Addressing inclusionary housing in SDG 11: Land management strategies to supply affordable housing at scale

Market and land management instruments for inclusion and greater accessibility

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Kuala Lumpur, Feb. 2018
Inclusive housing

Access to:
- Urban infrastructure and services,
- Social diverse neighborhoods, and
- Lower commuting costs (access to jobs)

All factors are associated to land prices!
Urban infrastructure and services
Residential Segregation

Source: Francisco Sabatini, IEU-PUC Chile Segregación Residencial y Mercados de Suelo en la Ciudad Latinoamericana presentation at Curso Políticas e Instrumentos de Gestión de Suelo Medellín Lincoln Institute / Medellín, agosto 22-24, 2011
BAs neighborhood of San Isidro development attempt to build wall separating rich and poor homes

The wall of Argentinian "involution" President Fernandez de Kirchner demands the Buenos Aires City Hall of San Isidro to paralyze the construction of the wall that separates the houses of the rich from those of the poor EFE - Buenos Aires - Buenos Aires - 09/04/2009 © Diario EL PAÍS S.L. 09/04/2009
Divided cities

Heliopolis in São Paulo

Buenos Aires villa miseria y country

Source: Francisco Sabatini, IEU-PUC Chile Segregación Residencial y Mercados de Suelo en la Ciudad Latinoamericana presentation at Curso Políticas e Instrumentos de Gestión de Suelo Medellín Lincoln Institute / Medellín, agosto 22-24, 2011
Santiago: Location of social housing compounds built in 1980 - 2000

Source: SUR, Corporación de Estudios Sociales y Educación, 2002 apud Francisco Sabatini, IEU-PUC Chile Política de Subsidio Habitacional en Chile y segregación residencial presentation at Curso Políticas e Instrumentos de Gestión de Suelo /Lincoln Institute / Medellín, agosto 22-24, 2011
Exclusion
Social housing at scale: problematic location, neighborhoods and access to services
# Inclusion

<table>
<thead>
<tr>
<th><strong>Problems</strong></th>
<th><strong>Policies</strong></th>
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<tbody>
<tr>
<td>Urban infrastructure and services</td>
<td>Alternative land based financing tools</td>
</tr>
<tr>
<td>Social diverse neighborhoods</td>
<td>Land use regulations, zoning</td>
</tr>
<tr>
<td>Lower commuting costs (access to jobs)</td>
<td>Accessibility, transport costs... land prices</td>
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What should planners know about urban land markets to deal with social housing inclusion?

"Those who have the privilege to know have the duty to act."

~ Albert Einstein (1879-1955)
81% of Δ $ housing from 1950-2012 due Δ $ land! (Ref. McKinsey)

Land increases infrastructure gap from $1 to 1.6 trillions - in the US!

Distortions resulting in higher land prices reduced the GDP > 13% since 1960 (Economist April 4, 2015)
If Land represents such a low % of housing value (<20% !), why is it so determinant of social housing programs?
Share of land prices in housing

- Buildings
- Land

3% of Annual appreciation
2% annual depreciation rate

$100
$80
$20

50 years
Time
Land and buildings

From 40 to 60% of the property stock
Highest and best use

Price => use or use => price?
The doctrine of Highest and Best Use of land, states that the *highest* values (land prices/rents) result from the bidder (individual agents or firms) that may give the *best* use (extract most utility/profit) to a given land location/parcel.

Extended to the dynamic context *highest* refers to the maximization of the net present value derived from the property and *best* refers to its potential (future) uses.

For land appraisals H&B refers to the maximization of net present value derived from the property. The value of a property is based on its potential uses. (Roddewig and Papke 1991, pp. 48)
Highest and Best Use of Land

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In other words, in a reasonably competitive, free market, land will be priced at the highest maximum possible among the existing/known alternatives.
The dictatorship of the Highest and Best use

Can it be confronted?
The 5 factors

What are the factors determining land prices?
Land price/use determination

**Accessibility**
- Trade-off land rent and transport costs
- Access to urban infrastructure and services

**Externalities**
- Discrimination, neighboring, NIMBY, NOPE, BANANA
- Amenities, pollution,

**Expectations**
- Land captive of use - fixed/high valued/long durability
- Speculation, vacant land

**Regulations**
- Exclusionary, elitists, esthetics...
- Zoning - density (FAR)

**Charges on land values**
- Taxes, fees, charges etc.
- Capitalization of net revenues/rents
## Land price/use determination

| Accessibility | • Trade-off land rent and transport costs<br>• Access to urban infrastructure<br>• Land captive of use - fixed/high valued/long durability<br>• Speculation, vacant land<br>• Exclusionary, elitists, esthetics...<br>• Zoning - density (FAR) | **What do these factors have to do with social housing inclusion?**<br>• Externalities | • Discrimination, NIMBY, NOPE, BANANA<br>• Amenity, pollution, externalities<br>• Expectations | • Taxes, fees, charges etc. Capitalization of net revenues/rents | **Charges on land values** |
Accessibility

The trade-off between accessibility costs and land prices

Transportation as an inclusionary tool

• The capitalized value of transportation

The determinant role of the marginal land in use.
Accessibility

Given the trade-off between rent and accessibility cost:

What is the impact on land prices from a reduction on accessibility costs?
Housing <-> Location

Present value of transportation cost between: Location in the outskirts vs downtown!

- US$ 2.50 per day
- 22 days per month
- 2 workers per household
- Annual interest rate 6%

That is, the cost of transportation in the outskirts consumes 3/4 or 75% of the price of a typical 25K house!
Marginal land determining city-wide land prices

Increasing demand for housing leads to more distant occupations, increasing the advantages of better located areas.
Externalities

How much is this view worth?
Externalities

- The poor as a negative externality?
- Paying to exclude ... diversity

Can social housing become a positive externality?

The ghetto-intersectice inclusionary conundrum
- Why are expectations so relevant?
  - Built environment
- Why real estate markets values them?

Expectations: Speculation?
After July 1969 - Apolo 11 - man landing on the Moon
New opportunities - Moon land being offered in the market!
Not all land equal: Sea of Tranquility more expensive than Inon Sea of Torments.
Many deals with farmers
Article published in Veja - from Street cars to Space published 27/08/1969
What is the market value of land use regulation?

Implications for funding of social housing and promoting inclusion

Re: Cynthia
The value of land use regulation
Changes on Land Prices (Stylized Facts)

<table>
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<tr>
<th>Type of Land Use Change</th>
<th>Price before Change (US$/m²)</th>
<th>Increment (%)</th>
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<th>Windfall on 5,000 m² (US$)</th>
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<td>400</td>
<td>10</td>
<td>40,000</td>
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<td>180</td>
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<td>200</td>
<td>100</td>
<td>400</td>
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Source: Prepared by the author.
The value of land use regulation
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Source: Prepared by the author.
In Curitiba, Brazil, the taller building on the left graphically illustrates the area above the basic FAR of about six stories for which building rights were charged. The taller building on the right also paid for additional building rights, but did not dramatize that fact in its design. © Gislene Pereira

Note: The City of São Paulo recently reduced all basic FAR to = 1! (US$130 million in 2013)
Revenues - MSP

- **CEPAC**
  - > $3 Billons

- **OODC since 2002-2017**
  - $890 Millions from 2.514 projects – (U$354,000 p/u)!
  - Note - many HIS do not pay OODC

- **Individual projects (FAR =1 up to 2.5)**
  - $ 6 a 10 millions in land plots of 3 to 5,000 m2
  - i.e. $2,000 for +1.5 m2 of buildable FAR =US$1,333 /m2

- **2015/16 (Real estate crisis)**
  - OODC + CEPACs = 10.86% (6.64% + 4.23%) of total investments
  - Potential >18%
Cross-subsidy?

- Building de 4,000m² land plot.
- Acquiring additional 6,000 m² of building rights for $6 millions

- The 30 additional high income apartments units at $200k/unit would fund 200 social (low-income) housing units at $30k/unit

30 == 200
CEPACs in S. Paulo

Additional FARs licensed against CEPACs auctioned in the market

Jardim Edith slum occupants resettled in new building in the same area funded by CEPACs

Fiscal charges

Capitalization of charges on land values

A land value tax as an inclusionary tool
Pure land rent is in the nature of a 'surplus' which can be taxed heavily without distorting production incentives or efficiency.

... using land rents as the basis of taxation is an argument that I think makes an awful lot of sense because it is a non-distortionary source of income and wealth.
Taxing land values
## Taxing land values

### Consensus among Nobel priz ed economists

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<td>Paul Samuelson (1970)</td>
<td>Pure land rent is in the nature of a 'surplus' which can be taxed heavily without distorting production incentives or efficiency.</td>
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<tr>
<td>James Tobin (1981)</td>
<td>I think in principle it's a good idea to tax unimproved land, and particularly capital gains (windfalls) on it</td>
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<tr>
<td>Franco Modigliani (1985)</td>
<td>It is important that the rent of land be retained as a source of government revenue.</td>
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<td>James Buchanan (1986)</td>
<td>The landowner who withdraws land from productive use to a purely private use should be required to pay higher, not lower, taxes.</td>
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<td>Robert Solow (1987)</td>
<td>For efficiency, for adequate revenue and for justice, every user of land should be required to make an annual payment to the local government equal to the current rental value of the land ...</td>
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<td>William Vickrey (1996)</td>
<td>Applying a tax to land values also means removing other taxes. This would so improve the efficiency of a city that land values would go up more than the increase in taxes on land.</td>
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<td>Joseph Stiglitz, (2001)</td>
<td>... using land rents as the basis of taxation is an argument that I think makes an awful lot of sense because it is a non-distortionary source of income and wealth</td>
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Tax (charges) on land values

Falls entirely on the landowner

Does not distort economic decisions
- No deadweight loss

Does not affect land

Does not affect the ‘timing’ of occupation

Reduce land speculation

Including ‘leap-frogging’

Source: Oates and Swab 2009
Tax (charges) on land values

Falls entirely on the landowner
Cannot be transferred to final prices

Is neutral
• Does not distort economic decisions
• Does not affect land
• Does not affect the ‘timing’ of occupation

Reduce land speculation
Including ‘leap-frogging’

Source: Oates and Swab 2009
Property tax facilitates access to land by the poor

...urban land prices are frequently so high that low-income groups cannot afford to purchase land, given their disposable incomes and the prevailing capital market conditions, which prevent access to mortgage credits at affordable interest rates. To the extent that the revenue from property taxes is capitalized into lower current land values (since the tax reduces the expected future private yield on the land), it partially expropriates land ownership rights from the present owner and also constitutes a loan to future owners, who can now acquire the land at a lower price but will have to pay property taxes in the future. If low-income groups cannot buy land because they lack liquidity and access to capital markets, property taxation may be one of the policy instruments to improve their access to land ownership.

Social Housing Inclusion

Make serviced land affordable to all

- Universalization of urban infrastructure and services to eliminate the quasi-rent thus reducing land prices;
- Alternative financing tools - value capture?

Polynucleate the cities

- To reduce the accessibility cost to jobs, to shopping and to other amenities;
- Large-Scale Urban Redevelopment projects?

Generate socially diverse neighborhoods

- Inclusionary zoning - ZEIS
- Spatial mobility

Voila! Problem solved...
Though, a few details left to resolve:

- **Revisit landownership rights** to get the necessary funding
  - heavier charges on land values would come on handy,
- **Revert land market concentration** and
- **Eliminate all prejudice among citizens.**

Nothing the NUA cannot handle ... in the coming centuries - Long live the NUA!
Thank you

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