

Tax Increment Financing as a tool for public infrastructure development

Findings from a simulation experiment

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Background

Difficulties in financing area development:

- Standstills in development as result of economic crisis
- From active land policy (municipality as developer) to more involvement of businesses / local owners

New instruments required: Tax increment financing (TIF)?

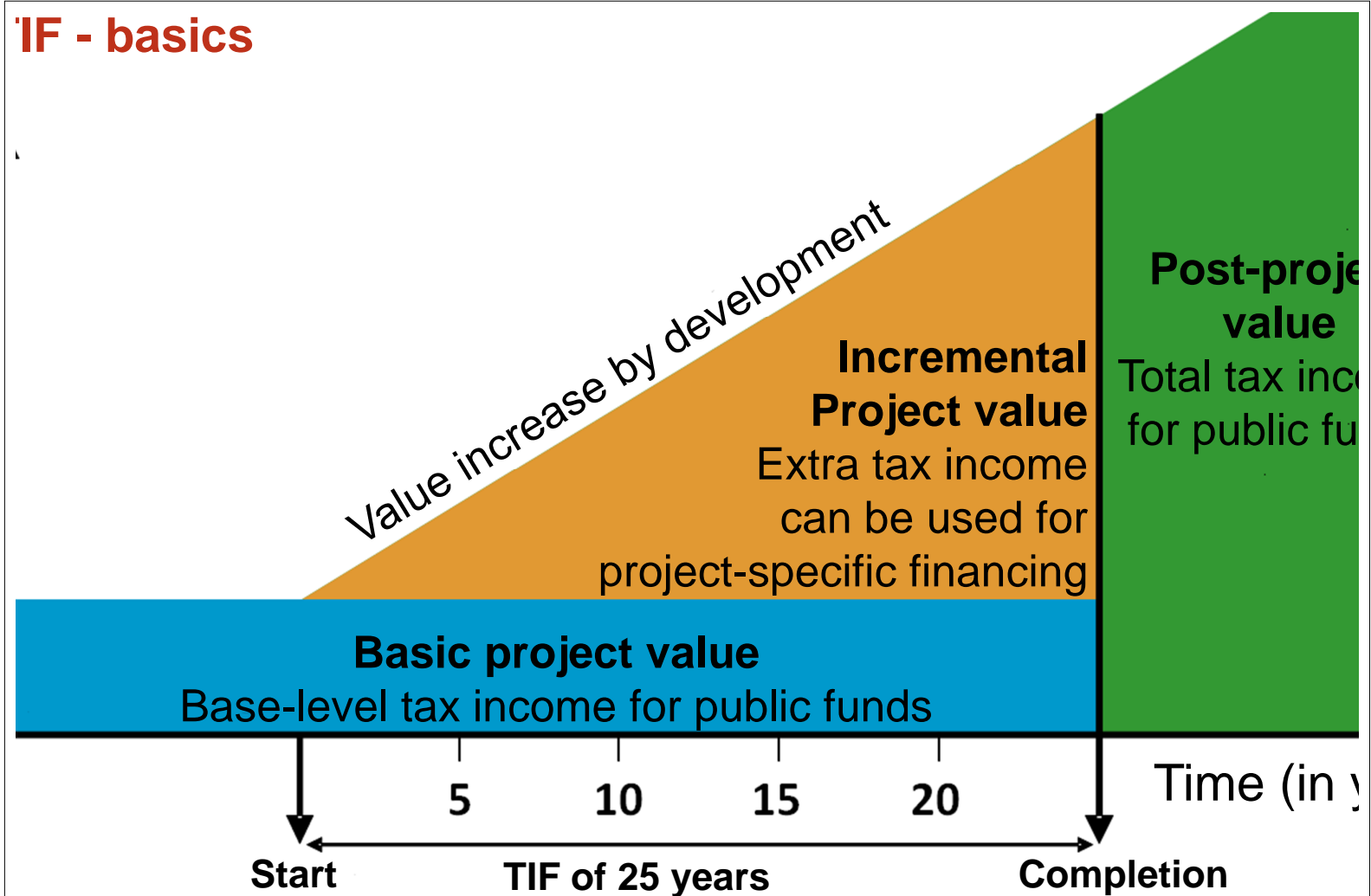
Pre-finance investments in area by future tax revenues generated by investments

Introduced in 1950s; popular in Anglo-Saxon world

TIF is currently not applied in the Netherlands, therefore unclear:

- roles of municipality and private developer
- consequences for program to be developed
- distribution of contributions to TIFs

TIF - basics



Research objective

TIF has not yet been applied in the Netherlands:

Modification of TIF to Dutch context is not straightforward

Deeper insight in relation municipality-developer is required:

How will introduction of TIF change negotiations between municipalities and private developers in area development?

- How do (public and private) contributions to TIF affect the program to be developed?
- What is the role of information availability in such negotiations?
- How does communication affect the negotiations on TIF?

Experimental design (1) - Hypotheses

On contributions and program to be developed:

- Municipalities provide higher contribution to pre-investment if more social housing is included in program.*
- Private developers provide higher contribution to pre-investment if more expensive housing is included in program.*

On information availability and communication:

- If information on payoff structures is available, negotiations will be more efficient and will result in better balanced public and private contributions.*
- If communication is allowed, negotiations will have a greater chance to result in an agreement and will result in a better balance between social and expensive housing in development program.*

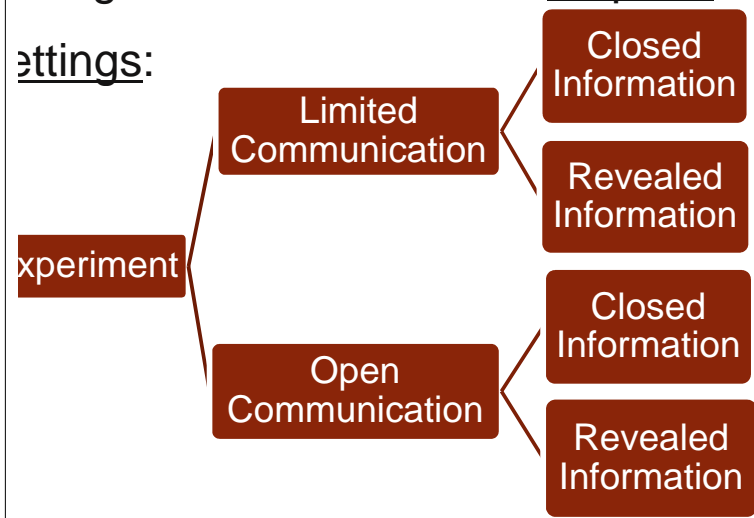
Layers: Municipality & private developer
 mediated by:

- area development professionals
- students urban planning (control group)

Negotiation:

- housing program; mix of social and expensive housing
- financial contribution to pre-investment
- no agreement: no TIF and no profit

Settings:



Revealed information

Tax Increment Financing of expensive housing
Tax Increment Financing of social housing

Municipality		Private developer
Public Benefits from expensive housing/unit	10	Development costs/house unit
Public Benefits from social housing/unit	20	Selling price/unit of expensive housing
		Selling price/unit of social housing

Closed information

TIF outcome	Total house can be developed
Tax Increment Financing of expensive housing	
Tax Increment Financing of social housing	



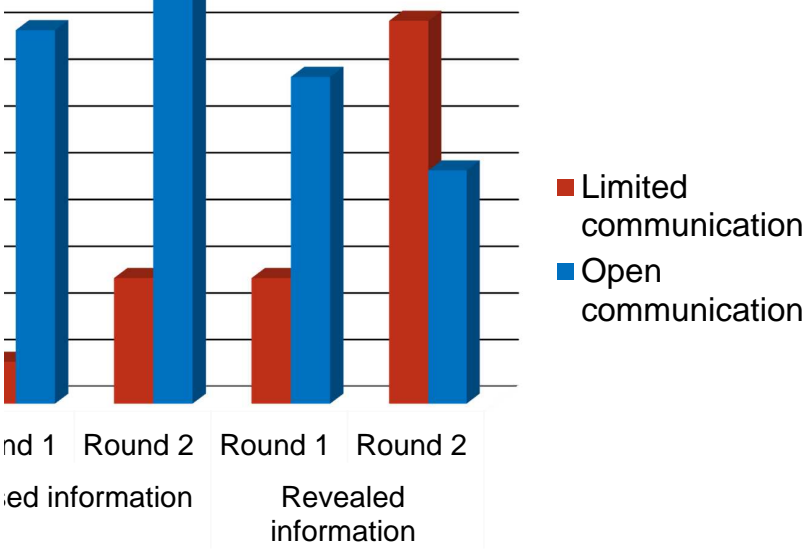
Limited communication



Open communication

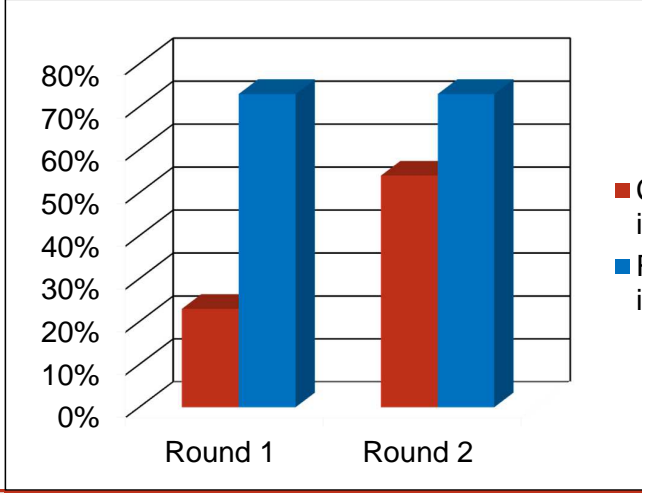


- Communication influences number of agreements, Especially for closed info, why?
- Players choose to share info through communication
- If info is revealed, communication becomes less important



Agreements (students; limited communication)

results in round 2 through learning:
 the negotiations: better accustomed to TIF,
 negotiation setting and procedure:
is easier if you are more accustomed to the negotiations

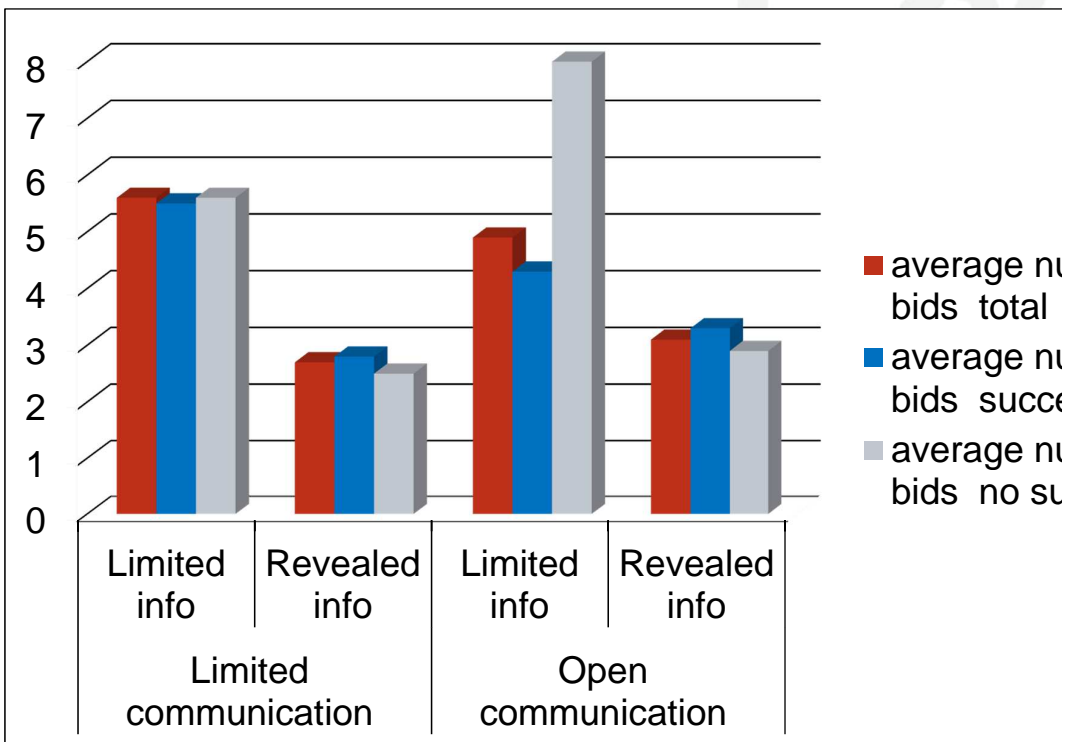


Bids in total, for successful and unsuccessful negotiations

revealed info limits amount of bids in negotiation

low amount of bids revealed info can also be ascribed to player strategy:

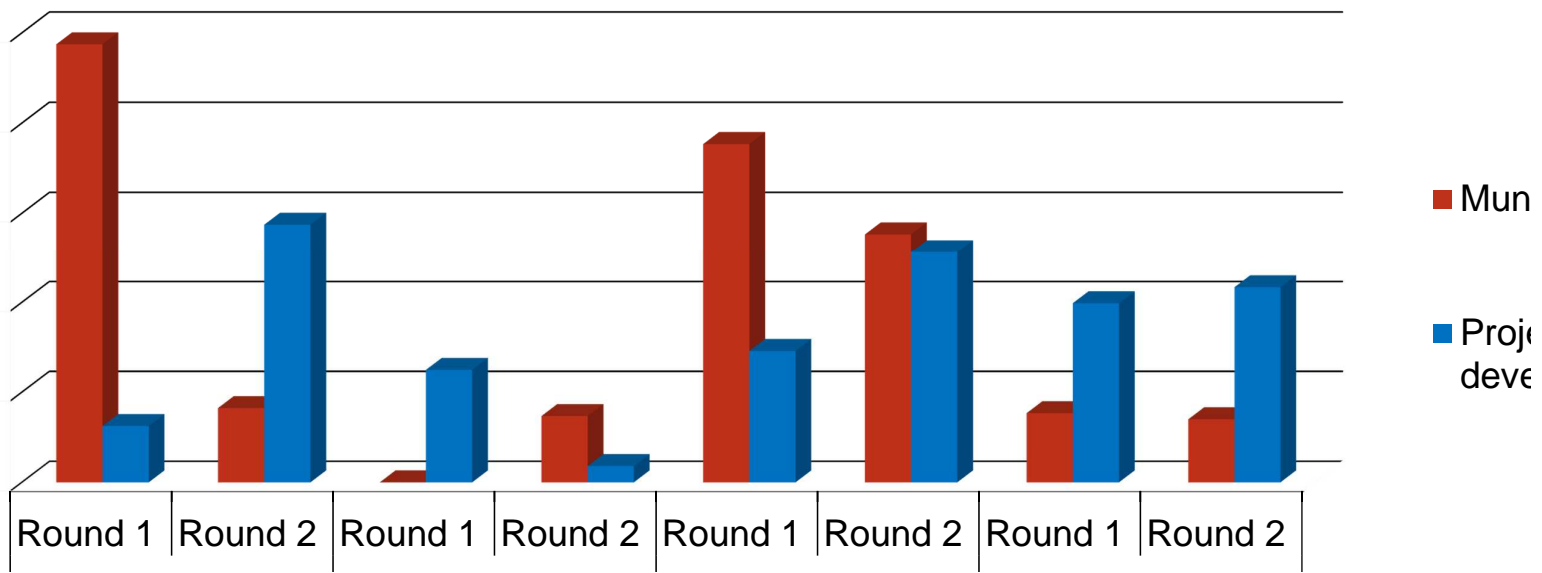
strategy: wait until there are only 10 seconds for negotiation, cause then the opponent tends to accept to prevent him/her from saying nothing



age profits of players

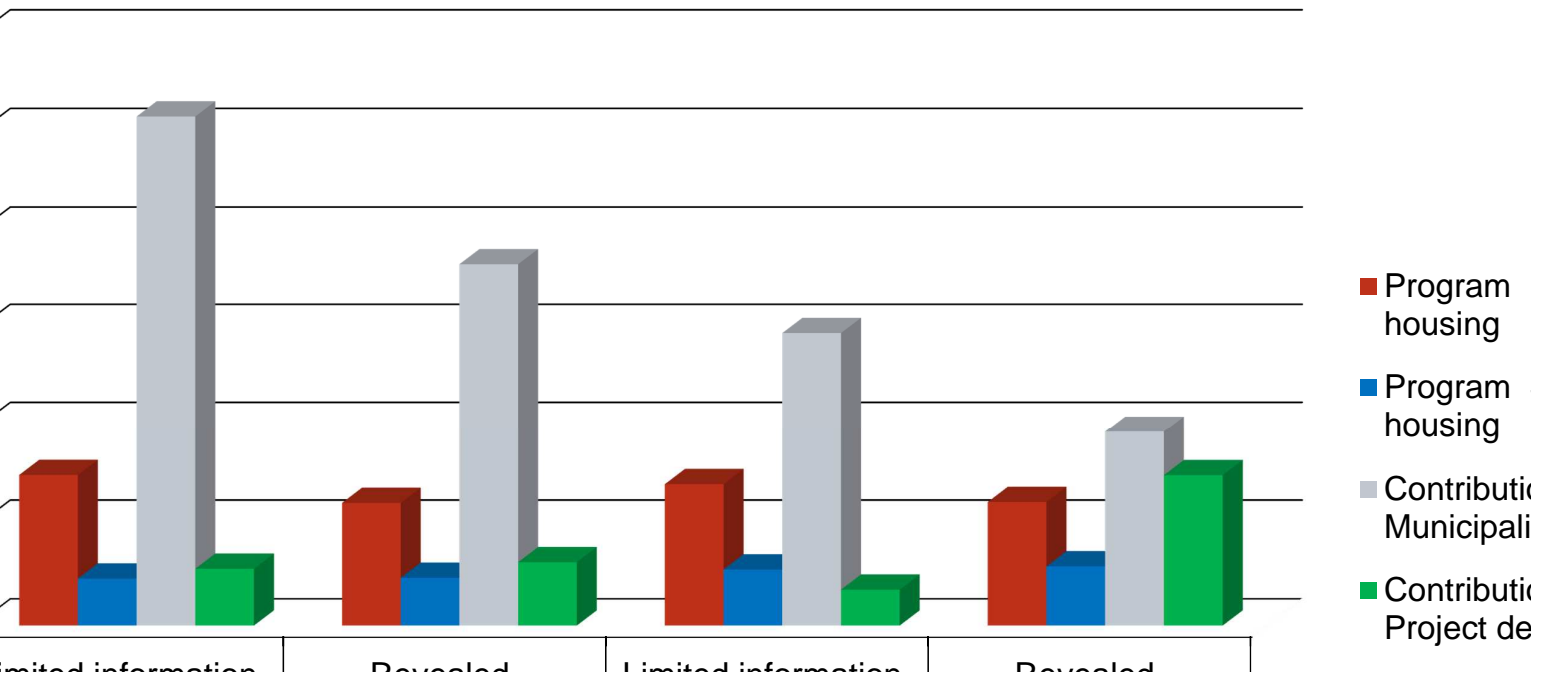
negotiations do not commonly end up in equal profits
 general, open communication brings profits closer together

however, only open communication - limited info, profits really approach each other
 why? Participants often decided to share information voluntarily, leading to better negotiations and results than in 'forced' revealed info setting



program remains similar, but municipality decreases contribution
 revealing info strengthens negotiation position of municipality
 social housing increased if communication allowed:

Municipality aim more at developing social housing, than gaining profits: *"I have tried to develop social housing as much as possible, while preventing to get a loss on the development"*



CONFIRMED

thesis 1: *Municipalities provide higher contribution to TIF pre-investment if more social housing is included in program*

contributions municipality considerably higher than private developers
direct relation between higher contribution and more social housing
municipalities cut profits for social housing → willing to invest in more social housing

REJECTED

thesis 2: *Private developers provide higher contribution to TIF pre-investment if more expensive housing is included in program.*

private developers seek profit, i.e. return on investment.
private developers only increase their contribution to reach an agreement: developers contribute necessary minimum to please municipality
if agreement developers contribute less; get a profit equal or higher than municipality
reverse hypothesis also rejected: private developers do not lower contribution if more expensive housing is included.

Results: hypotheses (2)

CONFIRMED

hypothesis 3: *If info payoff structures available, (1) negotiations are more efficient and (2) will result in better balanced public and private contributions.*



confirmed:
players need less bids to come to an agreement
known profit margins reduce trial-and-error in negotiation

unclear:
if revealed info contributions better balanced than closed info
but only in open communication the contributions become more or less equal

CONFIRMED

hypothesis 4: *If communication allowed, negotiations have greater chance to reach an agreement and have better balance between social and expensive housing.*

open communication positively influences chance to reach agreement
amount of social housing is considerably higher in open communication settings

Discussion

Communication helps to establish social housing program,
but, at the expense of municipal profits

Information sharing can speed up negotiation processes and cut down TIF transaction costs
but, practical limitations to open-book negotiations (competition-sensitive info!)

Multi-fold objective (economic and social) of municipality in TIF provides private
developers opportunity to reap benefits from public investments

Recommended research into:

Structured assessment of different TIF models (experiment only one TIF-model)
Guarantees and safety precautions in TIF (deal-makers and –brakers)
Role of communication on negotiation strategies in area development

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