Objective: Analyze and predict the occurrence of conflicting interests in redevelopment processes, and offer recommendations concerning process governance interventions.

Motivation: Accelerate Brownfield Redevelopment.

Data: On-line survey with experts.

Methods: In the first phase, we indentified the most important REF by Fuzzy Delphi and create the utility functions for different developers in Conjoint Analysis. In the second phase, these utilities are used as an input for the auction in Game Theory environment. The conclusions that derive from the Game Theory analysis will advance a bidding protocol.

Expected Results: Design and select the most suitable bidding games (ex. war of attraction, dollar auction, vickrey auction) for urban development practice. The conclusions of the game selection and rules are used to advanced existing protocol thus making the research design operational.

Implications: Suggested bidding model eliminate long negotiation processes and involves more parties thus achieving the greatest value for the developed land. Servicing and reparcelling the land is done by private developers and/or end users. This more freedom in development is regarded as an additional incentive necessary for the Brownfield Redevelopment.

Land development strategy | Initial situation on land market | Acquisition of a Brownfield | Servicing and reparcelling the land | Acquisition of building plots |
---|---|---|---|---|
(5) Biding model | Original owner(s) | Municipality acquires all land | Private developers; end users | End users |

Research Design:

Research phase 1

Fuzzy Delphi Method:

Acquisition attributes: 5-8 attributes from FDM analysis

Project in brief attributes:
1. Parcelation
2. Land Use distribution

Conjoint Analysis:

U_{developer} = U_{current} + U_{futur} + U_{ostatus}

U_{current} = Acquisition
U_{futur} = Project in brief
U_{ostatus} = Owning the land or not

Research phase 2

Game Theory:

1st round

Evaluate alternatives: Umunicipality1 = U_{futur}

Eliminate alternatives: U_{futur} < satisfaction

2nd round

Evaluate alternatives: Umunicipality2 = B(bid)