

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



LINCOLN INSTITUTE  
OF LAND POLICY

Market and land management instruments for  
inclusion and greater accessibility

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Kuala Lumpur, Feb. 2018

# Inclusive housing

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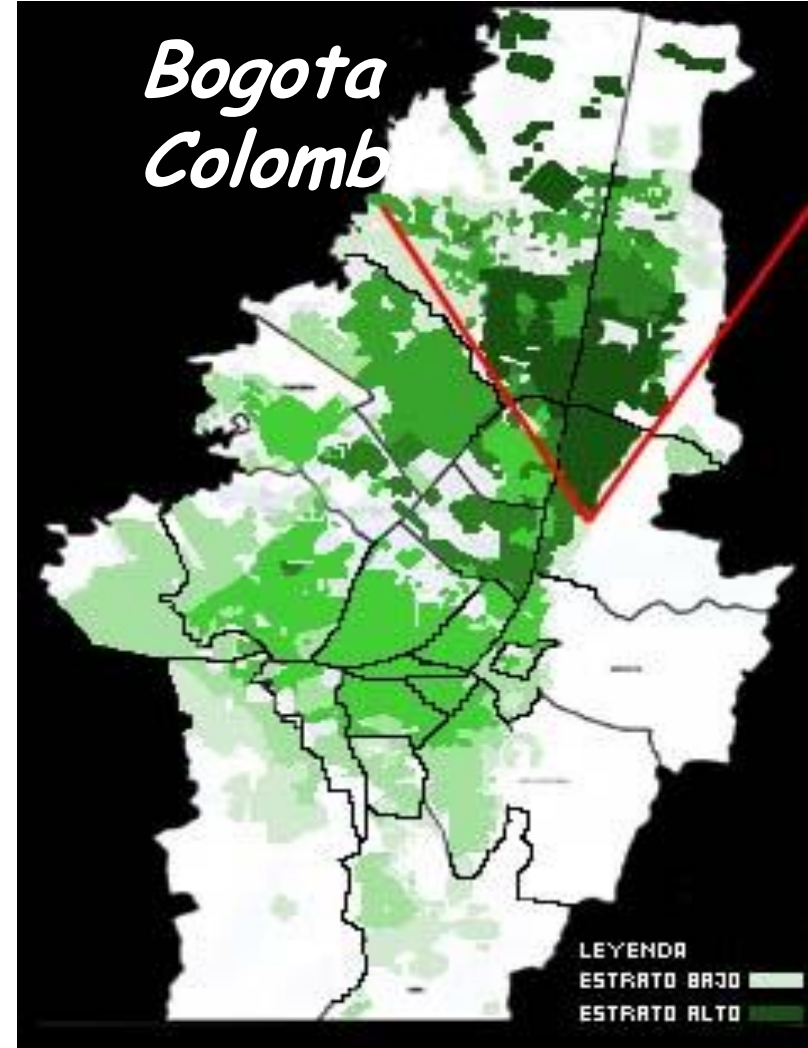
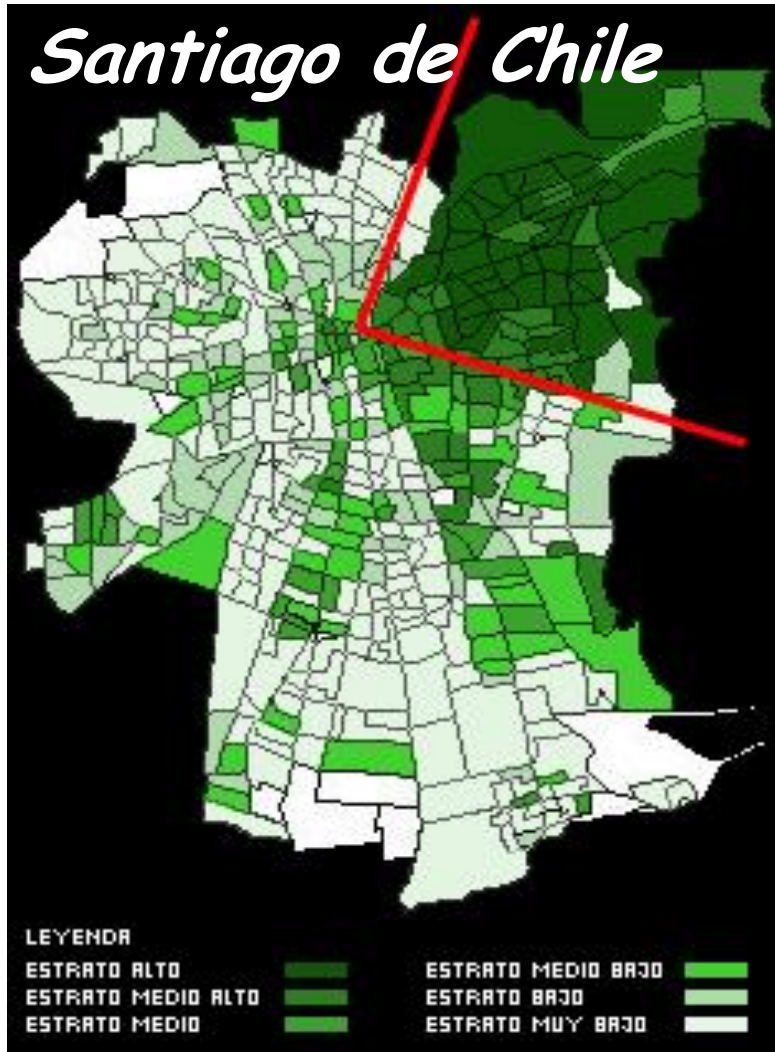
- ☐ Urban infrastructure and services,
- ☐ Social diverse neighborhoods, and
- ☐ Lower commuting costs (access to jobs)

**All factors are associated to land prices!**



# Urban infrastructure and services





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



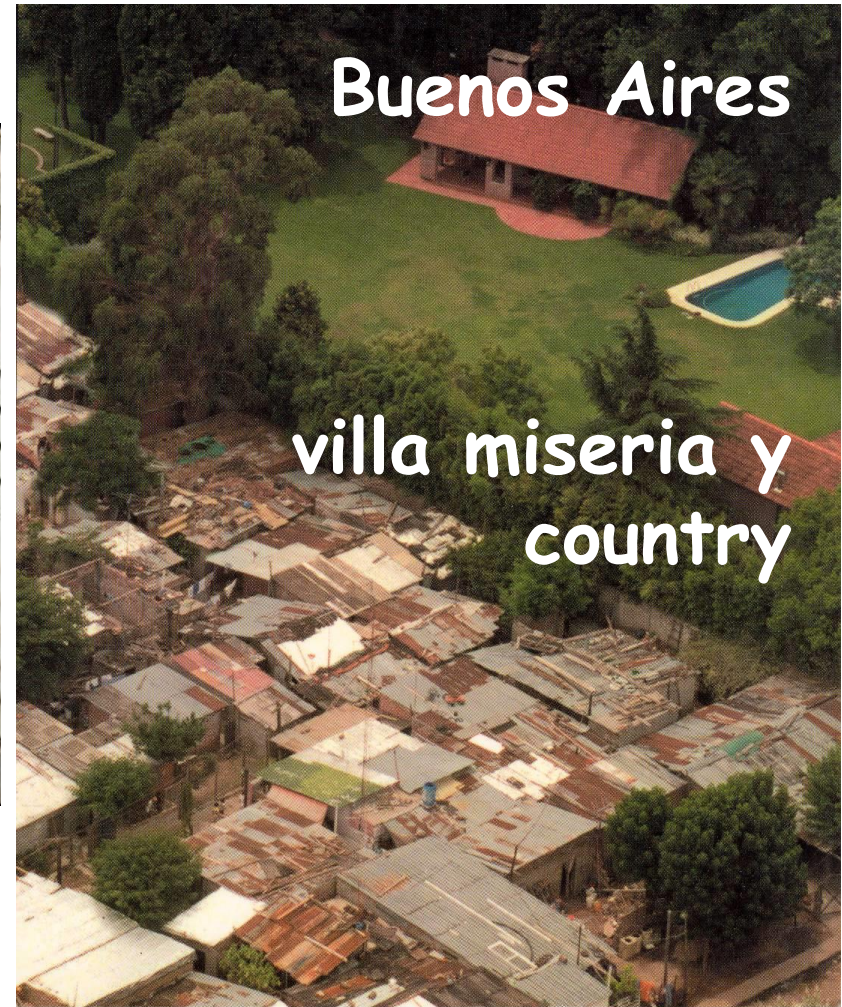
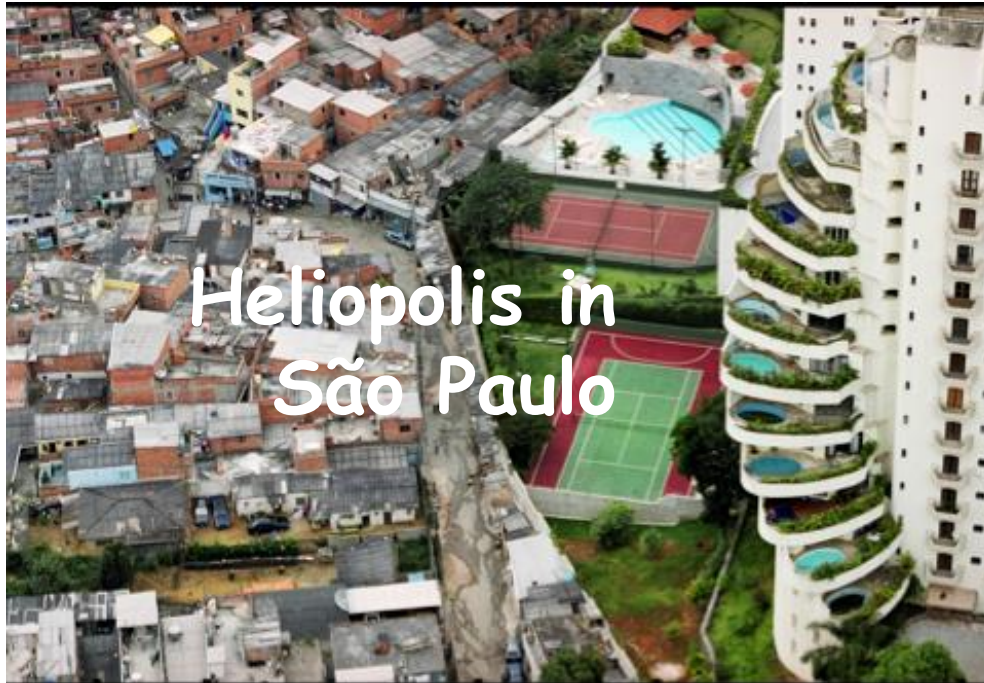
The wall of Argentinian "involution"  
President Fernandez de Kirchner demands  
the Buenos Aires City Hall of San Isidro  
to paralyze the construction of the wall  
that separates the houses of the rich  
from those of the poor EFE - Buenos Aires  
- Buenos Aires - 09/04/2009

© Diario EL PAÍS S.L. 09/04/2009





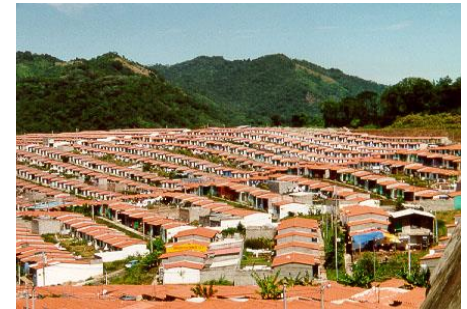
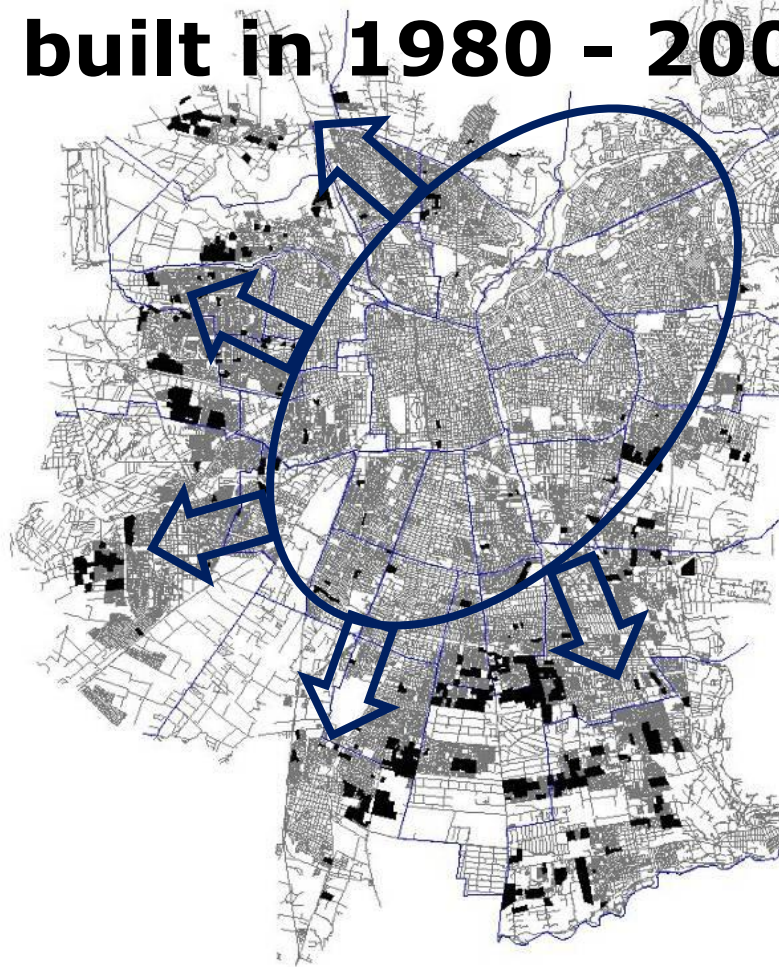
# Divided cities



*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*

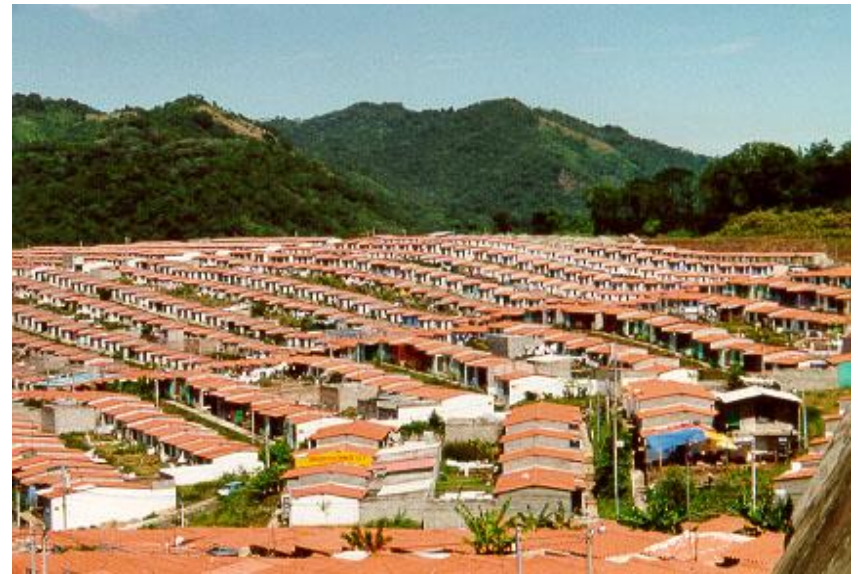


# Exclusion





## Social housing at scale: problematic location, neighborhoods and access to services



# Inclusion

## Problems

Urban infrastructure  
and services

Social diverse  
neighborhoods

Lower commuting costs  
(access to jobs)

## Policies

Alternative land based  
financing tools

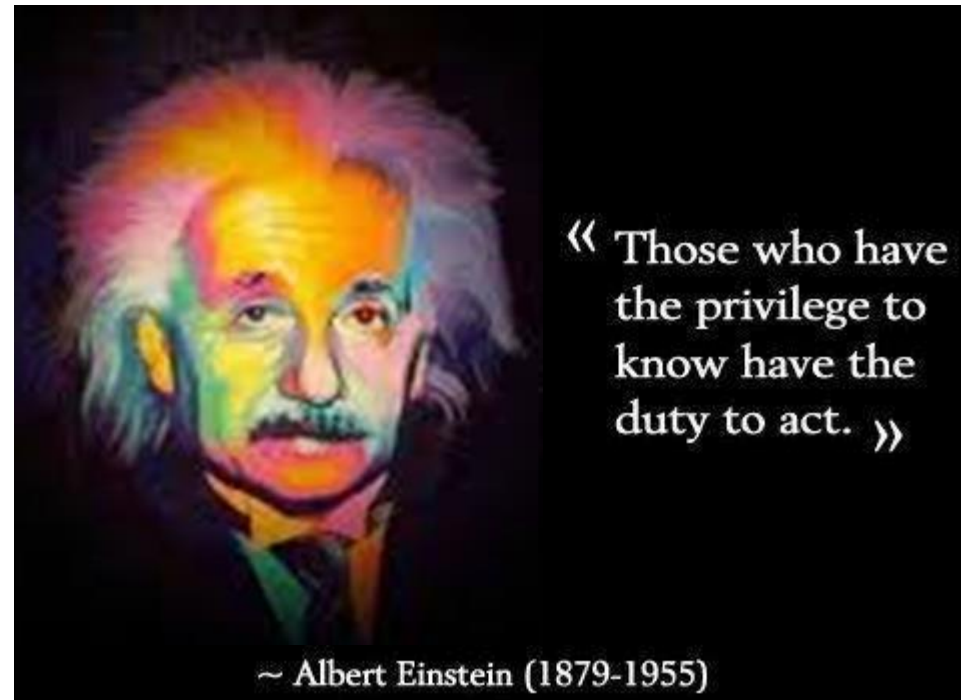
Land use regulations,  
zoning

Accessibility, transport  
costs... land prices



# What should planners know

**about  
urban land  
markets  
to deal with**



**social housing inclusion?**

# The relevance of land



81% of  $\Delta$  \$ housing from 1950-2012 due  
 $\Delta$  \$ land! (Ref. McKinsey)



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



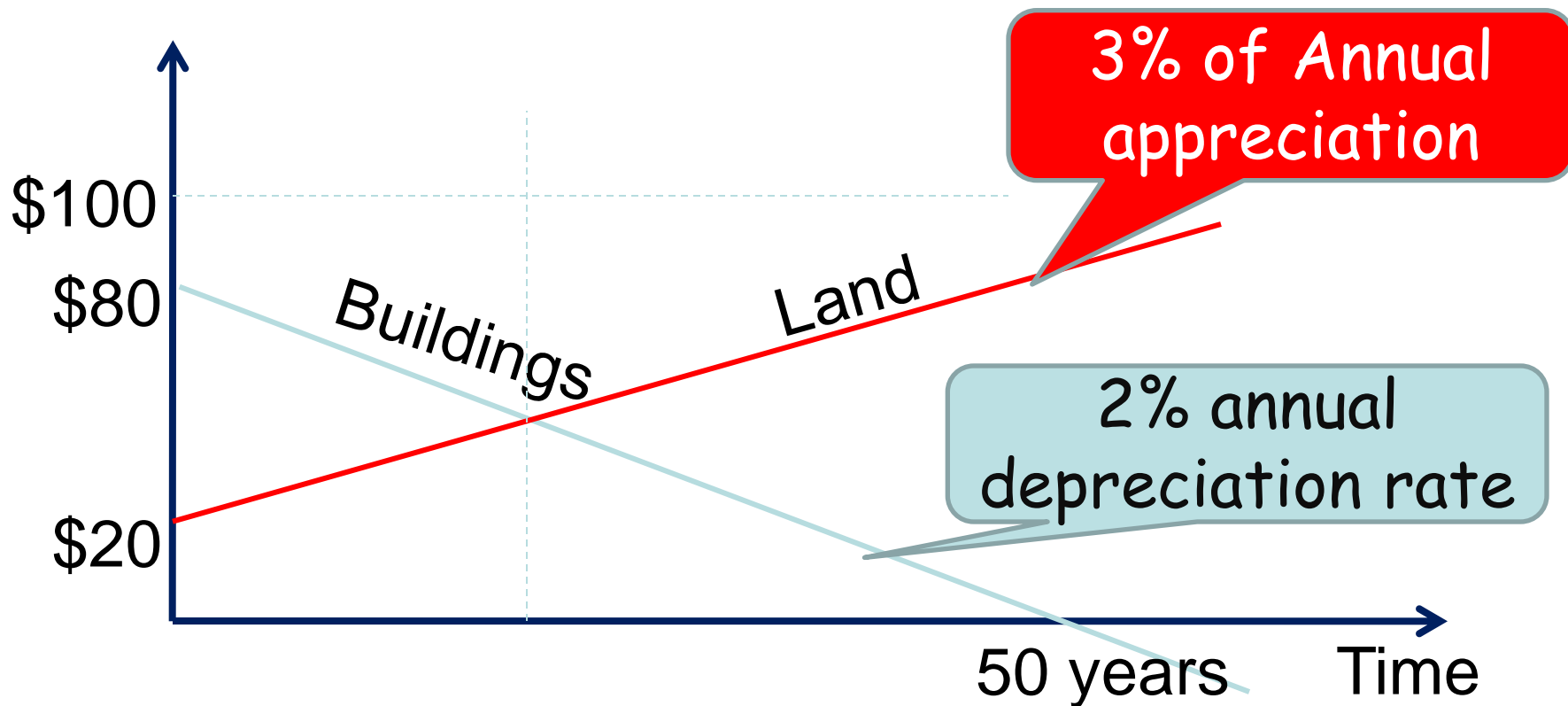
Distortions resulting in higher land prices  
reduced the GDP > 13% since 1960  
(Economist April 4, 2015)



If Land represents such a low % of housing value (<20% !), why is it so determinant of social housing programs?

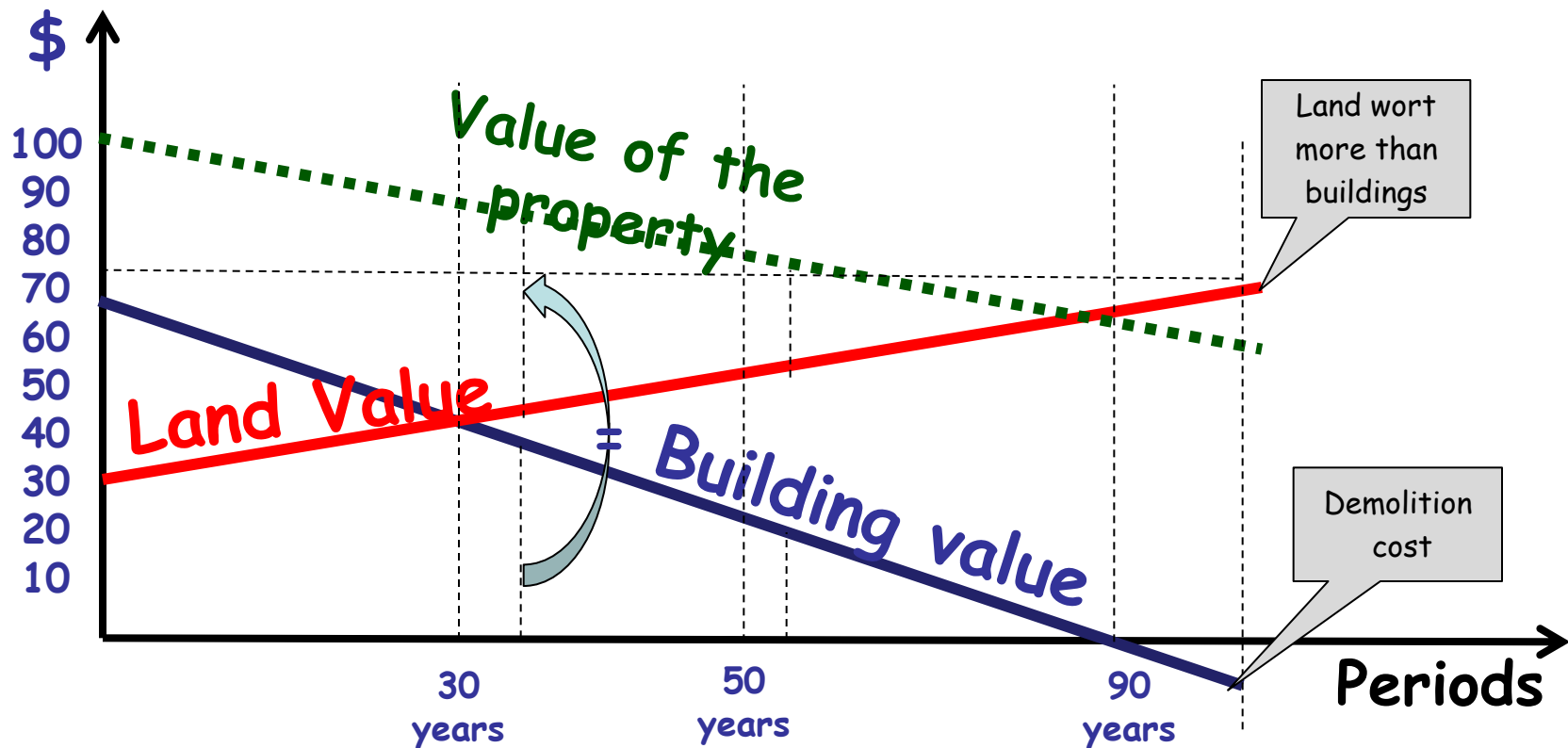


# Share of land prices in housing





# Land and buildings



From 40 to 60% of the propeerty stock

# Highest and best use



Price  $\Rightarrow$  use or use  $\Rightarrow$  price?



# Highest and Best Use of Land

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

The doctrine of Highest and Best Use states that the *highest* values (largest net return) from the bidder (individual or entity) that may give the *best* use (one that is most profitable for a given land location) to a

Extended definition: Highest and Best Use refers to the maximization of the value of the property and *best* refers to its

For land use, it refers to the maximization of net present value derived from the property. The value of a property is based on its potential (Newig and Papke 1991, pp. 48)

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



Economist - Apr 4th 2015

Barry Downard



# 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
- Access to urban infrastructure

## Externalities

- Discrimination
- Amenities

## Expectations

- Expected/long valued/high valued/long durability
- Land

...visionary, elitists, esthetics...

- Zoning - density (FAR)

## Land values

- Taxes, fees, charges etc. Capitalization of net revenues/rents

What do these factors have to do with social housing inclusion?



# 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%

PV (30 years)  
= \$18,347.00

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

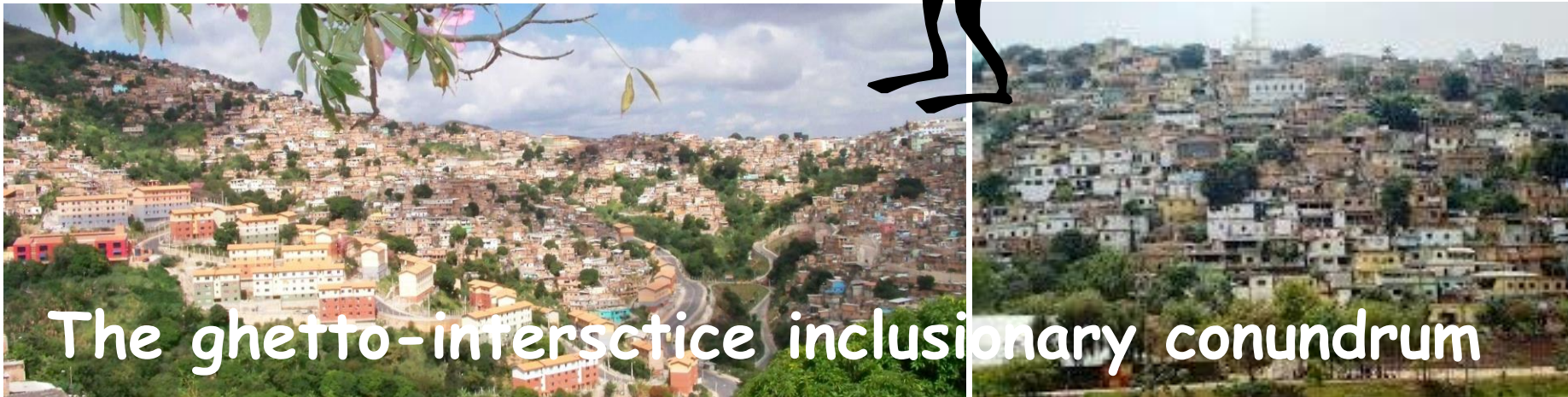
How much is this view worth?



# Externalities

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

Can social housing become a positive externality?



The ghetto-intersective inclusionary conundrum



- 
- ❑ Why are expectations so relevant?
    - Built environment
  - ❑ Why real estate markets values them?

# Expectations

## Speculation?



# The value of expectations

PROYECTO  
DE IRRIGACION  
DEL FRENTE DE DEFENSA  
DE LAS PAMPAS DE  
CONCON TOPARA  
C.E.T.E.C.

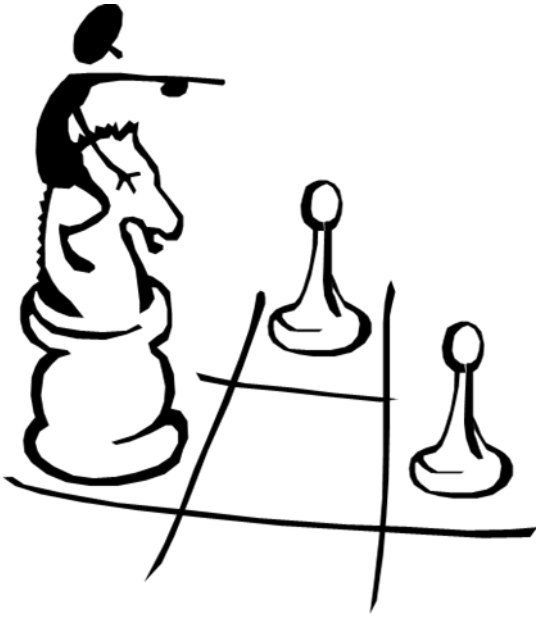
Chincha Peru



- 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 Sea of Torments.
- Many deals with farmers
- Article published in Veja - from Street cars to Space published 27/08/1969

Fuente: In Jose Augusto Dias Junior "Os Contos e os Vigários: Uma Historia da Trapaça no Brasil" São Paulo Editora Leya 2010 pg 13-14





# Regulation

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)

| Type of Land Use Change   | Price before Change (US\$/m <sup>2</sup> ) | Increment (%) | Price after Change (US\$/m <sup>2</sup> ) | Windfall on 5,000 m <sup>2</sup> (US\$) |
|---------------------------|--|---------------|---|---|
| Rural to Urban Conversion | 2  | 400           | 10  | 40,000                                  |
| Building Norms            | 100  | 80            | 180                                       | 400,000                                 |
| Zoning Regulations        | 200  | 100           | 400                                       | 1,000,000                               |

Source: Prepared by the author.

# The value of land use regulation

## Changes on Land Prices (Stylized Facts)

| Type of Land Use Change   | Price before Change (US\$/m <sup>2</sup> ) | Increment (US\$/m <sup>2</sup> ) | Area (m <sup>2</sup> ) | Windfall on 10,000 m <sup>2</sup> (US\$) |
|---------------------------|--|----------------------------------|------------------------|--|
| Rural to Urban Conversion | 20   | 10                               | 4,000                  | 40,000                                   |
| Building Norms            | 100  | 180                              | 2,000                  | 400,000                                  |
| Zoning Regulations        | 100  | 400                              | 2,500                  | 1,000,000                                |

**Gifts!**  
Renouncing of legitimate public incomes?

Source: Prepared by the author.



# Charge for building rights



Note:

The City of São Paulo recently reduced all basic FAR to = 1!

(US\$130 million in 2013)

# Revenues - MSP

## ❑ CEPAC

- > \$3 Billions

## ❑ OODC since 2002-2017

- \$890Millions 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 m<sup>2</sup>
- i.e. \$2,000 for +1.5 m<sup>2</sup> of buildable FAR =US\$1,333 /m<sup>2</sup>

## ❑ 2015/16 (Real estate crisis)

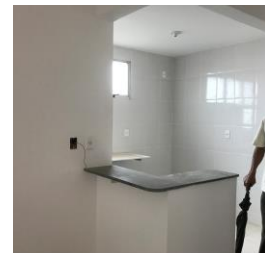
- OODC + CEPACs = 10.86% (6.64% + 4.23%) of total investments
- Potential >18%

# Cross-subsidy?

- ❑ Building de 4,000m<sup>2</sup> land plot.
- ❑ Acquiring additional 6,000 m<sup>2</sup> 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



$$30 = 200$$

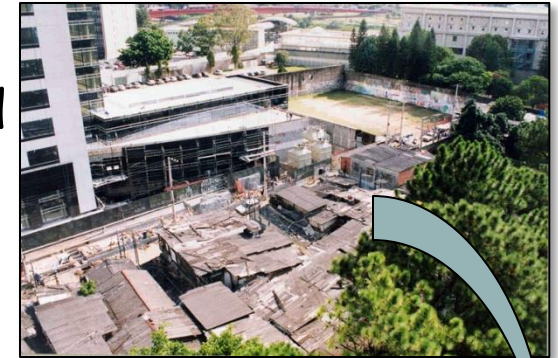
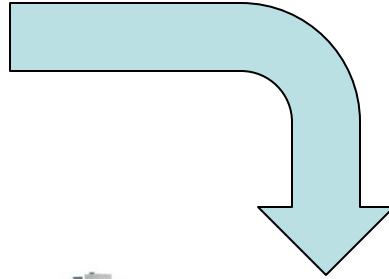




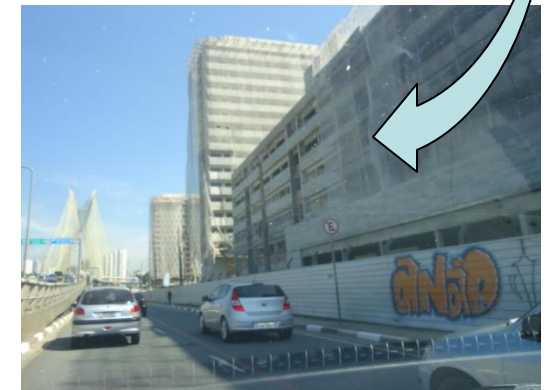
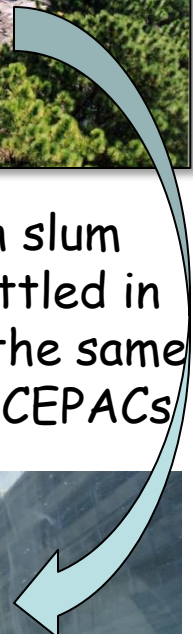
# CEPACs in S. Paulo



Additional FARs licensed  
against CEPACs auctioned  
in the market



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



From : Paulo Sandroni "Certificados de Potencial Adicional de Construcción (CEPAC) en la financiación de grandes proyectos de desarrollo urbano: El caso de São Paulo" Presentación in the Forum on Notable tools of Urban Policy - Quito May 2013.

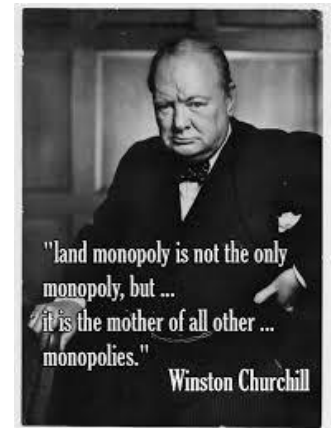
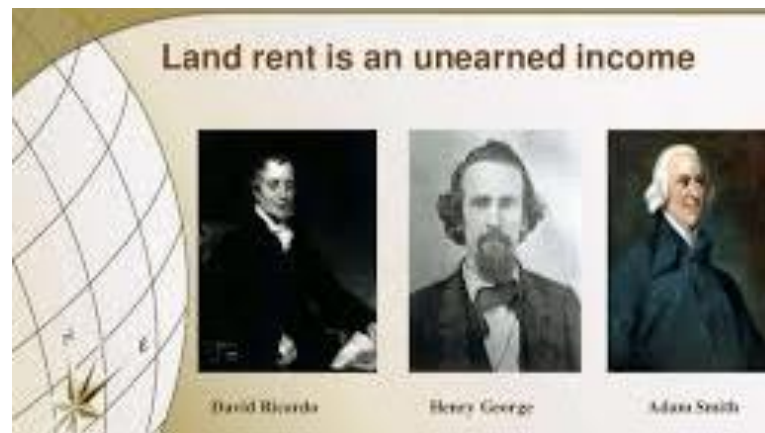
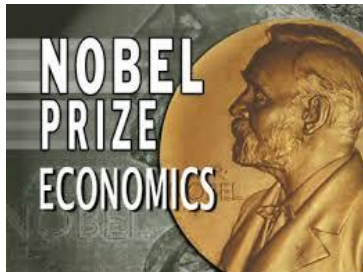
# Fiscal charges

Capitalization of charges on  
land values

A land value tax as an  
inclusionary tool



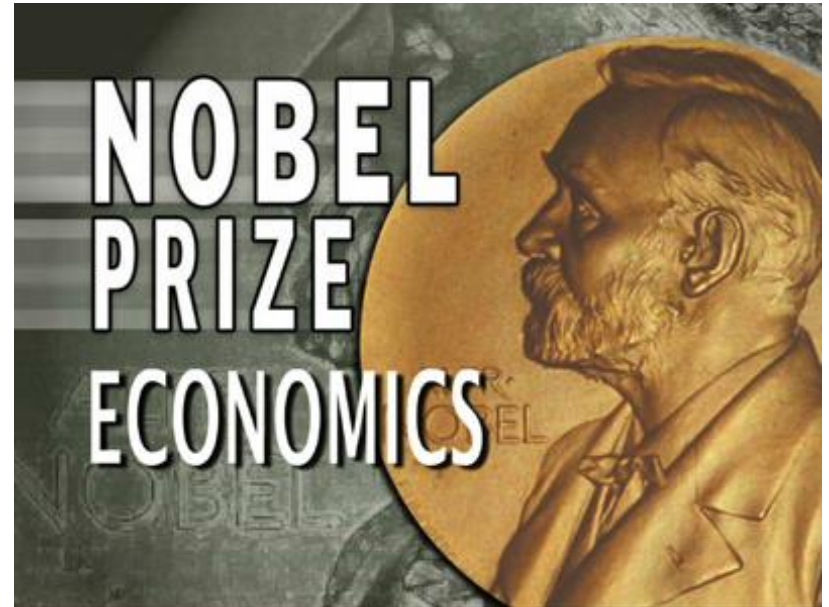
*Pure land rent is in the nature of a 'surplus' which can be taxed heavily without distorting production incentives or efficiency*



*... 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 prized economists

Paul Samuelson  
(1970)

- *Pure land rent is in the nature of a 'surplus' which can be taxed heavily without distorting production incentives or efficiency.*

James Tobin  
(1981)

- *I think in principle it's a good idea to tax unimproved land, and particularly capital gains (windfalls) on it*

Franco Modigliani  
(1985)

- *It is important that the rent of land be retained as a source of government revenue.*

James Buchanan  
(1986)

- *The landowner who withdraws land from productive use to a purely private use should be required to pay higher, not lower, taxes.*

Robert Solow  
(1987)

- *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 ...*

William Vickrey  
(1996)

- *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."*

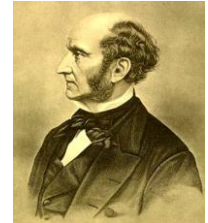
Joseph Stiglitz,  
(2001)

- *... 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*

# Tax (charges) on land values

Falls entirely on the landowner

Cannot be transferred to final prices



Is neutral



- 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 affect economic decisions

Does not cause land loss

Does not affect land

Does not affect the 'timing' of occupation



Does not 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.*

Bahl, Roy W., and Johannes F. Linn. *Urban Public Finance in Developing Countries*. Washington DC: Published for the World Bank by Oxford University Press, 1992 p.168

# 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

# Questions?

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