

Planning informality: Promoting a market of planned informal settlements

About 30% of the population in developing countries live in informal urban settlements lacking adequate basic services, public spaces and urban equipment. The origin to most of these shortcomings can be traced to a single feature: the urban layout design.

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1) Human settlements that have not been adequately planned tend to prioritize the private use of land (housing), and leave little for public use (roads, recreational areas, urban equipment).

Such an unbalanced distribution of land use creates a fundamental problem: once the housing is built, the only way to get enough space to create roads, water networks, parks or schools is through massive processes of demolition and relocation; an expensive option in social, economic and political terms. Therefore, attaining a better distribution of land uses—i.e. a more rational plot layout—within a few days of an informal settlement's creation could substantially improve its developmental potential in the long run.

Regrettably, local and national authorities have proven time and again their lack of capacity—or willingness—to adequately guide processes of urban expansion that have been going on for decades all over the developing world. Moreover, public agencies tend to focus their efforts on policies that attempt to remedy the problems created by the unplanned occupation of land, not to prevent those troubles from arising in the first place—in contexts in which informal

settlements are the main, or even the inevitable, drivers of urban expansion.

In order to start working out policies and tools that would help to achieve better plot layouts, it would be necessary to have a clear understanding of the internal dynamics of informal settlements (unauthorized housing, which may or may not involve legal land purchases), specifically of how land is distributed for public or private use at the very foundation of each new 'spontaneous' urbanization. Hence, we developed a comparative study between two very different places that experienced intense processes of informal occupation during the last 15 years: the urban peripheries of Lima (Peru) and Dar es Salaam (Tanzania).

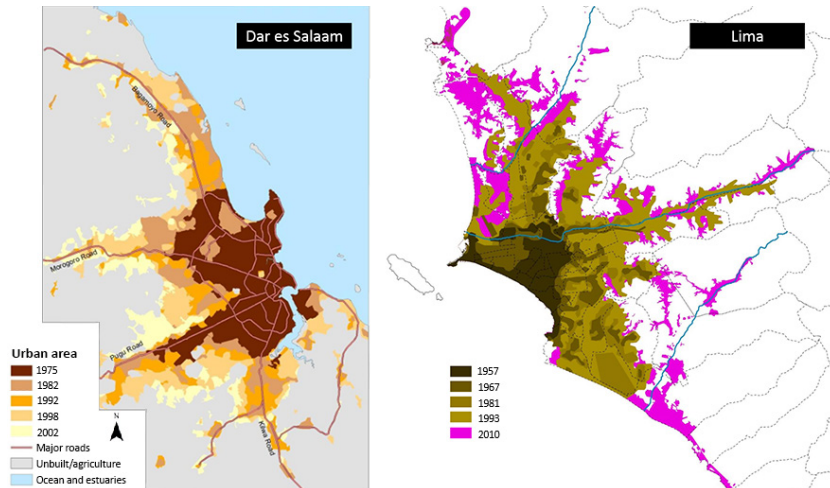
The methodologies involved in our research included quantitative techniques, such as the estimation of an 'urban layout quality' index based on 'optimal' urban parameters, and qualitative methods, such as focus groups and in-depth interviews with leaders and dwellers of newly formed human settlements. Additionally, we carried out a historical study on the process of informal urbanization in Lima between 1960 and 1990.

2) Our fieldwork found that, despite the obvious differences between the two case studies, the fundamental dynamics of land distribution for public or private use is very similar in Lima and Dar es Salaam. A first finding is that the plot layout is entirely managed by the supply side of the informal settlements' market.

In the case of Lima, informal settlements are created in two types of land: (i) the wastelands with no agricultural value that surround the city, typically owned by the national government; (ii) privately owned agricultural land. In the first case a group of around 30-150 families simultaneously 'invades' a plot of land; the selection of the plot and the 'recruitment' of squatters is typically carried on by a single person, usually a local leader or an informal land dealer.

In the second case, the owners sell the land, without urban authorization, to an 'association' or 'cooperative' also comprised by between 30 and 150 families organized by an intermediary. Once the transaction is completed, the members of the 'association' occupy the land simultaneously, 'invasion' style, because, although they can demonstrate a legal purchase of land, they

Figure 1. Urban expansion in Lima and Dar es Salaam



do not have the authorization to generate a new development.

The fact that occupation is ‘instantaneous’ in both cases—which implies that all participants must demarcate their individual lots practically at the very moment of the invasion—means that the power to distribute and place lots lies on the leader or organizer, who controls the ‘supply’ of land. Beyond the personal gains that may or may not be extracted from the occupation process, organizers have legitimate incentives to maximize the portion of land dedicated to housing: on the one hand, for the new settlement to prosper money has to be raised from settlers (through fees) so roads can be built, rough terrain can be flattened, and bribes can be paid—and more settlers means more money. On the other hand, the settlement requires a critical mass of dwellers, capable of exerting political pressure on local governments and, eventually, obtaining public services and infrastructure.

In Dar es Salaam, urban expansion occurs mainly in actual or potential agricultural land, with an intrinsic value and proper owners (usually peasants with ancestral property rights). Here, the lots for housing are delimited, sold and occupied one

family at the time, through intermediaries (‘middlemen’) who use informal networks to attract potential buyers—which means that the simultaneous and massive occupation of land plots, that is a defining feature of informal settlements in Lima, does not occur in Dar es Salaam. In this case, both landlords and middlemen (who get a fixed percentage of the lot price) have obvious economic incentives to sell as many lots for housing as possible. Thus, both in Lima and Dar es Salaam the system of incentives favors the private use of land over public uses.

3) A second characteristic shared by the case studies is that the ‘demand side’ of informal settlements—the actual or potential dwellers—is wholly aware of the importance of preserving enough space for public uses, and of the problems generated in the long term by failing to do so.

Furthermore, in all the focus groups and interviews conducted in new human settlements in Lima and in Dar es Salaam, dwellers declared having been aware of this issue at the time of the occupation of what are now their homes, and to be currently suffering the negative consequences of not having reserved enough space for public uses.

According to them, there are two reasons why land uses could not be better allocated at the time of the informal occupation: First, at that moment people are solely focused on securing and building their individual lot—that is, on those early days people apply a high discount rate to public spaces, temporarily reducing its perceived value and priority. Second, the ‘supply side’ of new settlements did not offer them the option of choosing to settle on a plot of land where spaces had been explicitly and clearly reserved for public uses.

In this regard, an important finding of our field work is that, when asked about their disposition to pay a higher price (or fee) to obtain lots in a ‘planned’ informal urbanization (with enough spaces reserved for public use), most of the participants in the focus groups answered affirmatively—both in Lima and in Dar es Salaam. Moreover, it was clear for everybody that the costs of living in a chaotic, badly planned neighborhood far outweighed the costs of a higher down payment.

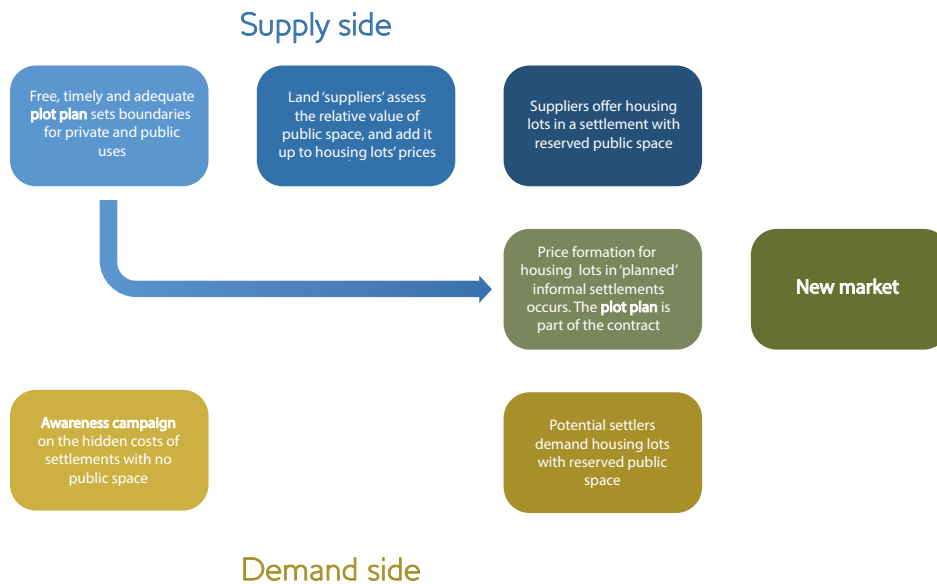
The magnitude for such a *premium* has not been measured, although several sources in Dar es Salaam cited examples of semi-planned informal settlements in which the land value more than doubled that of neighboring, properly unplanned areas.

4) This finding suggests that conditions could be met to create a market of ‘planned’ informal settlements—which would greatly reduce the costs that a chaotic urban sprawl generates for new settlers and for society in general.

For this market to develop—and to reach an equilibrium that allows it to grow without state intervention—it would be necessary to properly align the potential supply and demand. On the demand side, it would be necessary to reduce the discount rate that is applied to the value of public spaces at the time of occupation. This could be mean an awareness campaign that strengthens the intuitions people already have regarding

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Figure 2. Creation process of a planning informal urbanization market



the convenience of reserving space for public uses when creating a new neighborhood.

On the supply side, the key task would be to incorporate the value of the land reserved for public uses in the price of lots sold for housing—which would mean, according to our estimates, an increase of between 15 and 35 percent of the 'unplanned' price per square meter. Only in this way the 'invasion' organizers or the landlords would get the incentives to set aside more space for public uses, and would be able to verify whether demand exists to justify such effort. For this to happen, however, the supply side of informal settlements must be able to plan its plots before selling or allocating lots for housing.

5) How to 'plan' an informal settlement? Our historical research gave us some clues, based on the experience of the informal settlements that emerged in Lima between the early 1960s and the late 1980s. Over that period, the Peruvian government applied a permissive policy regarding informal settlements, allowing

de facto occupations, and offering a path for legalizing property and urbanization rights tied to a simple condition: that lots would be rearranged following plot plans that met basic urban parameters.

The result of this policy, as can be easily verified by reviewing satellite photos of the aforementioned neighborhoods, were regular urban grids, with lined up plots, proper roads and reserved areas for urban infrastructure and facilities, which greatly facilitated subsequent urban consolidation.

Not only does a plot plan clearly demarcate lots for housing—which reduces potential conflicts between future neighbors—and land for public uses, but it also makes it feasible to respect such limits by making them explicit and precise. Therefore, the plot plan provides as much credibility as possible to the offer of a 'planned' informal settlement.

6) Our findings helped us develop a series of tools designed to facilitate and encourage the creation and consolidation

of demand and supply sides for a market of planned informal settlements.

These tools include a series of awareness videos (both for potential 'buyers' and for 'sellers' of land); a manual for drawing plot plans, designed for the people responsible for distributing lots of land in new settlements—based on appropriate planning parameters; and a free mobile application, the Lotizer, which automatically generates basic, but functional and rational plot plans for any piece of land identified by the user in Google Maps¹. This 'toolbox' can be found and downloaded, both in Swahili and Spanish, on the following page: www.grade.org.pe/lotizer.

¹ The current version of the Lotizer, although functional, requires several adjustments to reach its full potential, such as including topographic data in its algorithms, or restrictions for its use in protected or high-risk areas, among other improvements. The current version should be considered as a proof of concept.

Figure 3. From a mobile app to a plot plan



This policy brief is based on the key findings of Alvaro Espinoza and Ricardo Fort, «The processes of spontaneous urbanization in the absence of the State», in collaboration with the Economic and Social Research Foundation, Tanzania. The study and the publication holding the former were undertaken with funds designated from the International Development Research Centre, Canada, through the Think Tank Initiative.

Analysis & Proposals addresses various issues of Peruvian reality based on GRADE's research findings and offers public policy recommendations. The content of this policy brief does not necessarily reflect the institutional view of GRADE or donors. This and other GRADE's publications are available in www.grade.org.pe/en/publications

Policy recommendations: tools for the development of a market for planned informal settlements

An optimal policy of urban expansion (e.g. massive popular housing programs) would end informal or unplanned occupation of the territory. But if the state does not have the economic or political conditions to guide or regulate the expansion of cities, it is at least necessary to mitigate the negative consequences of disorderly informal urbanization.

One issue that has profound effects on the future of informal settlements-and one that is relatively easy to improve-is the initial design of the urban layout of these neighborhoods. As we have shown in these pages, the conditions are given to promote the creation of a market for 'planned' informal settlements.

The state can help develop this market with some simple actions:

- Offer subsidized plot plans to anyone who wants to urbanize in the periphery of cities-the social costs of not having a timely plot plan are infinitely greater than the cost of drawing up a plan. An alternative would be to develop and fine-tune tools such as the Lotizer, accessible to all and that fulfill the aforementioned function.
- Establish incentives for private planning of new neighborhoods, e.g. put as a condition that, to access basic services, these urbanizations have an urban layout that meets minimum urbanistic parameters and that public spaces are respected.
- Develop awareness campaigns for the supply and demand of informal settlements, explaining

the benefits of a well-distributed neighborhood, and offer tools to carry out a minimal planning.

- Evidently, none of the above can be directed directly to illegal land invasions. However, if the 'legal' informal occupations begin to be 'planned', it is to be expected that the invasions will also do so-for a simple matter of competition.
- Finally, it would be convenient to quantify the social costs of urban expansion in the long term, which could help justify the implementation of optimal policies to gradually reduce the informal occupation of territories.

If this market emerged, a new equilibrium could be reached in which the city could continue to expand without direct state intervention, and with a better order and possibilities for future consolidation.