

Buzău

Determinants of House Prices in Romania

how to measure House Prices in a new EU state

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Outline

- Romania: very short history
 - EU criteria: an effective monitoring system for the land and real estate markets
- Real Estate Market Information System (REMIS)
 - observed data
- Results
 - estimated data
 - house price model
 - first results

Very short history

- After 1990 private properties rights were reinstated to their pre-1940 situation.
- 2007: member of the EU
- GDP growth 2008 in real terms 7.1%, one of the highest rates in Europe



Ceausescu's Palace

Intermezzo: Huge investments

Underground Universitatii



May 2008



May 2009

Housing market

- Transition to a market economy, the housing stock would be transferred to private ownership.
- These new registrations require a well-functioning cadastral system. Romania: over eight million housing units
- Homeownership exceeds 95%, which is higher than the 60% average in many West European countries.
- House Prices catching up rapidly, twice West European countries
- Significant statistical relationship between House Prices and its fundamentals

Data Quality

- Huge lag of information about quality of the individual properties, including the property rights
- 37m² , 2.7 rooms
- 72% apartments
- 2/3 no pipe water



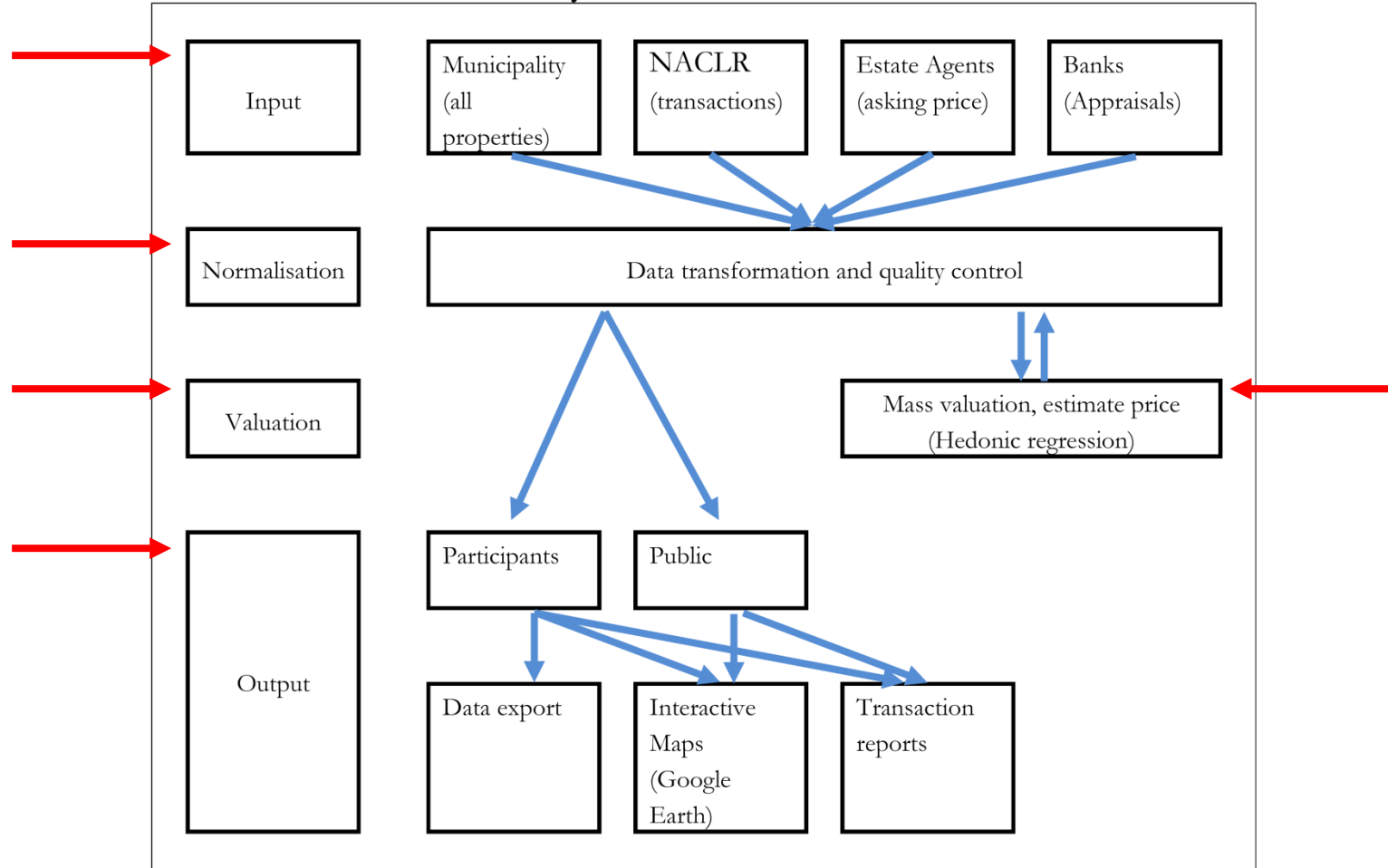
Street view in Pilot region Buzău

Valuation (REMIS project)

- By law, the Cadastre must provide a well-functioning cadastral system, including a set of databases, procedures and guidelines that enables a valuation process on the Romanian real estate market.
- For this purpose a software has been developed called REMIS (Real Estate Monitoring Information System).

REMIS structure

Basic structure of the REMIS system



Source: REMIS Buzău / operations OTB Research Institute Delft University of Technology

REMIS

Valuation Process

Observed
House Quality
House Price

} Sold or
On-the-Market

Hedonic regression

- 'some' characteristics
- real House Price
- Pilot region Buzău

Estimated
House Price

} All properties



Visiting a Estate Agent

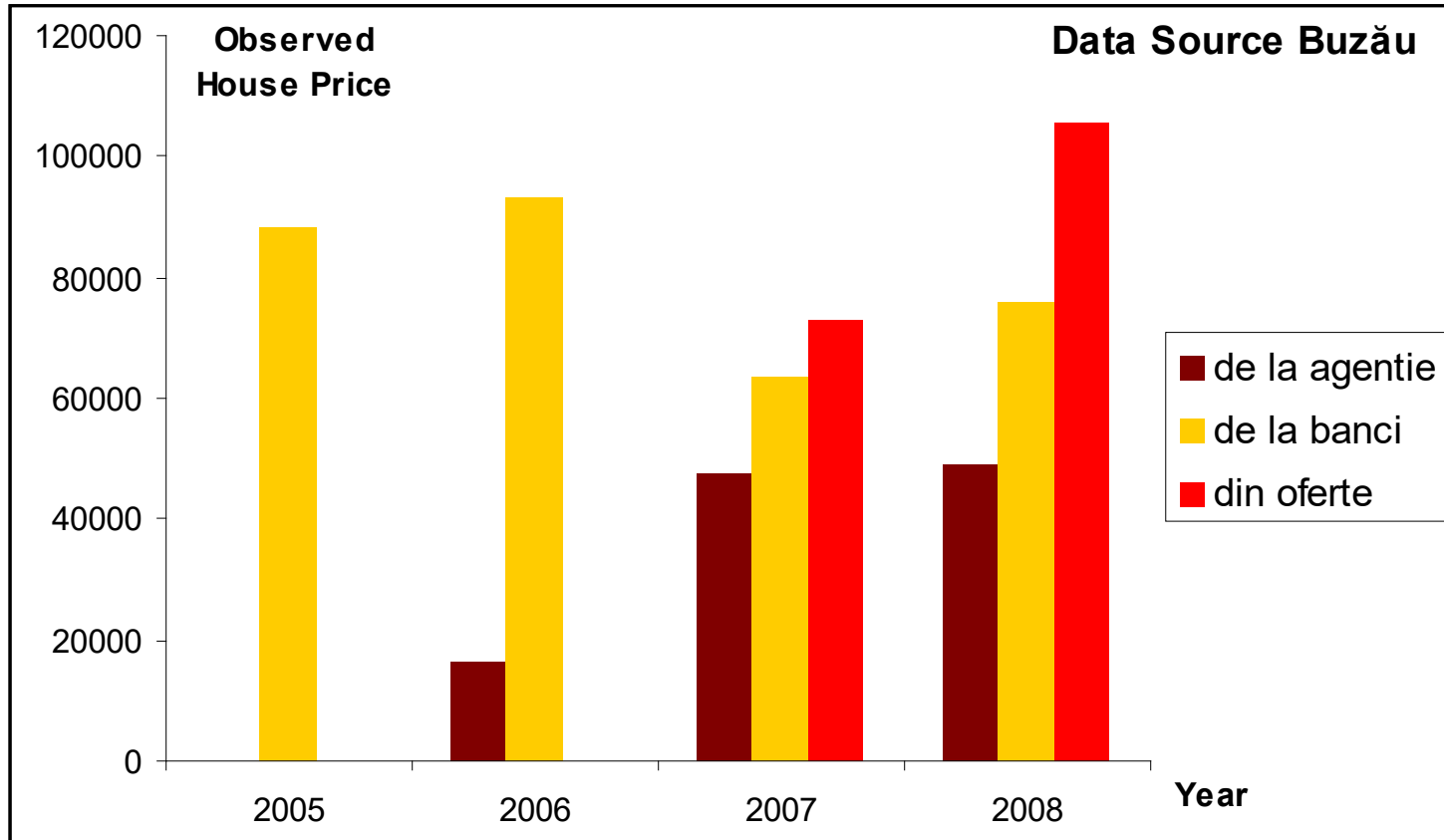
Observed data: gaps in Price Level

Transaction Price < Appraisal value < Offer Price

(de la agentie)

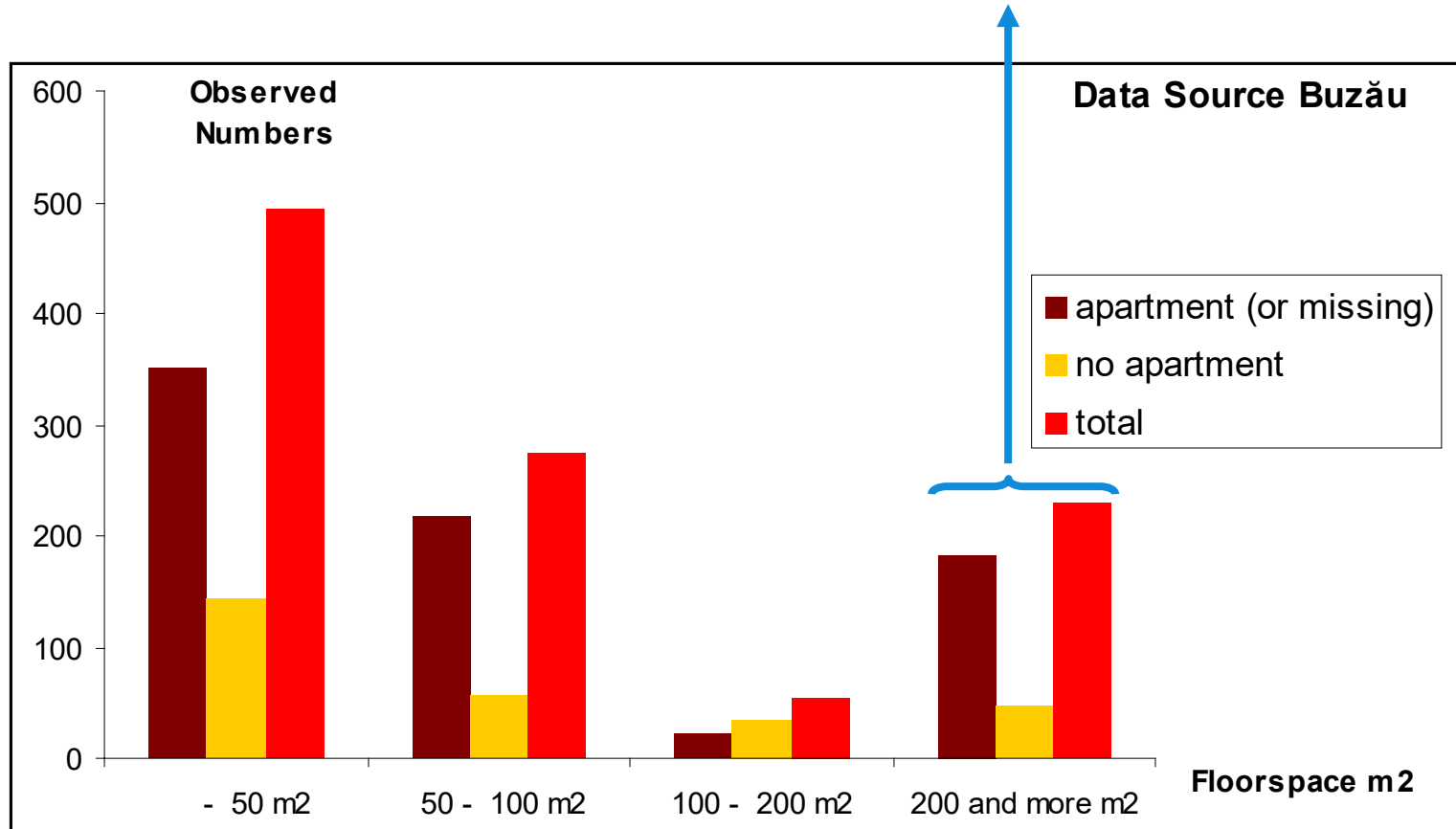
< (de la banci)

< (din oferte)



Observed data: Measuring

Mean Floor space category 200m² and more = 7,516 m²



Observed data: Conclusion

- In potential, good data
- However,
 - Data is incomplete
 - Consistency problems
- Future
 - Data consistency
 - Data quality control



Bucharest

Hedonic regression

Model based on:

- Data source
- House Type
- Neighbourhood
- Floor space
- Number of Rooms
- Year of Construction

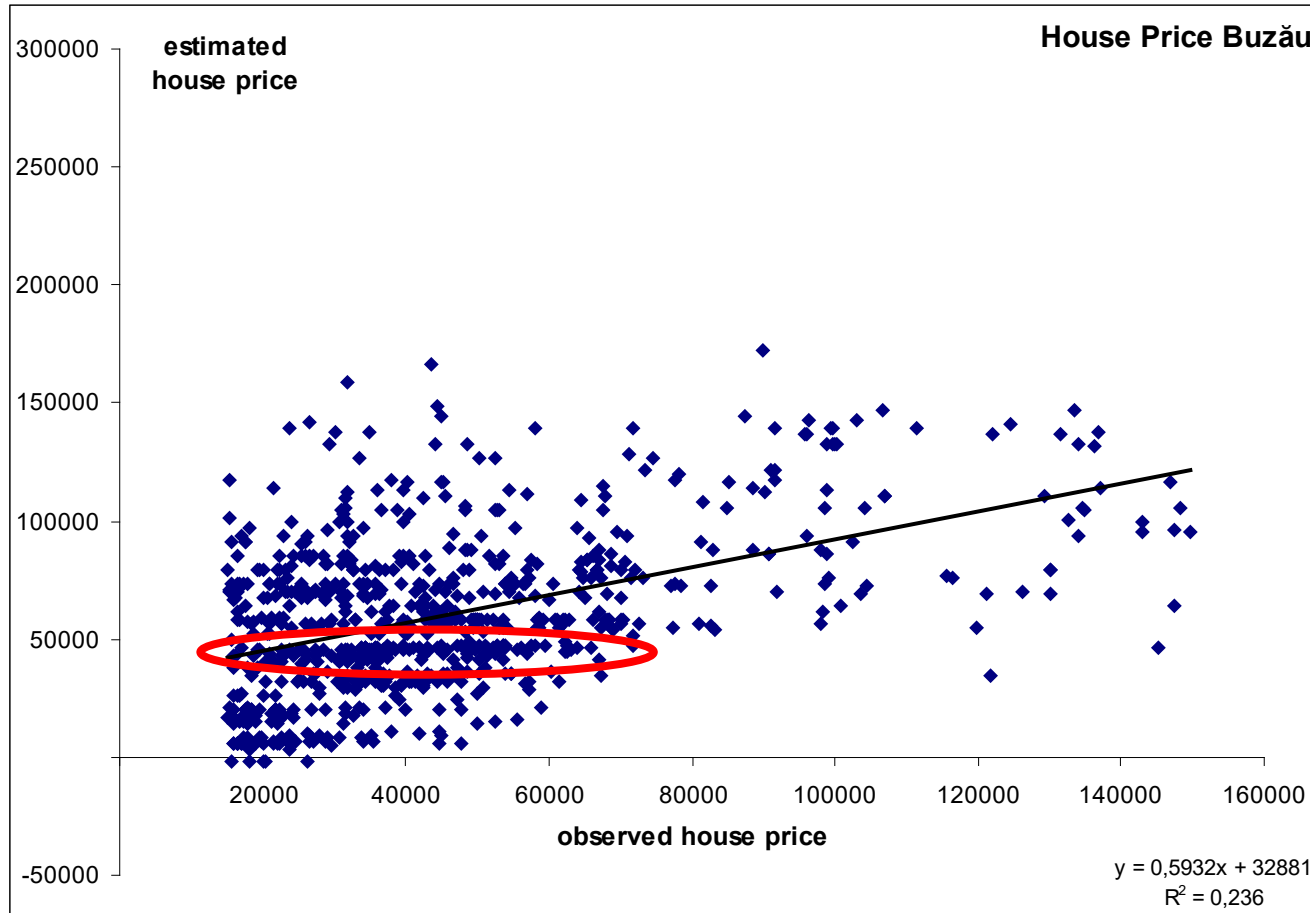
Hedonic formula for valuation in Buzău ($R^2 = 0,20$)

Estimate: real house price (in euro, 2005)

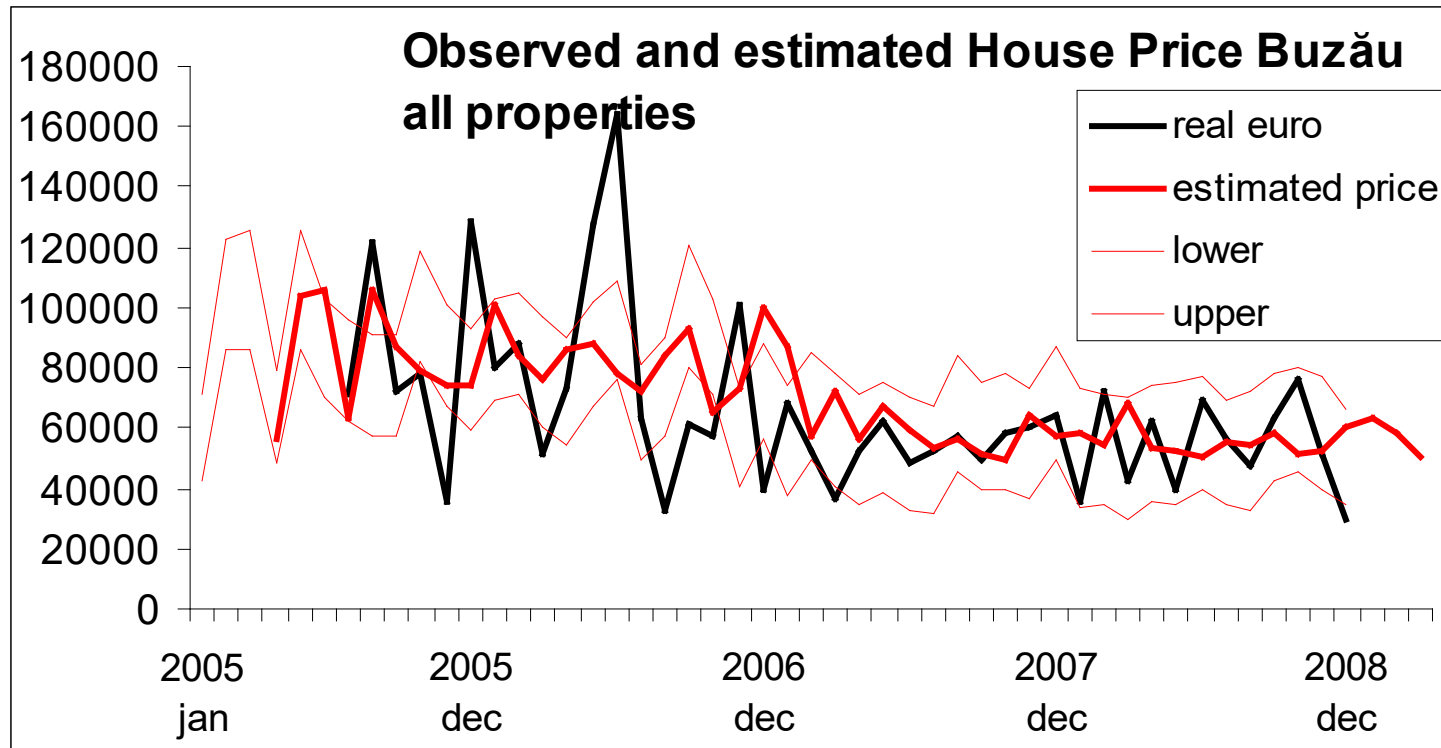
	Coefficient	Sig
(Constant)	10512	0.38
Source		
Agenti	0	-
de la banci and din ofert	26124	0.00
House Type		
no apartment	75736	0.00
Neighbourhood		
Nicolae Balcescu	0	-
Orizont, Simileasca, Unirii	-29702	0.08
Crang, Dorobanti	-17867	0.25
Constitutiei, Marghiloman, Mihai Viteazu	-7265	0.50
Democratiei, Episcopiei, Independentei, Zona Centrala	4011	0.70
Brosteni, Nicolae Titulescu, Obor, Posta	27129	0.03
Floor space		
Floor m ² 0 - 50 m ²	0	-
Floor m ² 50 - 100 m ²	600	0.92
Floor m ² 100 - 200 m ²	15039	0.20
Floor m ² 200 m ² and more	27153	0.00
Rooms		
1-2 room	0	-
3 rooms	11910	0.05
4 or more rooms	26622	0.00
Year of construction		
before 1975	0	-
1976 – 1980	2592	0.73
1980 - thru 2008	5270	0.40

Source: offer database Buzău / operations OTB Research Institute Delft University of Technology

Results I



Results I



Conclusion

- Model: weak house price model
 - today results show the potentials of REMIS
- Future
 - Data consistency
 - Data quality control
 - Valuation all properties in Buzău
 - Spread out over Romania



Bucharest

Finish



Economic Growth