

A property rights approach to parking supply

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247 m

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Why introduce minimum parking norms?



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FAST FOOD RESTAURANT WITH DRIVE-IN WINDOW (836)

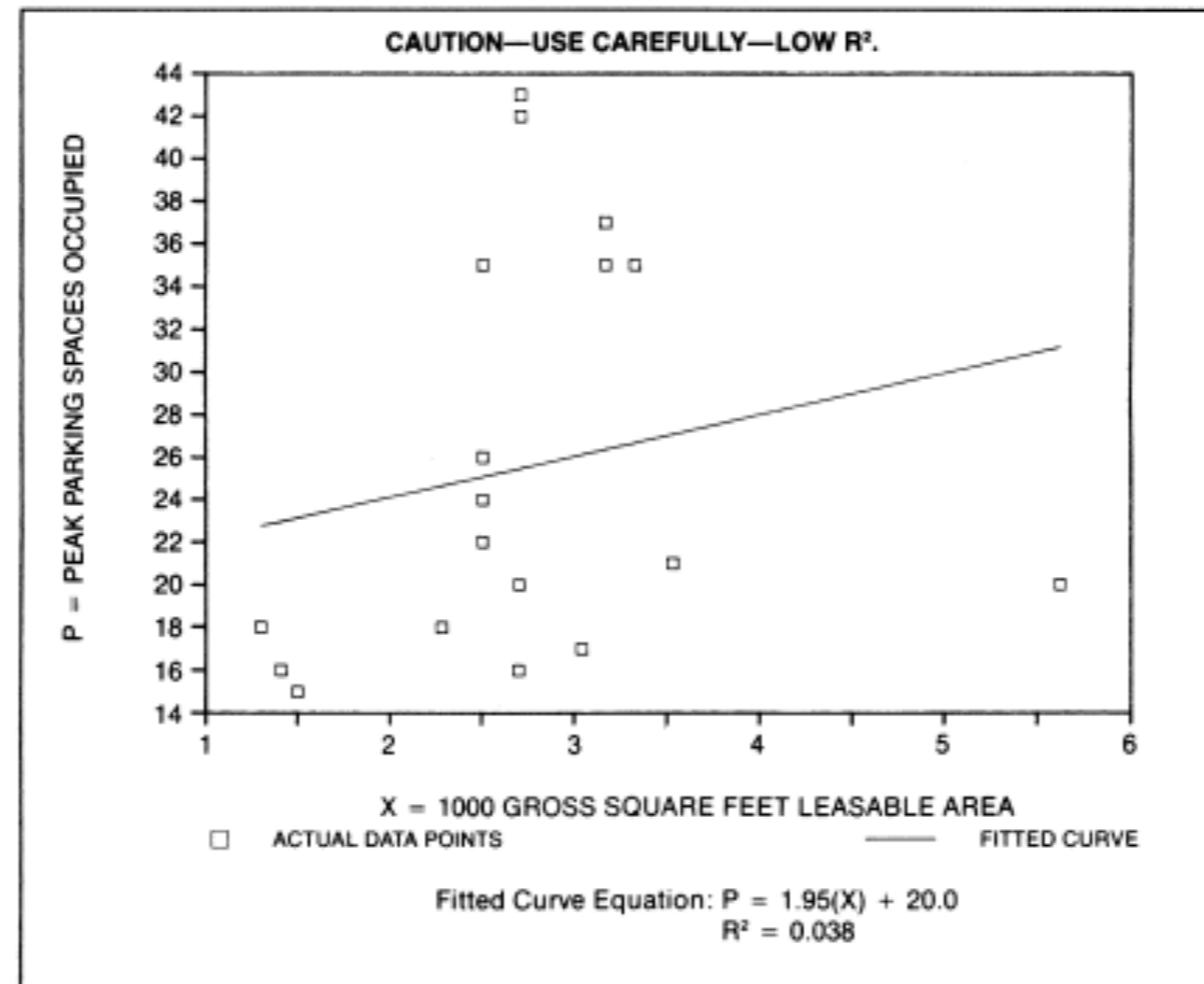
Peak Parking Spaces Occupied vs: 1,000 GROSS SQUARE FEET LEASABLE AREA

On a: WEEKDAY

PARKING GENERATION RATES

Average Rate	Range of Rates	Standard Deviation	Number of Studies	Average 1,000 GSF Leasable Area
9.95	3.55-15.92	3.41	18	3

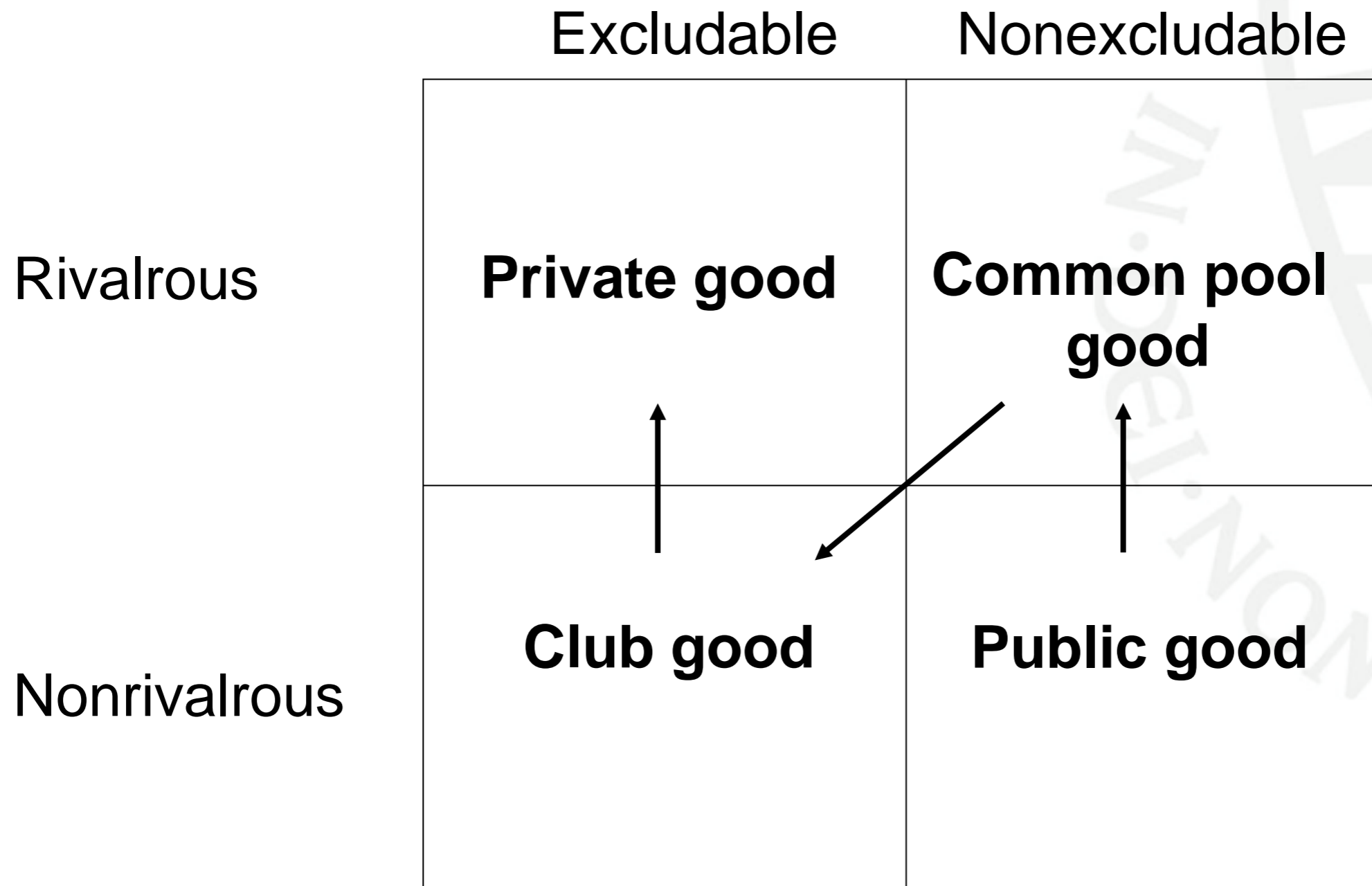
DATA PLOT AND EQUATION



Typology of goods

	Excludable	Nonexcludable
Rivalrous	Private good	Common pool good
Nonrivalrous	Club good	Public good

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Typology of goods



← minimum parking norms



Rivalrous

Private good

Common pool good

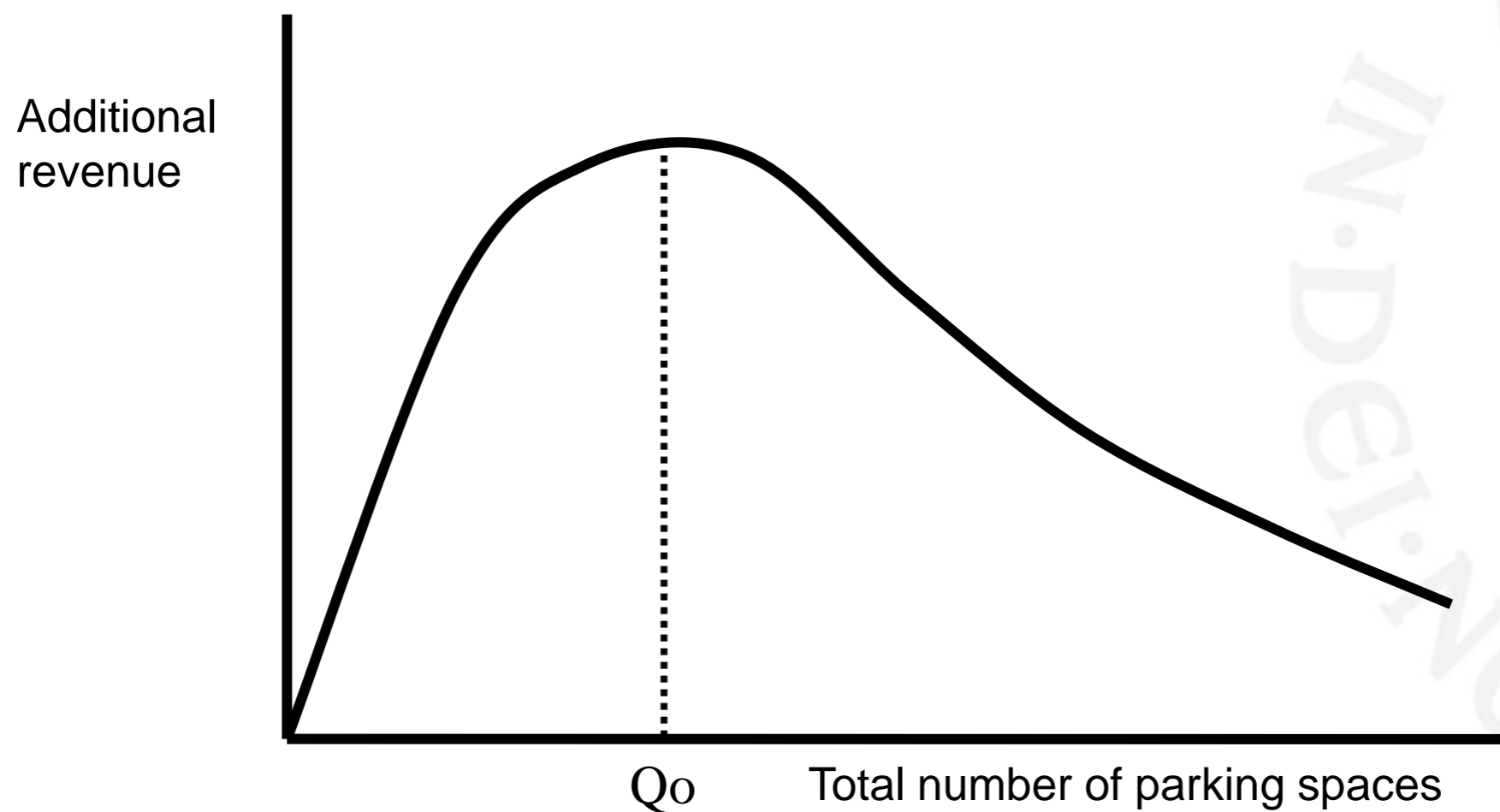
Nonrivalrous

Club good

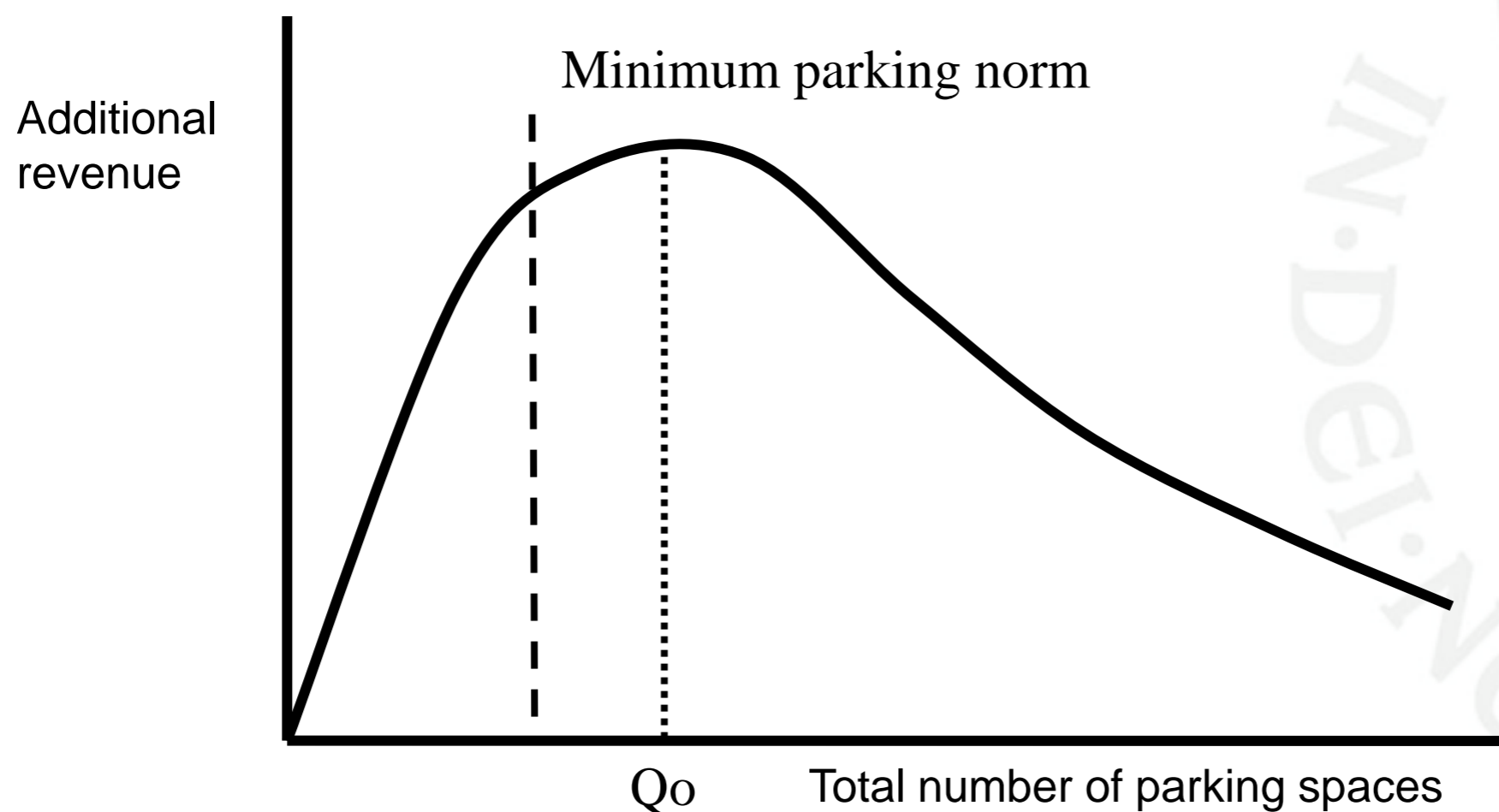
Public good



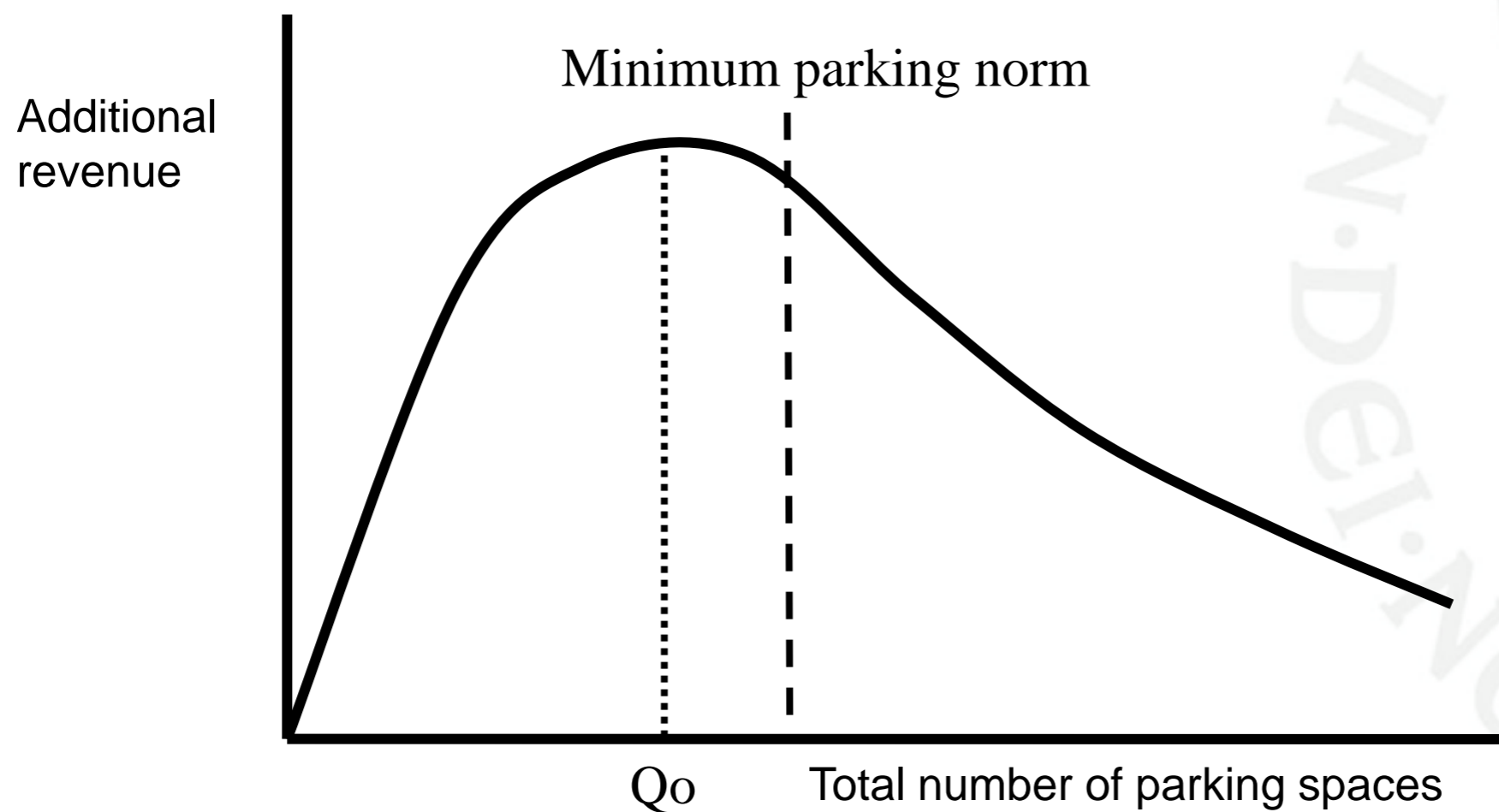
Minimum parking norms: you never get it right



Minimum parking norms: you never get it right



Minimum parking norms: you never get it right



Impacts of minimum parking norms

- High costs of providing parking
- Over-supply of parking
- Increase of car use
- Unattractive, car-oriented, urban design

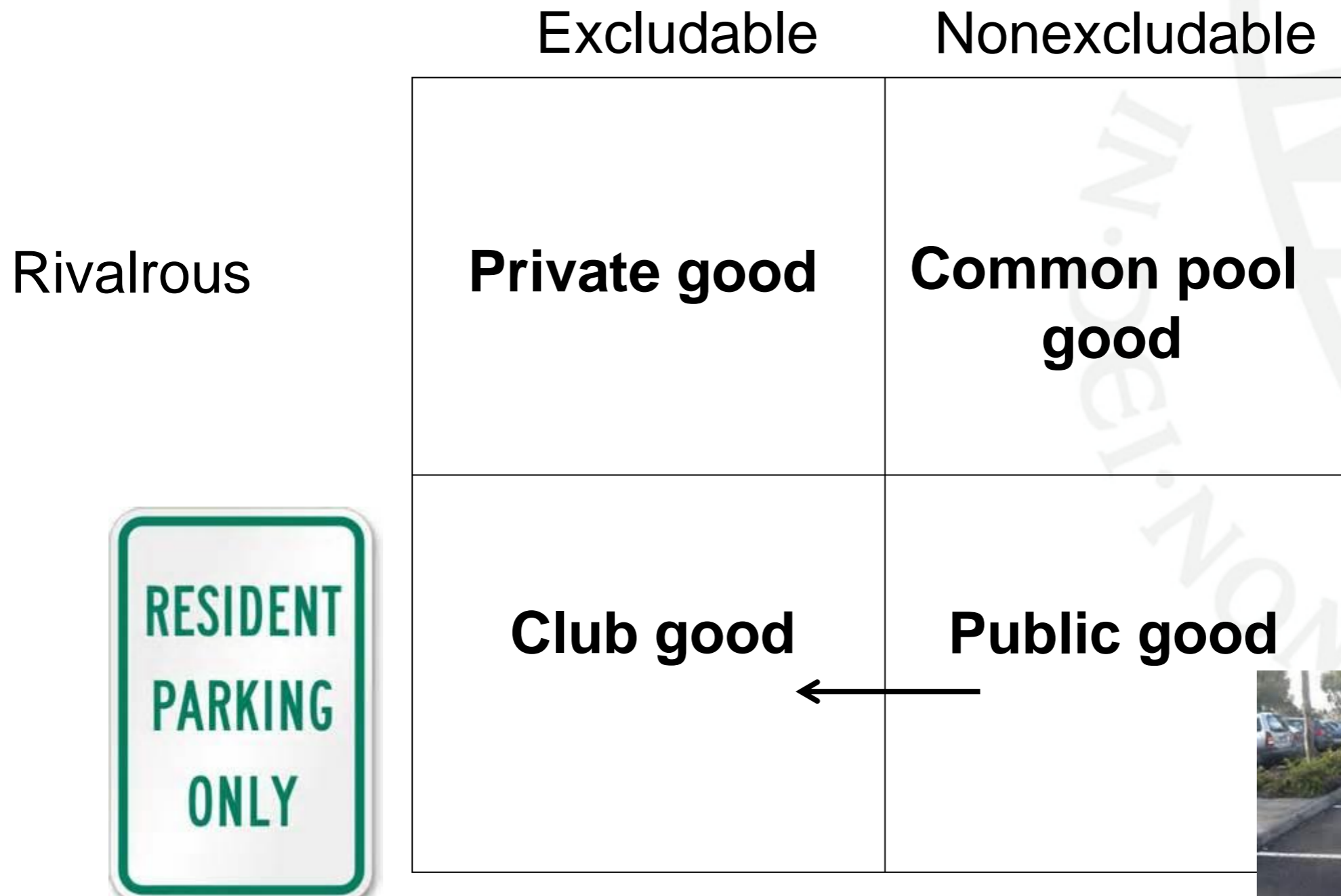


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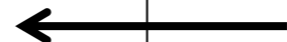
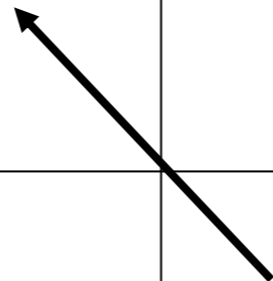
Typology of goods



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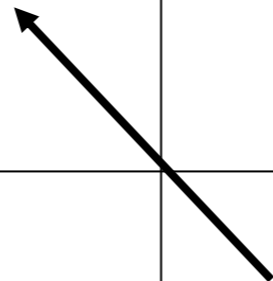
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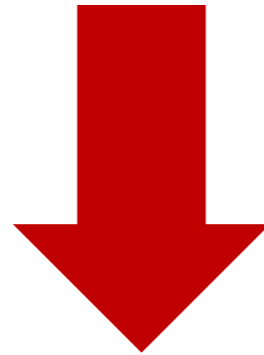
Typology of goods



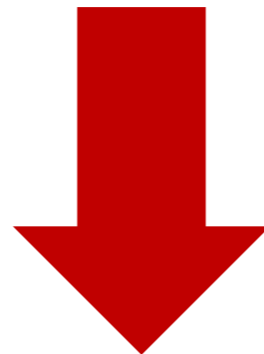
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Assigning property rights over public on-street parking



Erases need for parking norms



Developers can decide about amount of parking places

Parking game (i)

- Four developers build office and decide about amount of on-street parking supply
- Uncertainty about parking demand of future user
- Goal: Make as much profit on parking as possible

Parking game (ii)

Round 1:

Each developer makes individual decision about parking supply

Round 2:

Each developer makes individual decision about parking supply ...
... knowing that hiring and letting of parking places is possible

Round 3:

Each developer makes individual decision about parking supply ...
... knowing that hiring and letting of parking places is possible ...
... knowing that additional parking places can be rented from parking provider

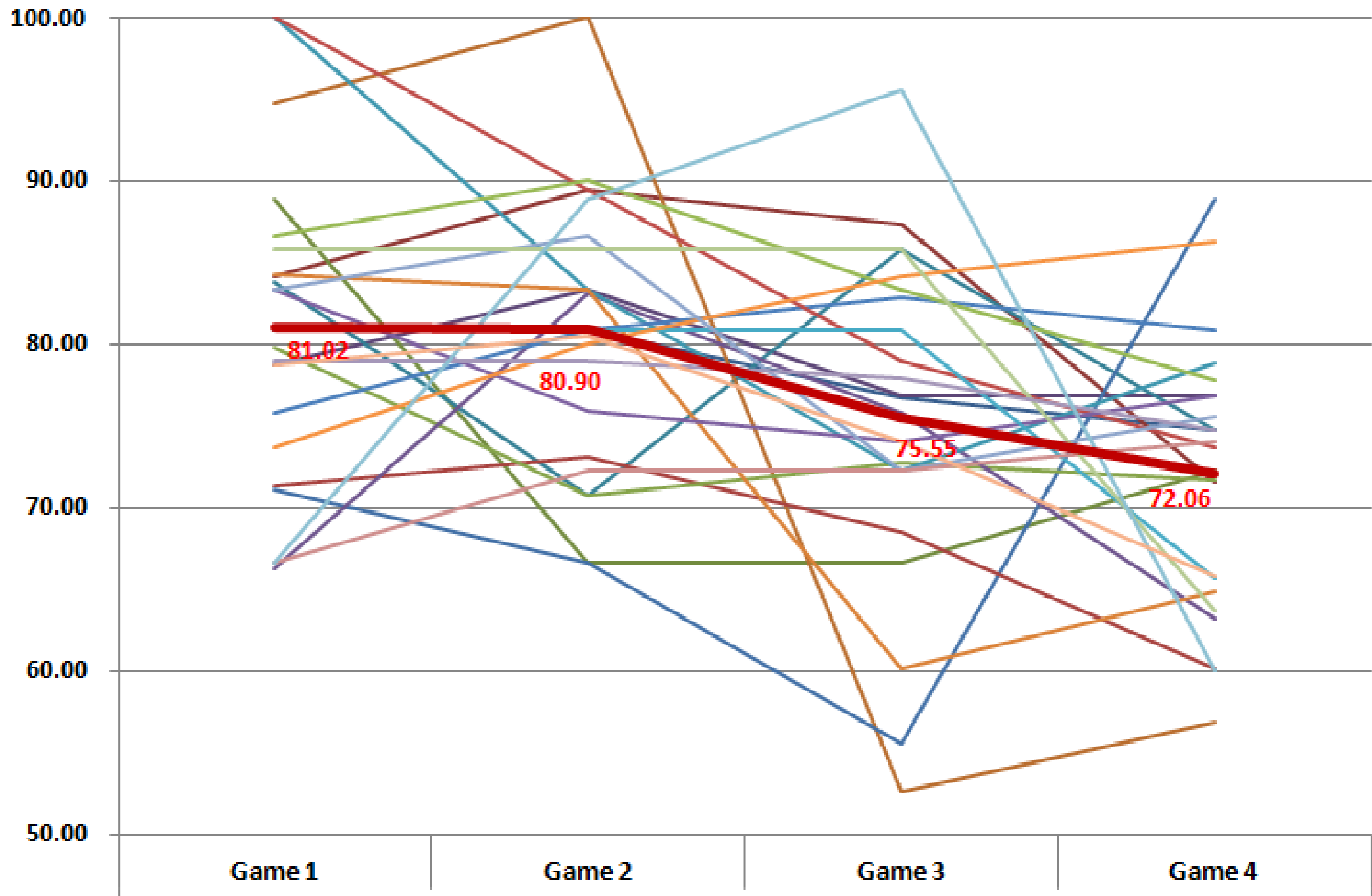
Round 4:

Hiring and letting of parking places is possible as in Round 3 but ...
... developers can bargain **before** deciding on amount of parking to build

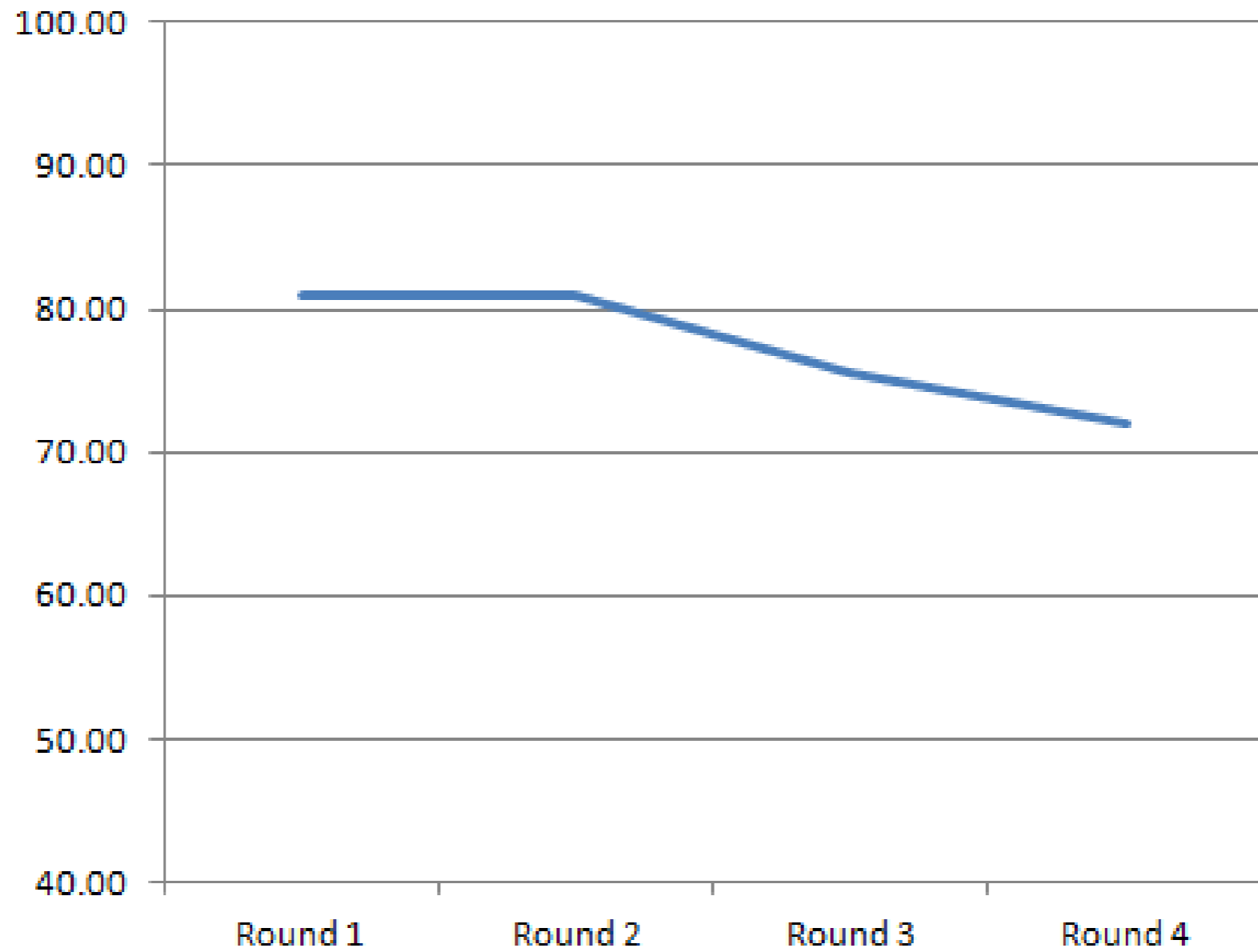
What is the impact on developers' behavior?



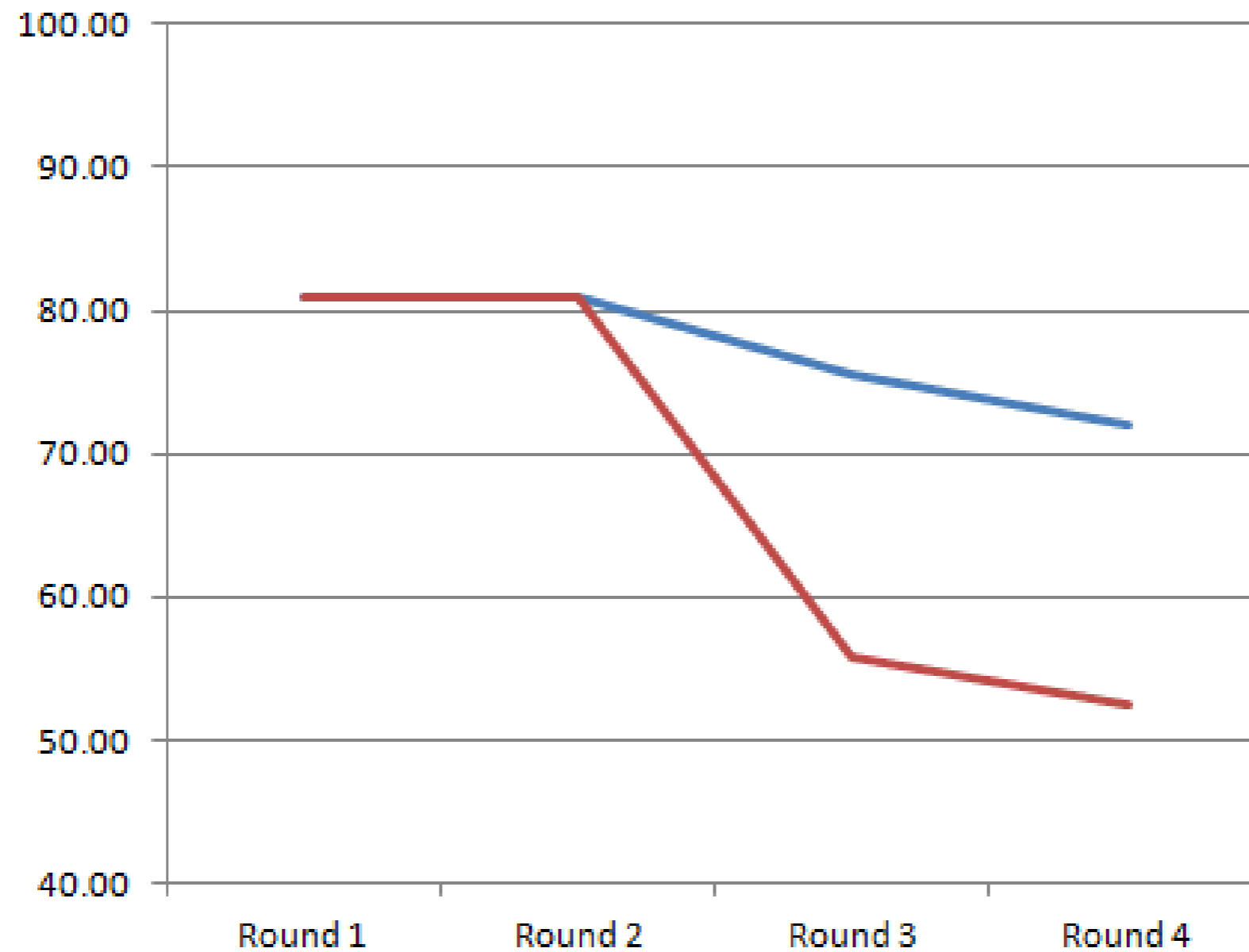
What is the impact on developers' behavior?



Average parking provision



'Expected' parking provision



Conclusions

- Planning regulations for parking (partly) result of undefined property rights
- Assigning property rights enables potential efficiency gains
- But: game shows that potential may not used to full extent
- Powerful force of 'soft' institutions? Or wrong players?