



The in-transparency of the Amsterdam office market

The underlying incentive and effective rental price development

A quantitative research into the market dynamics and spatial segmentation of the Amsterdam office market over the period 2002-2012

IVBN Thesis Presentation

Ruud Boots

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Content

- I. Problem introduction & definition
- II. Transaction Data overview & Effective rental price calculation
- III. Results
- IV. Conclusions



I - Problem introduction & definition

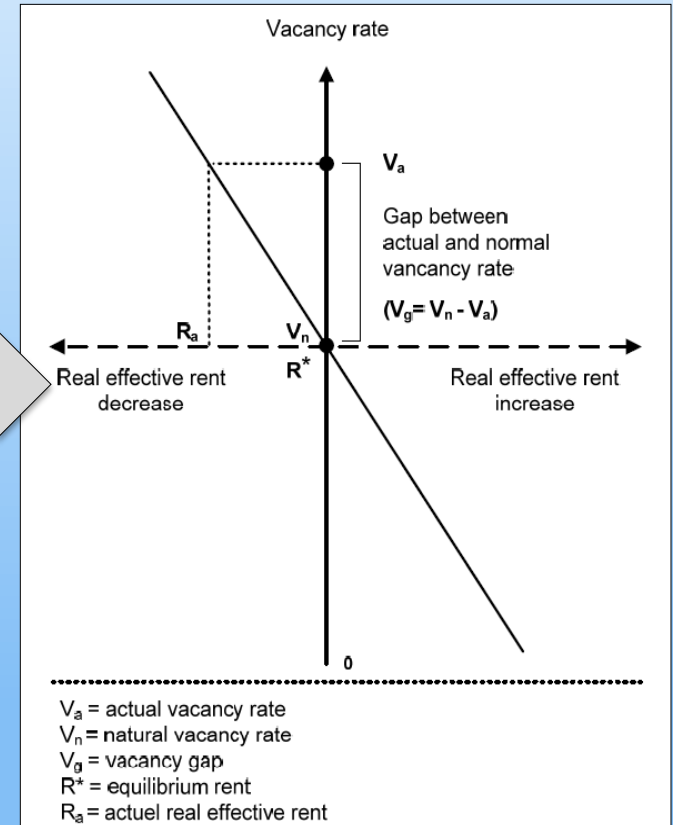
Problem introduction

Paradoxical situation



Real Face rental price development vs. vacancy development

Theoretical relation

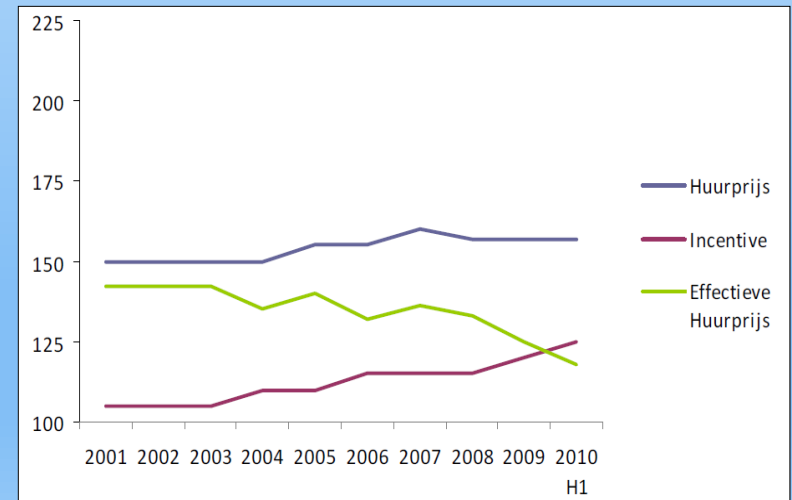
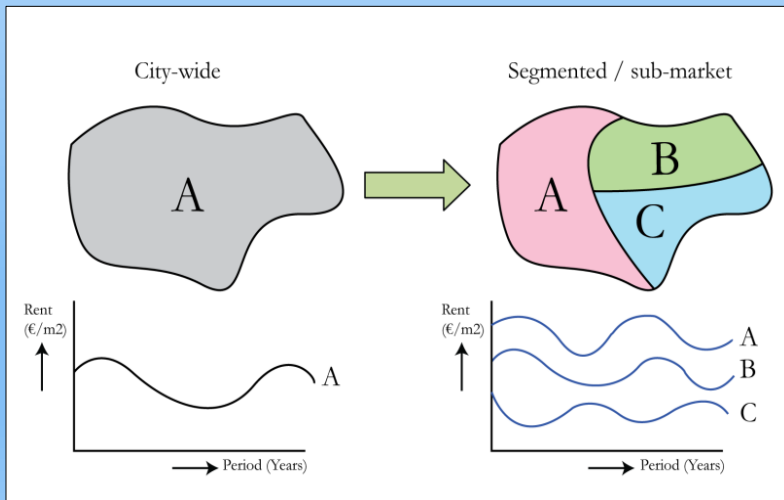
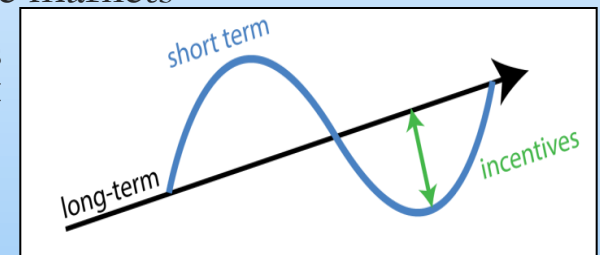


Rental adjustment equation (Hendershott, 1994)
Schematically illustrated by Koppels & Keeris (2006)

Problem introduction

Explanation consequences of the limited/in-transparency

- 1. Spatial and structural segmented structure of real estate markets
 - Scale of analysis might not reflect the actual market process
- 2. Barrier third parties & Competitive functioning market
- 2. In-transparency of the Amsterdam office market
- 3. Research implications
 - a. Face rental prices published in the market
 - b. Reported vacancy rates might not reflect the prevailing market conditions



Problem definition

Main research questions

- 1. To what extent does a price index based on face rents, provide an accurate reflection of the market dynamics in the Amsterdam Office market over the period 2002 – 2012?
- 2. Do spatial market segments differentiate in market dynamics in the Amsterdam office market over the period 2002-2012?

Research Aim

- 1. Set the next step in ‘solving’ the transparency problem in the Dutch real estate market, by giving openness about the underlying effective rental price and incentive development in the Amsterdam office (sub-)market(s), in order to make the office market more accessible and competitive for outsiders, entrants and non-experienced participants in the market
- 2. Constructing a ‘(real) effective rental price index’ in order to provide an as market conform reflection of the market dynamics in the Amsterdam office market over the period 2002-2012



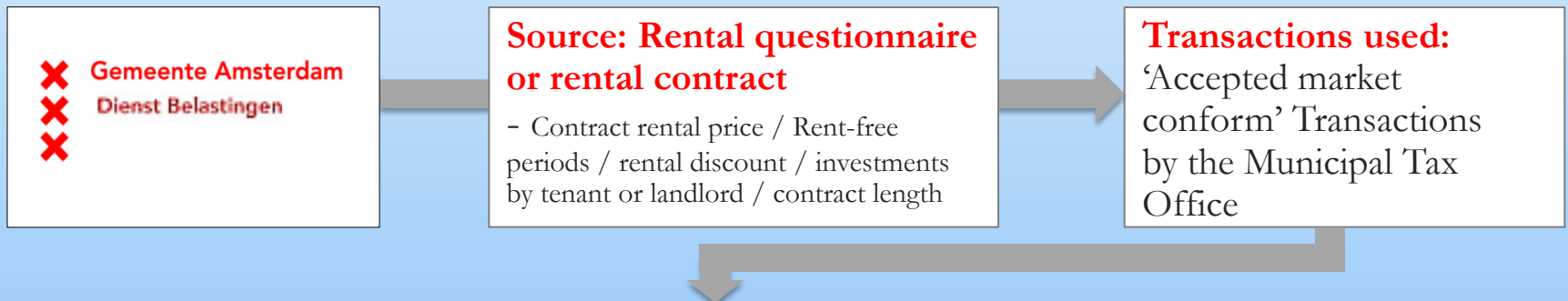
II –Transaction Data overview & Effective rental price calculation



Transaction Data overview

Transaction data overview

Transaction data 2002-2012



Database overview

Year	# of transactions	Transactions LFA < 500 m2	Transactions LFA > 500 m2	Transactions with a known LFA
2002	378	247	53	300
2003	315	213	45	258
2004	342	231	43	274
2005	269	194	39	233
2006	325	239	53	292
2007	341	227	67	294
2008	288	189	50	239
2009	228	167	34	201
2010	187	142	30	172
2011	157	113	32	145
2012	127	109	18	127
Total	2957	2071	464	2535

Transaction Data overview

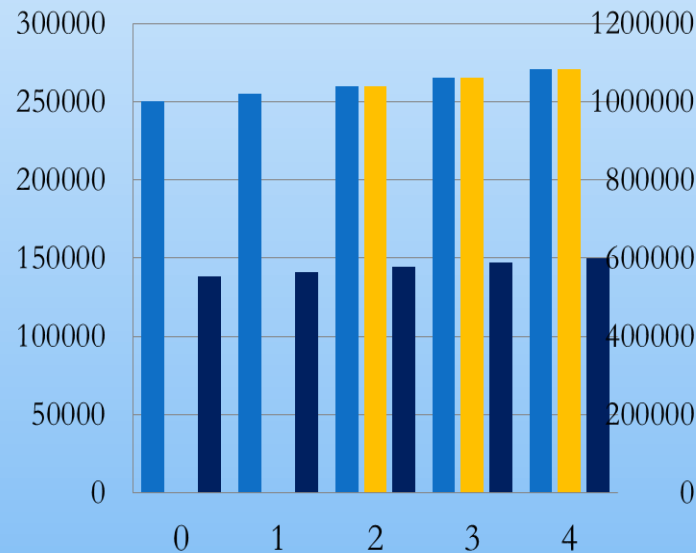
Calculating incentives & effective rents | DCF method

	Nominal Contract Rent excluding incentives	
Year	Rental income	NPV
0	€ 250.000	€ 250.000
1	€ 255.000	€ 481.818
2	€ 260.100	€ 696.777
3	€ 265.302	€ 896.102
4	€ 270.608	€ 1.080.931

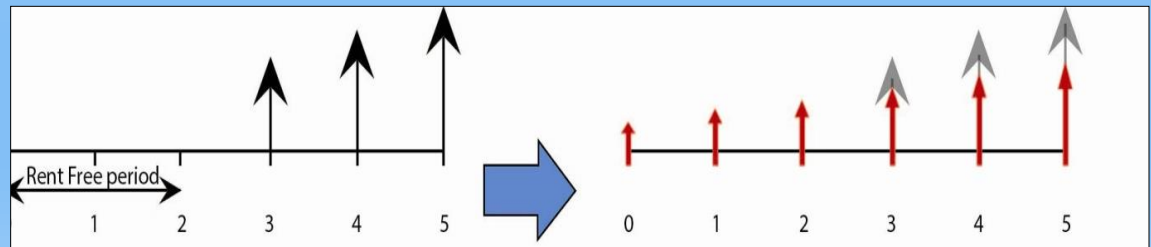
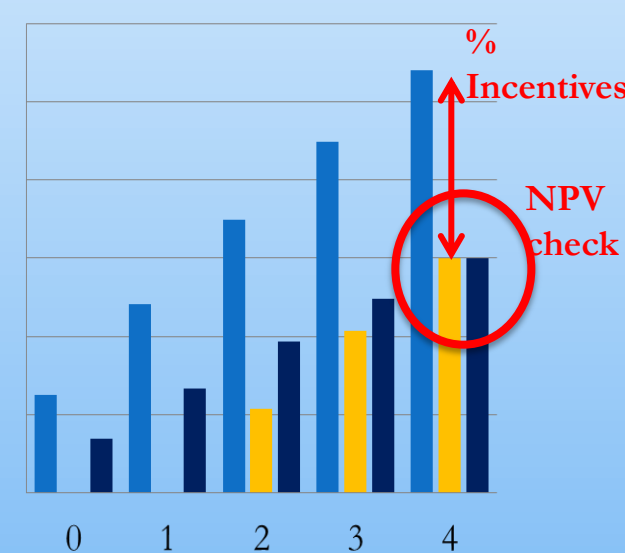
	Nominal Contract Rent including incentives	
Year	Rental income	NPV
0	€ 0	€ 0
1	€ 0	€ 0
2	€ 260.100	€ 214.959
3	€ 265.302	€ 414.284
4	€ 270.608	€ 599.113

	Nominal Effective Rent	
Year	Rental income	NPV
0	€ 138.564	€ 138.564
1	€ 141.335	€ 267.051
2	€ 144.162	€ 386.193
3	€ 147.045	€ 496.670
4	€ 149.986	€ 599.113

Cash Flow overview



NPV overview





III – Results

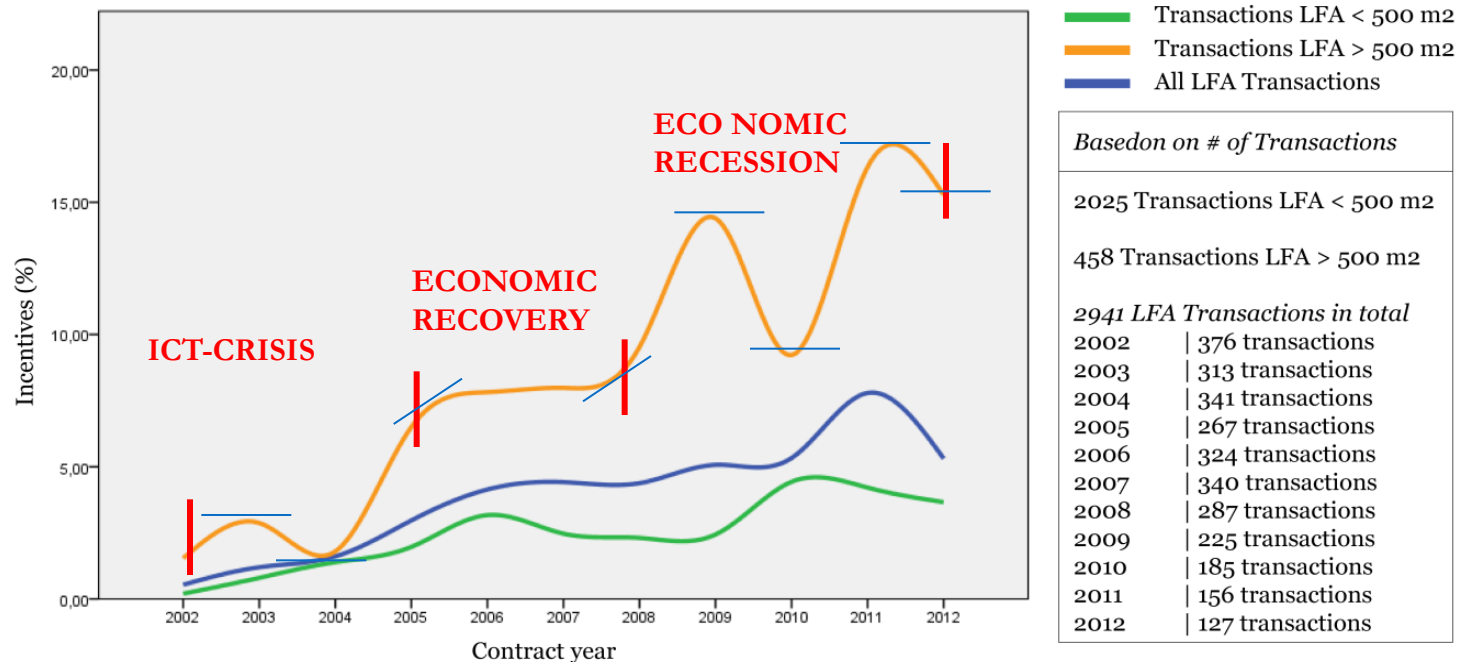
Incentive and (Real) Effective Rental price development

Development

Incentives in the Amsterdam office market

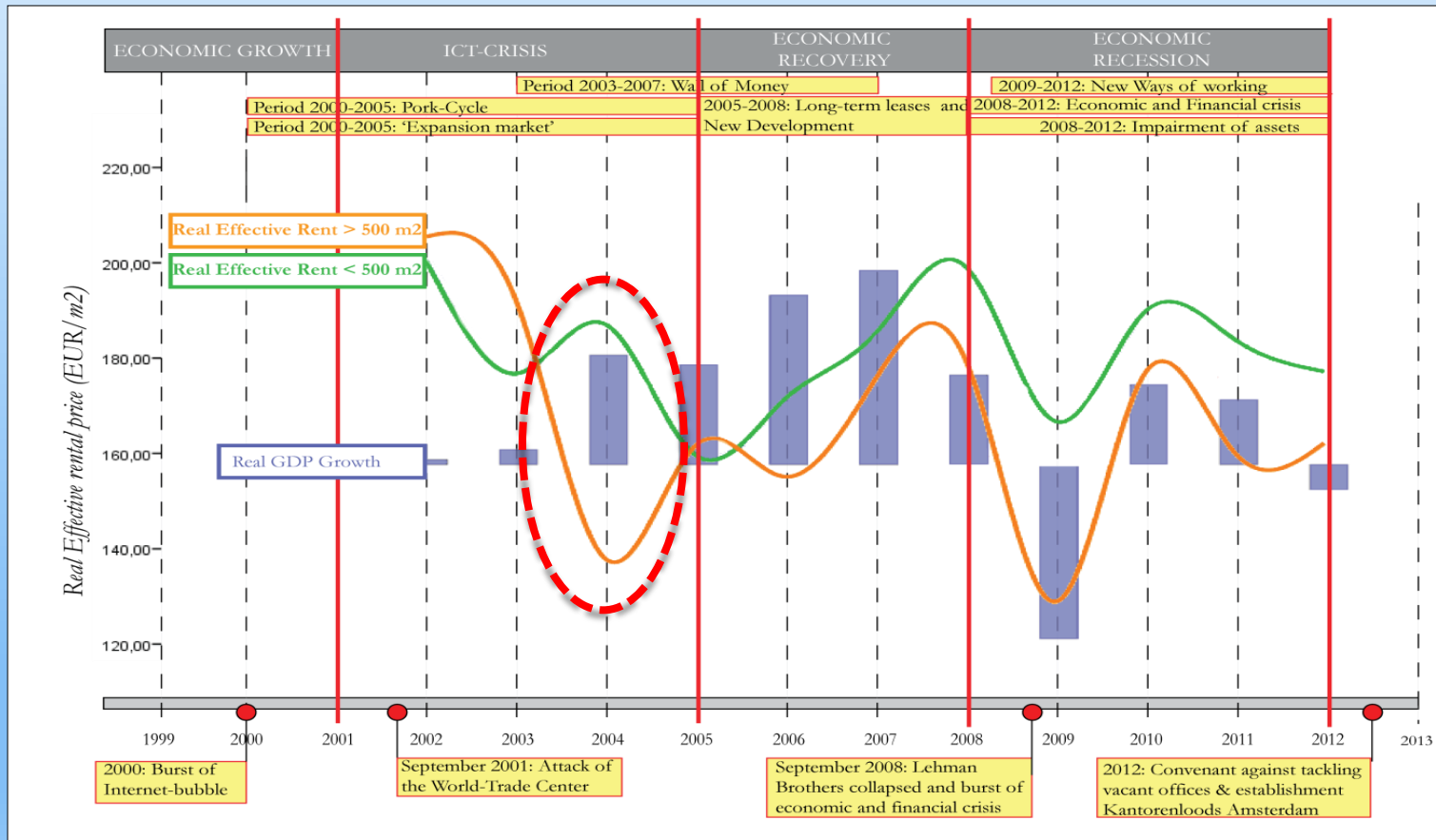
Incentive development in Amsterdam Office market

All Transactions, Transactions LFA <500 m2 & LFA > 500 m2 - Amsterdam Office market 2002-2012



Development

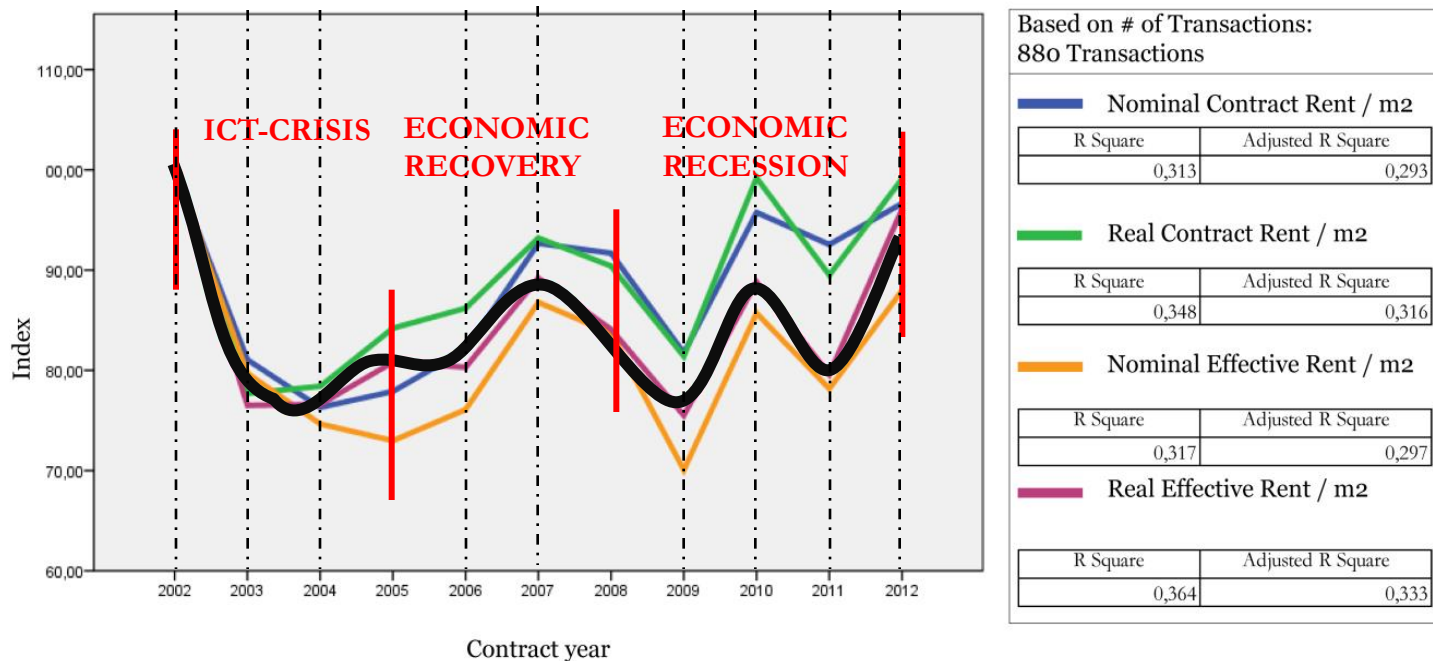
Real Effective rental price development



Development

Hedonic rental price indices – Market conform?

Hedonic Rental Price Index in Amsterdam Office market
All Transactions - Amsterdam Office market 2002-2012



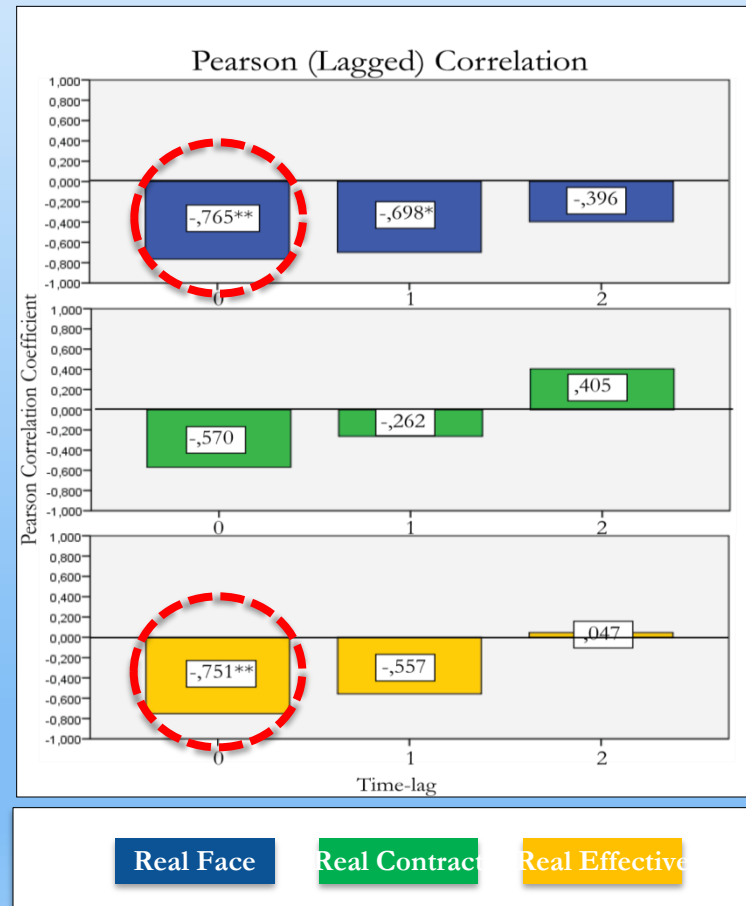
Rental adjustment

Face vs. Effective rental prices

Rental adjustment - Correlation

Vacancy & Rental price

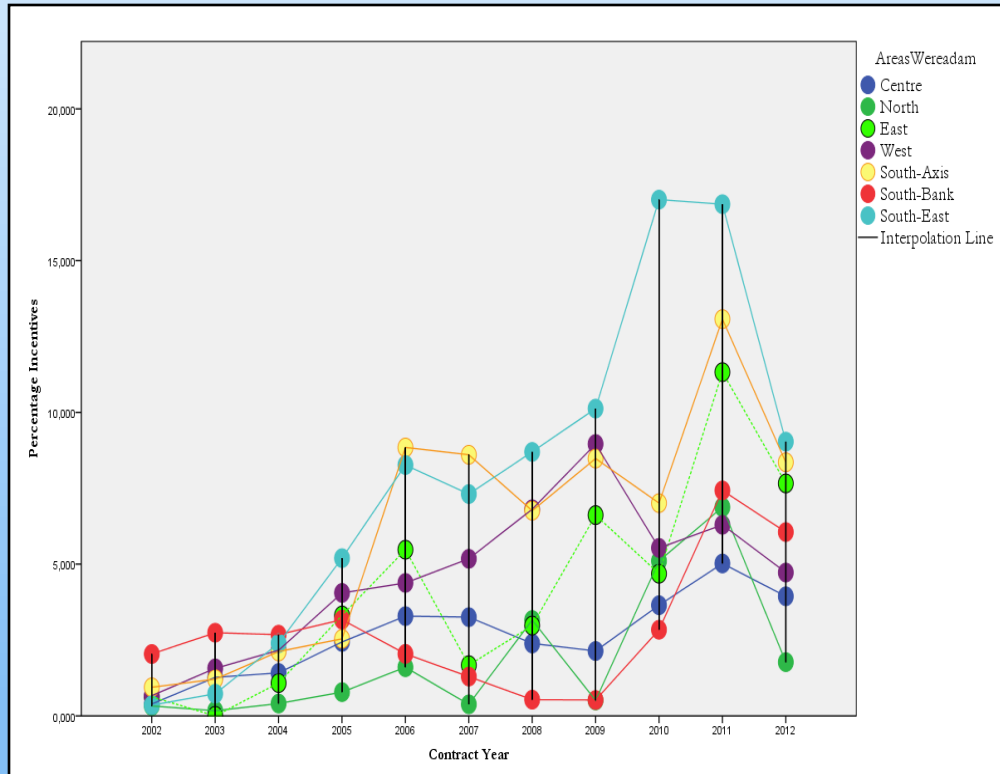
- Average Vacancy rate constructed
- Strong negative correlation between *real face* rental price and vacancy rate
- Strong negative correlation between *real effective* rental price and vacancy rate (in line with rental adjustment equation)
- Strongest correlation without time-lag (in contrast to earlier research Koppels & Keeris, 2006)



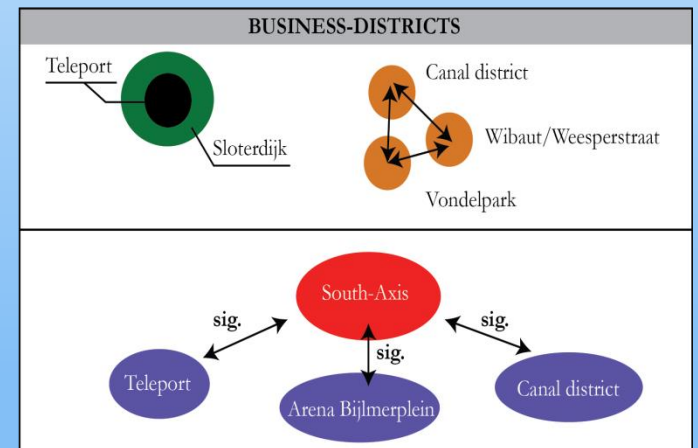
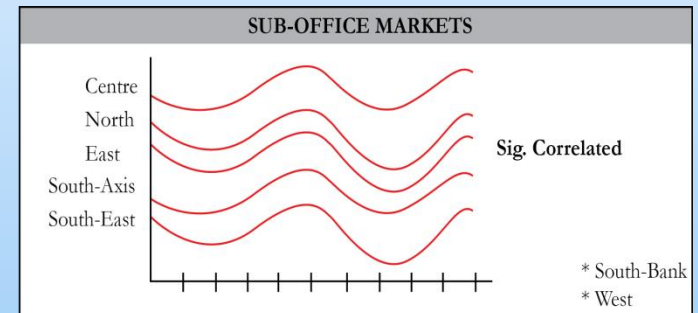
Spatial Segmentation analysis

Spatial segmentation analysis

Incentive development



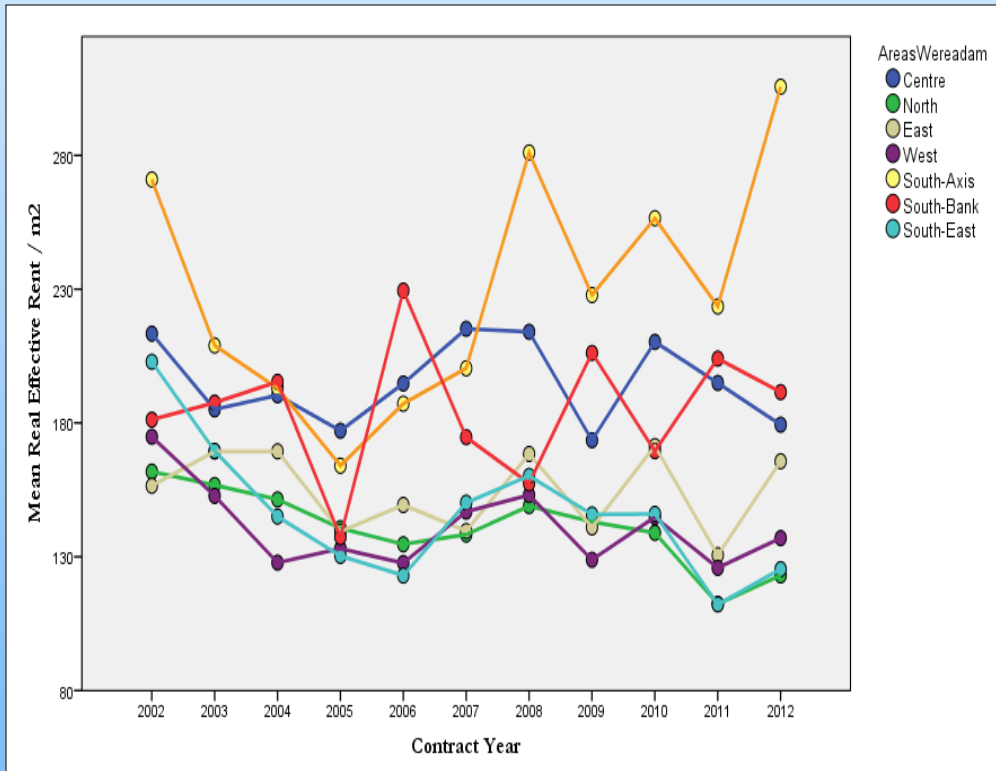
Sample 1 | Sub-office markets



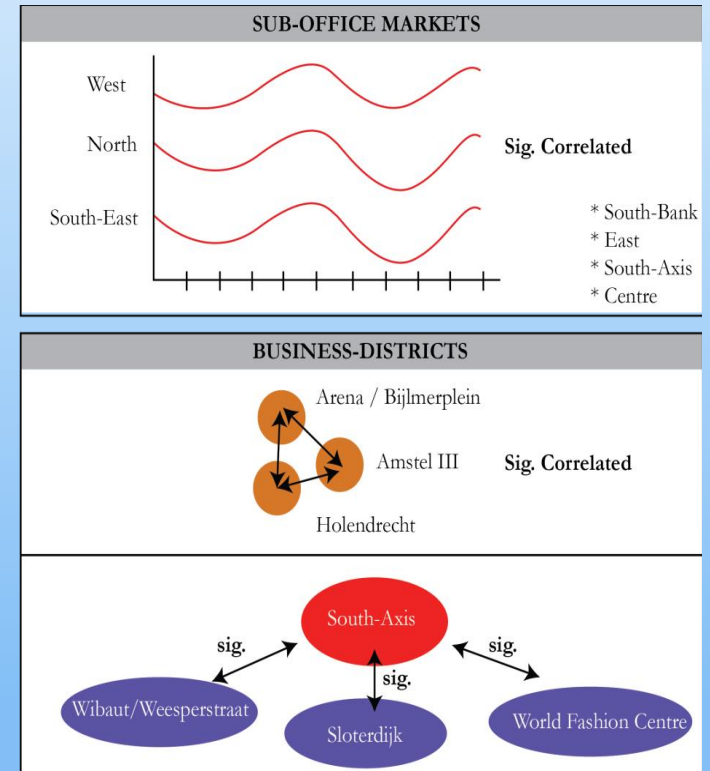
Correlation outcomes

Spatial segmentation analysis

Effective rental price development



Sample 1 | Sub-office markets



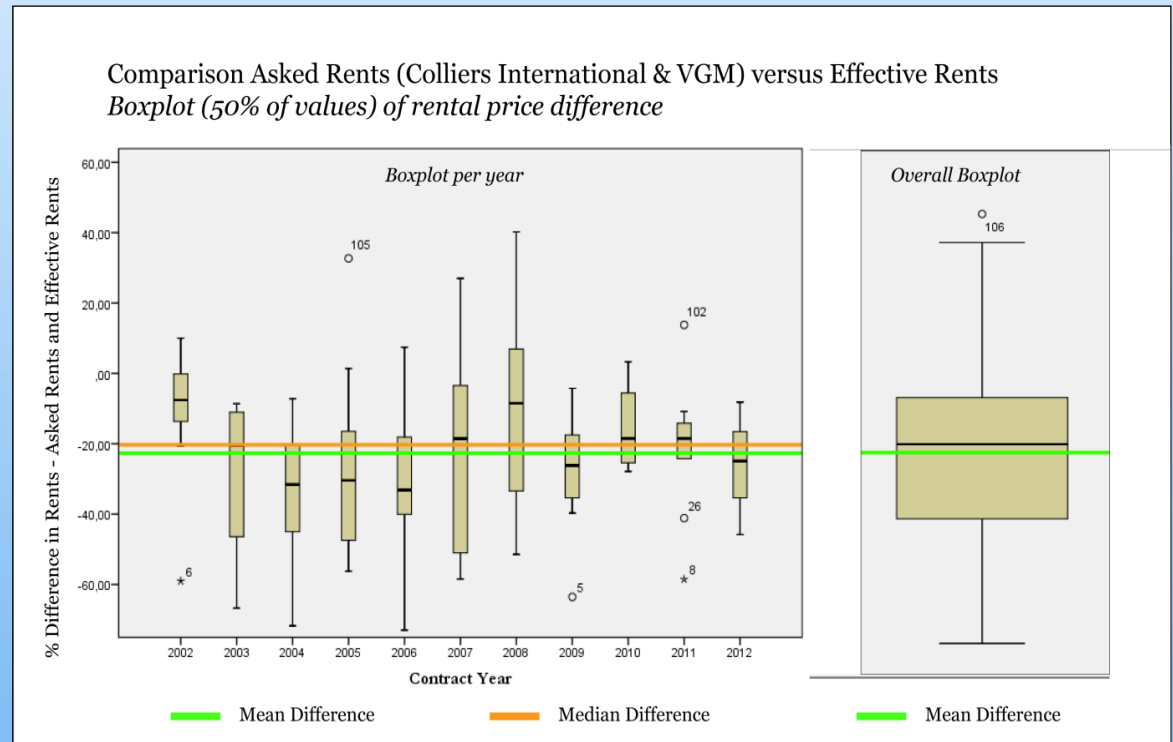
Correlation outcomes

“In-transparency” analysis – Market comparison

Transparency analysis

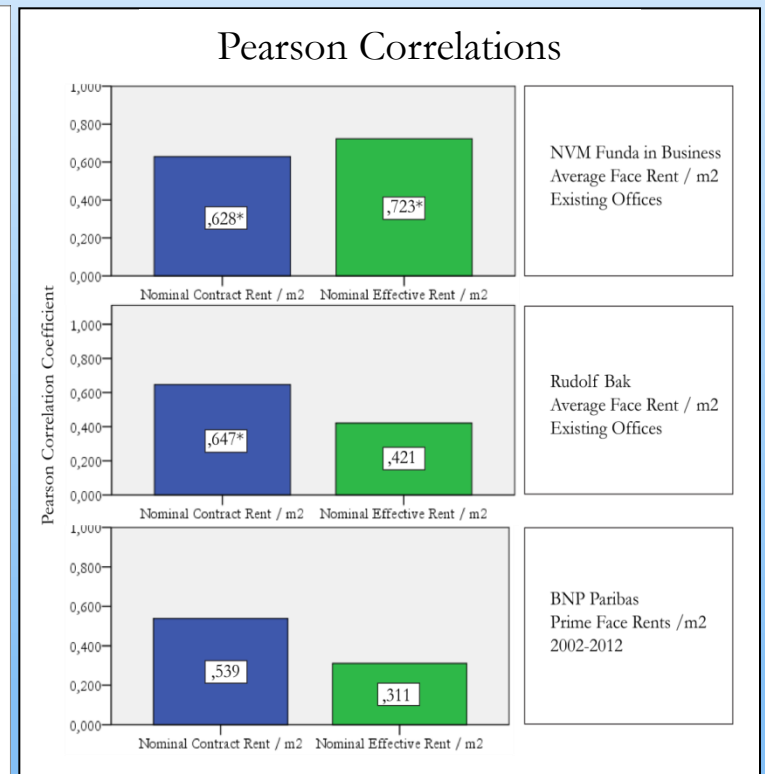
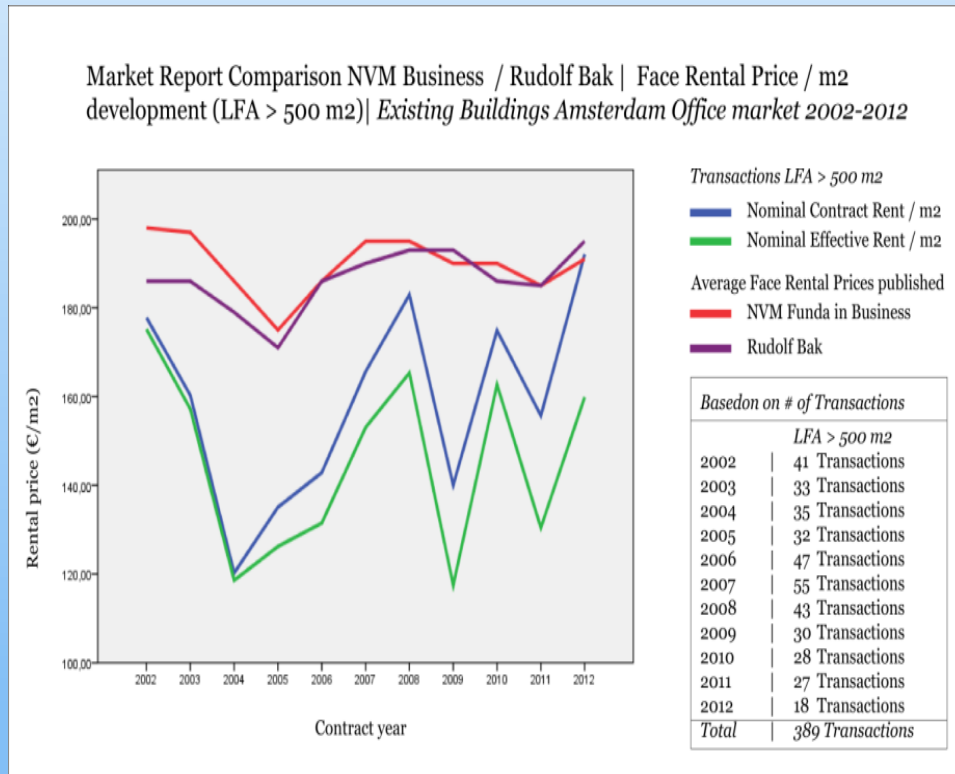
Individual transaction comparison

- Face rents: Colliers International & VGM
- Connected 238 of 454 transactions
- Deleted: transactions > 106 final accurate transactions
- Average difference 20%



Transparency analysis

Face rental price development comparison



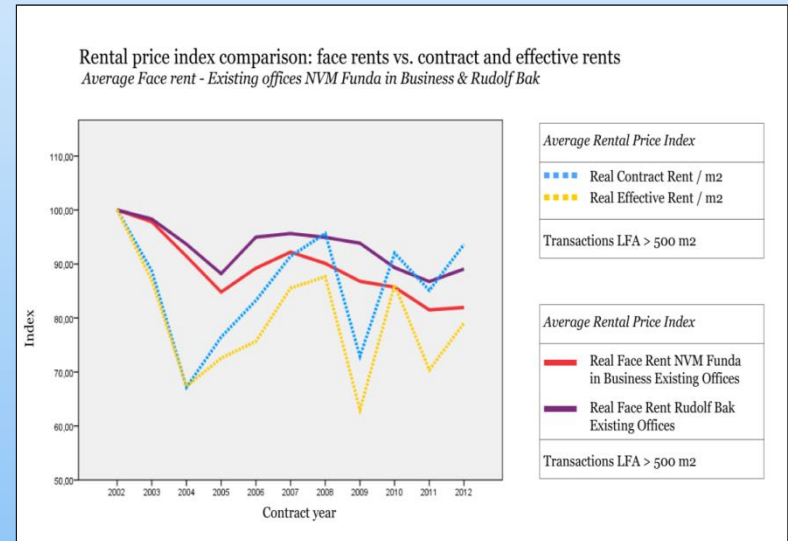
Existing offices - Average difference: 15-23%



IV– Conclusions

Conclusions

1. To what extent does a price index based on face rents, provide an accurate reflection of the market dynamics in the Amsterdam Office market over the period 2002 – 2012?
 - *index based on (real) effective rental price more accurate reflection of market dynamics*
2. Do spatial market segments differentiate in market dynamics in the Amsterdam office market over the period 2002-2012?
 - *No segmentation in incentive development; segmentation in effective rental price development*



Other important conclusions

- Upward cyclical incentive development (> 500m2)
- Rental price development 'smaller' transactions (LFA < 500 m2) similar to 'larger' transactions (LFA > 500 m2); on average higher
- Strong correlation in incentive development for surrounding business districts
 - Also for rental price development in South-East districts
- Rental adjustment equation: vacancy and real effective rental price (neg. correlation; time-lag 0)
- Indication of difference between face rental prices and effective rental prices: 20%

**At last:
Recommendation/Advice
for the real estate market**

**For a competitive, transparent and
well-functioning real estate market**