics, structure-agency theory and critical realism –while emphasising different aspects, focus their analysis on the relationship between structure and actions of social agents. They hold a common purpose in attempting to explain the ubiquity of basic social stability, in spite of countervailing tendencies or forces. It is for this reason that the three remain ideal as a basis for theorising the paradox highlighted in the introduction to this paper.

Structure-agency theory posits that institutions steer individual behaviour in certain directions and therefore provide the scaffolds to everyday activity which, as a result, reduces uncertainty or transaction cost (Fuchs, 2003; Sewell, 1992). Social stability is thus explained by the structuring effect of institutions or rules. Critical Realism (CR) on the other hand has a primary interest in the nature of social reality, which is conceived as having a separate independent existence from its perception of it (Lawson, 1995, 1996). According to Lawson (2003) social reality consists of three elements, namely social actions, *social rules* that condition those actions, and social positions into which individuals slot in, positions that in turn have rules specifically associated with them. As in structure-agency theory, rule–bound (or structured) social behaviour is at the centre of critical realist theory. Overall, it is clear that in all three perspectives, rules embedded or formulated by society shape social relations and economic action (Beckert, 2007; Ekstrom, 1992; Fleetwood, 1996; Ghezzi, 2007; Lawson, 1996; Lawson, 1995, 1997; Uzzi, 1996; Uzzi and Lancaster, 2003).

Understanding the decision-making process and actions of individuals and households in the informal settlements is cardinal to understanding the emergence of informal property markets and their role in the production of the urban built environment; which the three perspectives would help to highlight. Unlike in the formal market where the state provides land policies, statutory laws and guidelines by design, informal property markets are self-organizing and (re)create their own social institutions and organisational arrangements. Structure-agency theory has been used by a number of studies in the property development process on theorizing individual actors and their behaviour (Guy and Henneberry, 2000). Critical realism sees these same actors as taking up various positions as they engage in market activities such as buying, selling, developing and renting which constitute social action structured through social rules (Ekstrom, 1992; Fleetwood, 1996; Lawson, 1999).

5. Property markets in an institutional framework

Property markets, as institutions of governance, coordinate activities of individuals with disparate motives (Sudgen, 1989; Williamson, 1981). The property market has been defined as a "set of formal and informal rules governing the behaviour of diverse property market actors" (D'Arcy and Keogh, 2002: p. 20). It can be subdivided into space, investment and development markets. Seen from an institutional perspective, both the property rights to land and the property markets are institutions which exist to minimize transaction costs. These transaction costs broadly fall under search and information costs; bargaining and decision costs; and supervision and enforcement costs (Mooya, 2009).

In terms of extant theory, in order for property rights to minimize transaction costs they need to be clearly defined and enforced. By definition, however, property rights in informal property markets are irregular or unclear, which should significantly increase the uncertainty and transaction costs, potentially causing market failure. Nevertheless literature shows that informal property transactions do take place. It is therefore logical to assert that informal property markets function like the formal markets and facilitate the interaction of individuals and provides mechanisms for reducing transaction costs, thereby enabling transactions to take place. These individuals, who take up various positions as buyers, sellers, builders, etc. make decisions to consume, work, produce, save or invest which are coordinated through these informal property markets. As institutions, informal property markets and informal property rights, shape the actions of individuals in informal settlements through the interaction of actors, resources and activities in order to support production and exchange. Because informal property markets and informal property rights are not a product of deliberate design, their enforcement is mostly through private means.

The property development process is a key submarket in the production of new space and growth of cities. In the formal market this process is depicted as a series of steps leading to a common outcome, which is the built environment (Guy and Henneberry, 2000; Han and Wang, 2002). However in the informal market, the process is not clearly defined and depends largely on building activities of individuals, households or groups and as such would appear rather uncoordinated. Nonetheless, Serageldin (1991) found that even in the informal land development process a numbers of actors (or/and organizations following D'Arcy and Keogh [2002]) can be identified and these include small-scale entrepreneurs, local brokers, contractors, local officials and court clerks.

In most cities in developing countries the informal property development submarket is responsible for the emergence and growth of the informal urban form. Informal property markets emerge to consolidate and coordinate interaction and reduce transformation and transaction costs by ensuring that informal property

rights are respected; informal agreements are respected and enforced; externalities are held in check; competition is encouraged and information flows smoothly to market participants (McMillan, 2002). The urban built environment is a collective outcome of the implementation of such individual strategies.

6. Informal property markets and the production of the urban built environment – conceptual framework

The conceptual framework developed in this section links the informal property market to the production of the urban built environment. Figure 1 below outlines a generic process applicable to most developing countries through which the urban built environment is produced. As the figure show, the outcome is a result of a combination of formal and informal processes. In the formal part the key actors are the state, local authorities and private sector who collaborate in creating development land from planning to physical development. One key difference between the developed and developing countries, particularly in Sub Saharan Africa, is that ownership of land is vested either in the state or the President on behalf of the citizens; the state then grants lesser rights to developers (this is the case for instance in Zambia, Botswana, Mozambique and Namibia). Development land provided through this collaborative process is then developed through the private property market as real estate or as public projects for infrastructure (roads, railway, airports, etc), public housing, government offices, etc.

In the informal process, all the activities from planning to development are conflated into the informal property market supported by social networks and local hierarchies. Individuals/households/groups are key economic agents with their actions based on individual motives and strategies. Figure 1 also represents all the three forms of institutions of governance, that is; the market, networks and hierarchies.

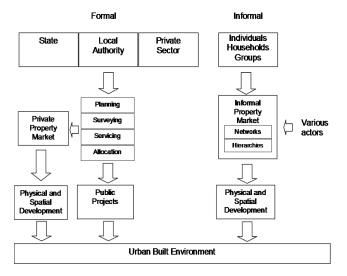


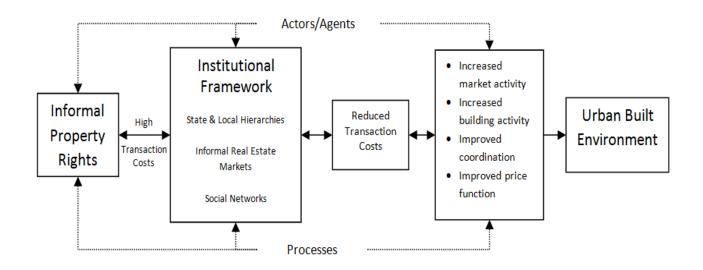
Figure 1: Urban Development Process

The conceptual framework in Figure 2 provides an explanation for the paradox of illegality of property rights and stability of urban form expatiated in the introductory section. In terms of this framework, the high transaction costs arising from informal property rights are mediated by the emergence of specific institutions as governance structures for informal transactions. These institutions are the informal property *market* itself, together with local *hierarchies* and social *networks*).

Informal property markets refer to a mode of organising voluntary, arms-length exchanges between independent actors (Mooya and Cloete, 2012). The defining characteristic of such markets is the preeminent role played by *prices* in the allocation of resources. In contrast to the role of prices in markets, hierarchical governance structures, on the other hand, emphasise the exercise of *command* in resource allocation. This implies the existence of decision makers with the necessary authority to impose their will or give effect to their wishes. Networks forms of organisation for their part rely on neither prices nor command as principles modes for coordination (Mooya and Cloete, 2012). Rather, transactions are structured by *relationships* between agents based on notions of solidarity, altruism, loyalty, reciprocity and trust (Mooya and Cloete, 2012 citing Thompson, 2003 and Meagher, 2005). Network governance structures are most salient in a domain between the flexibility of markets and the visible hand of organisational authority (Mooya and Cloete, 2012, citing Smith-Doerr and Powell, 2005). Network governance structures provide scope for human agency, which may be narrow in hierarchical structures, while emphasising structure and constraint, which may be weak in 'atomised' markets (Mooya and Cloete, 2012).

The emergence of this institutional framework in informal settlements provides for social order, stability and confidence from economic actors, and also lower uncertainties and transaction costs. Interaction of key actors is facilitated by market rules, social rules and rules of engagement with the external world. The reduction in transaction costs in turn engenders increased transaction activity, evidenced by increased exchange and building activities, improved coordination (as many actors get involved in the transaction) and improved functioning of the pricing system as selling prices become known to the majority of the inhabitants. Although the legal status of informal property rights does not immediately change, the perception on security of tenure improves because of the involvement of third parties to authenticate market transactions. The stable urban built environment is an outcome of these informally coordinated development activities.

Figure 2: Conceptual framework linking Informal Property Markets, Informal Property Rights, Transaction Costs and the Urban Built Environment



The key parts in the framework are informal property rights, institutional framework, transaction costs, development activities and the urban built environment.

Informal property rights are user rights on land whose legitimacy is obtainable within society but outside formal laws. It is hypothesises that informal real estate markets bring together various actors in an informal coordinating and cooperating structure thereby reducing uncertainty in human actions and lowering costs in the transaction of informal property rights and production of the urban built environment; which contributes to urban growth and the resultant urban form.

An *Institutional framework* is the institutional environment or an "action arena" (Ostrom, 2010; McGinnis, 2011) of a social system. It embeds rules, norms, beliefs and conventions that facilitate the interaction of various actors within the social structure. For the purposes of this paper, these rules, norms, beliefs, conventions, etc are operational within the state and local hierarchies, the informal real estate market itself and social networks. However, in the absence of direct involvement of the state in informal settlements, informal real estate markets spontaneously emerge as the dominant institutional arrangement. These informal institutions, mechanisms and arrangements contribute to social order and result in

lowering the *uncertainties* and *transaction costs*, in the process facilitating the continued existence and growth of informal settlements.

A market from an institutional economics perspective is defined as "a specific institutional arrangement consisting of rules and conventions that make possible a large number of voluntary transfers of property rights on a regular basis" (Menard and Shirley, 1995: p. 170). Besides the transfers of rights, the market also facilitates *development activities* such as coordination, cooperation, building, etc. In informal settlements, the operation of the informal real estate market and the indirect involvement of the state and local hierarchies results in lowering uncertainty and transaction costs, hence heightening development activities such as buying and selling, new constructions, better coordination and better pricing.

The *urban built environment* is mainly the physical product of a social, economic and political process constituting mainly the area dominated by buildings within the administrative boundaries of an area functioning as a city or town. It is thus a product of the property development process as a component of the real estate market. Urban growth and form of the built environment is thus seen as both *spatial* and *physical* growth. From this reasoning an *informal settlement* is a built environment and its emergence, growth and form is attributed mainly to the operation of the informal real estate market supported indirectly by state and local hierarchies and social networks.

7. Implications for urban research and policy

The rapid expansion of urban areas in developing countries, driven largely by the growth of informal settlements, is arguably one of the biggest challenges for urban policy this century. There is a pressing need to develop new theoretical frameworks that will not only aid better understanding of the processes which generate these outcomes, but also provides insights for better policy making to facilitate improved urban management. There is further need to develop appropriate methodologies to aid understanding of these problems at the empirical stage.

The conceptual framework developed in this paper provides a basis for a theoretically sound urban research agenda and a more appropriate urban policy disposition in the context of developing countries. In terms of the former, there has, hitherto, been very limited application of heterodox theory in urban research. New institutional economic theory, structure-agency theory and critical realism provide fresh lenses with which to explore various aspects of urban phenomena from a decidedly structural/causal perspective. These theories are not only more realistic and therefore appropriate for context, as argued before, but by emphasising structural or causal mechanisms, lead to better explanation and prediction.

In terms of policy orientation, this conceptual framework directs attention away from final outcomes, as in conventional location theory, to processes and mechanisms that generate those outcomes. This should make for more effective planning and development control. Indeed, conventional location theory, influenced by the notion of equilibrium in spatial markets, as an ideal or optimal state, does not prove a natural handle for policy with which to influence urban form in desired directions. By contrast this framework calls for urban policy not to focus on the surface, by looking only at the urbanisation patterns and how to control influx into urban areas, but rather on understanding how the informal property market works, especially how it is able to provide urban shelter at minimal cost, how informal rules emerge, how informal coordination results in lowering uncertainties and transaction costs and under what conditions formal markets are likely to fail to provide low cost housing.

Finally, by recognising the role of informal property rights and institutions in the production of the built environment, the conceptual framework helps to confer legitimacy to what is essentially illegal activity, albeit activity which accounts for the majority of urban growth in developing countries. Traditionally, informal settlements have been viewed as a failure for urban policy, prone to demolishment and regular eviction of residents. This framework should spur a rethinking of formal planning policy and development control, making it more sensitive and accommodating to the realities of developing country environments.

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