

# The Mental Map of Entrepreneurs

## *Comparisons in space and time*

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# Agenda

- Background: firm migration research
- Less informed migration decisions
- Mental maps of entrepreneurs
- Comparisons in space
- Comparisons in time
- Analysing the data
- Conclusions

# Firm migration research

- Popular research theme since the 1960s (target of regional policy)
- Firm migrations good source of information for grounding firm location theory
- Firm migration motives and information about alternatives: not very rational
- Entrepreneurs choose locations not because they *are* the best locations, but because they *think* they are the best locations

# Albert Einstein



“Facts are facts.....  
but perception is reality!”

# Locations to be valued as possible firm sites

*Give a value  
for each place  
as a possible location  
for your company:*

- ++ very good
- + good
- +/- neutral
- bad
- very bad

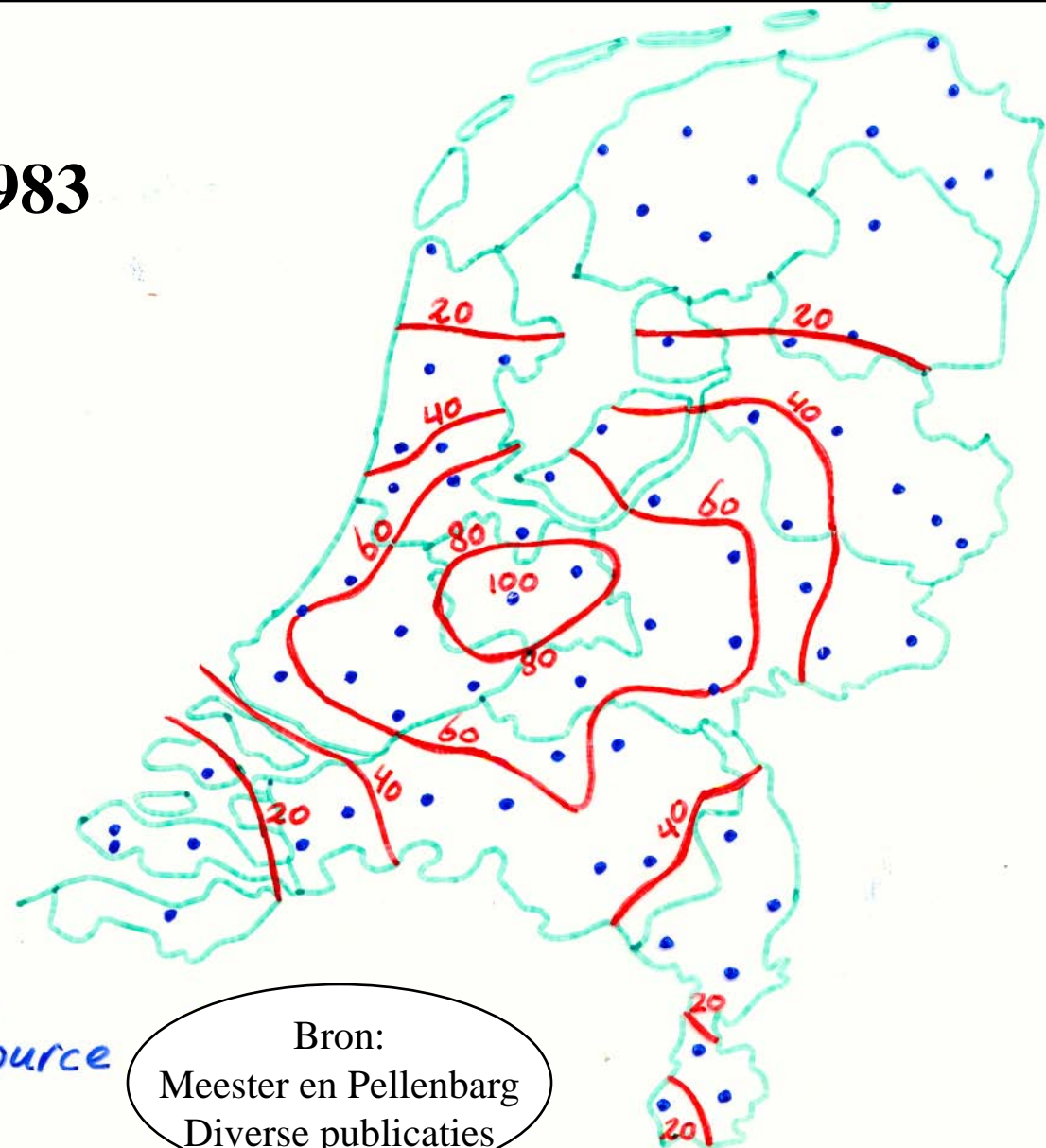


# VALUATION (RANKING) OF LOCATIONS AT THE TIME OF THE FIRST SURVEY, IN 1983

1. UTRECHT	100	15. DEN HAAG	61
2. AMERSFOORT	90	16. NIJMEGEN	60
3. ROTTERDAM	82	17. LEIDEN	57
4. HILVERSUM	79		
5. GOUDA	73	21. EINDHOVEN	54
6. ALMERE	72		
7. EDE	71	51. MAASTRICHT	20
8. GORKUM	69		
9. AMSTERDAM	68	55. GRONINGEN	14
10. ARNHEM	68		
11. APELDOORN	66	70. WINSCHOTEN	0

# AVERAGE VALUATION OF LOCATIONS

1<sup>ST</sup> SURVEY, 1983



*Source*

Bron:  
Meester en Pellenburg  
Diverse publicaties

**ENTREPRENEURS IN :**

**FRIESLAND**

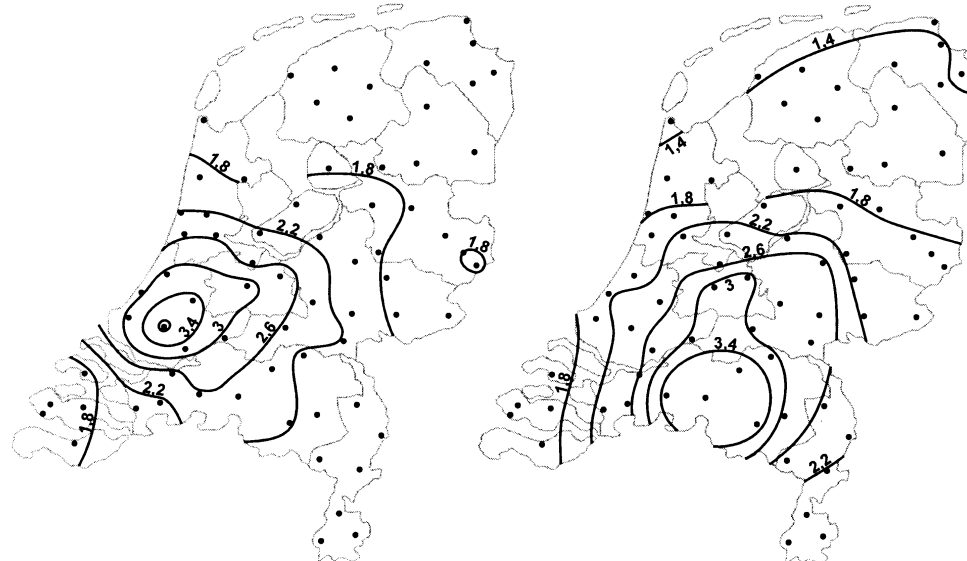
**UTRECHT**



**ENTREPRENEURS IN :**

**Z-HOLLAND**

**N-BRABANT**

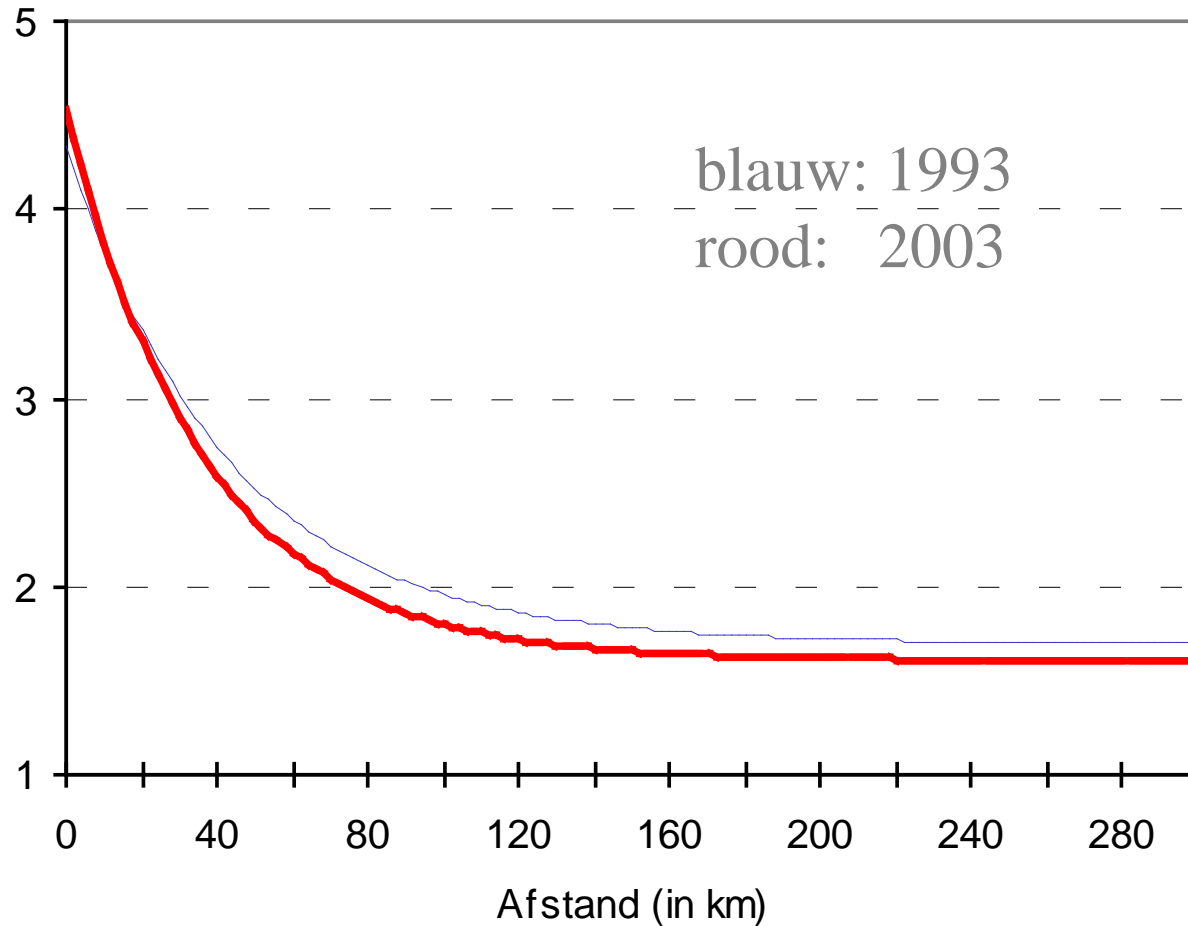


Bron:  
Meester en Pellenbarg  
Diverse publicaties



# Rating of locations and distance

*(modified exponential)*



Comparisons in space:

*other countries, or parts of countries*

# SURVEY OF LOCATION VALUATION IN GERMANY



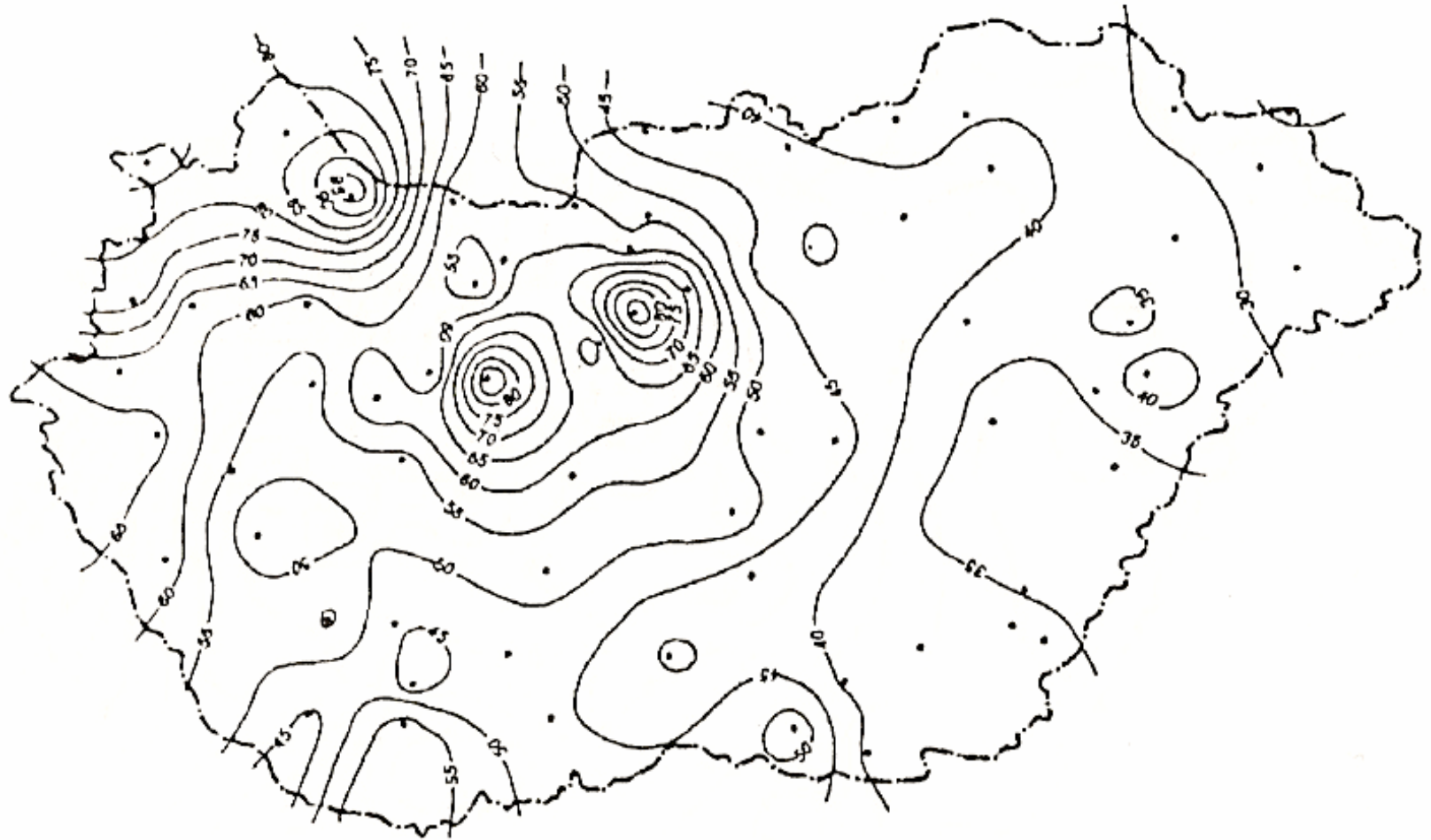
Bron:  
Meester 1999  
Dissertatie

# AVERAGE VALUATION OF LOCATIONS IN GERMANY, 1996

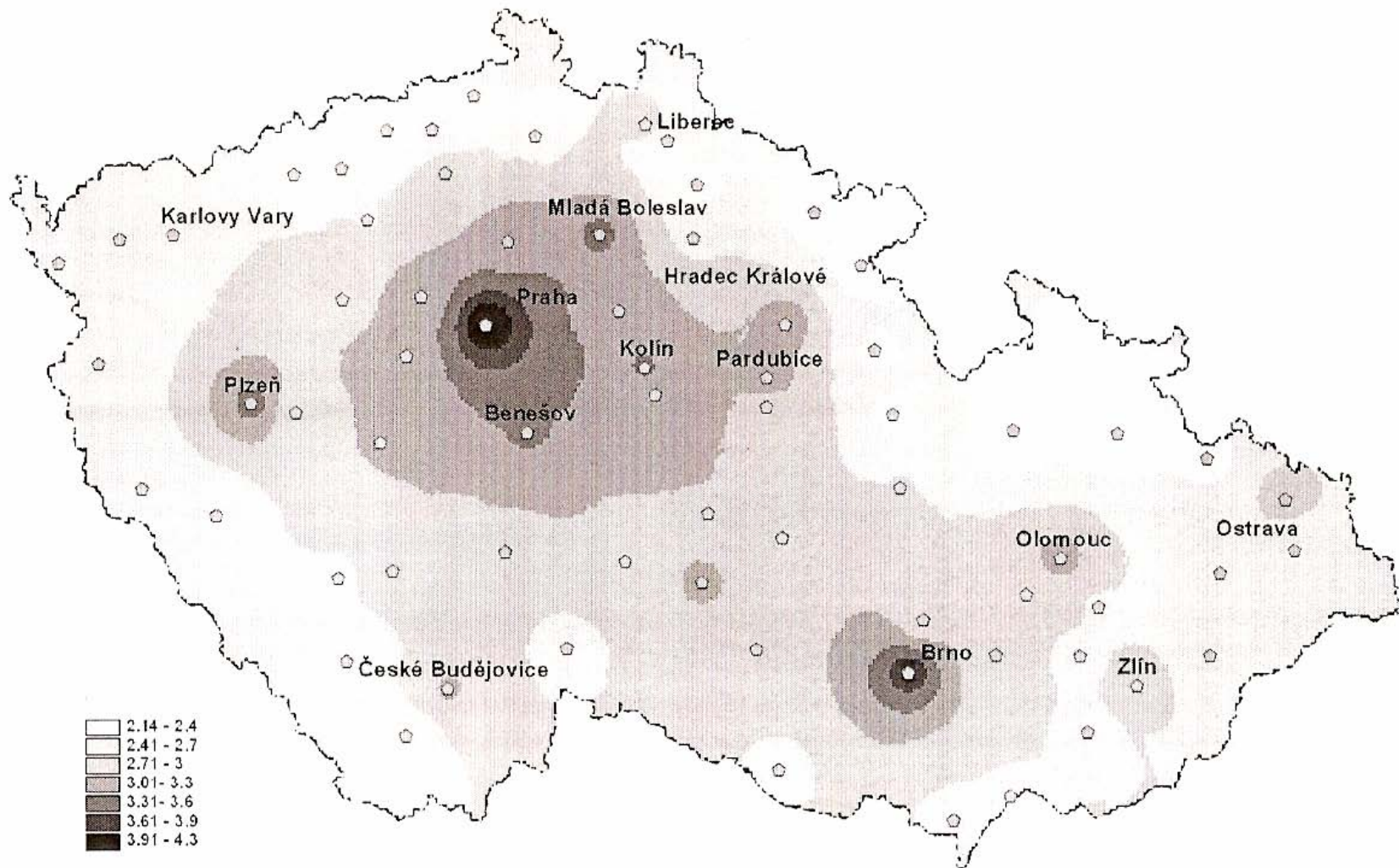


Bron:  
Meester 1999  
Dissertatie

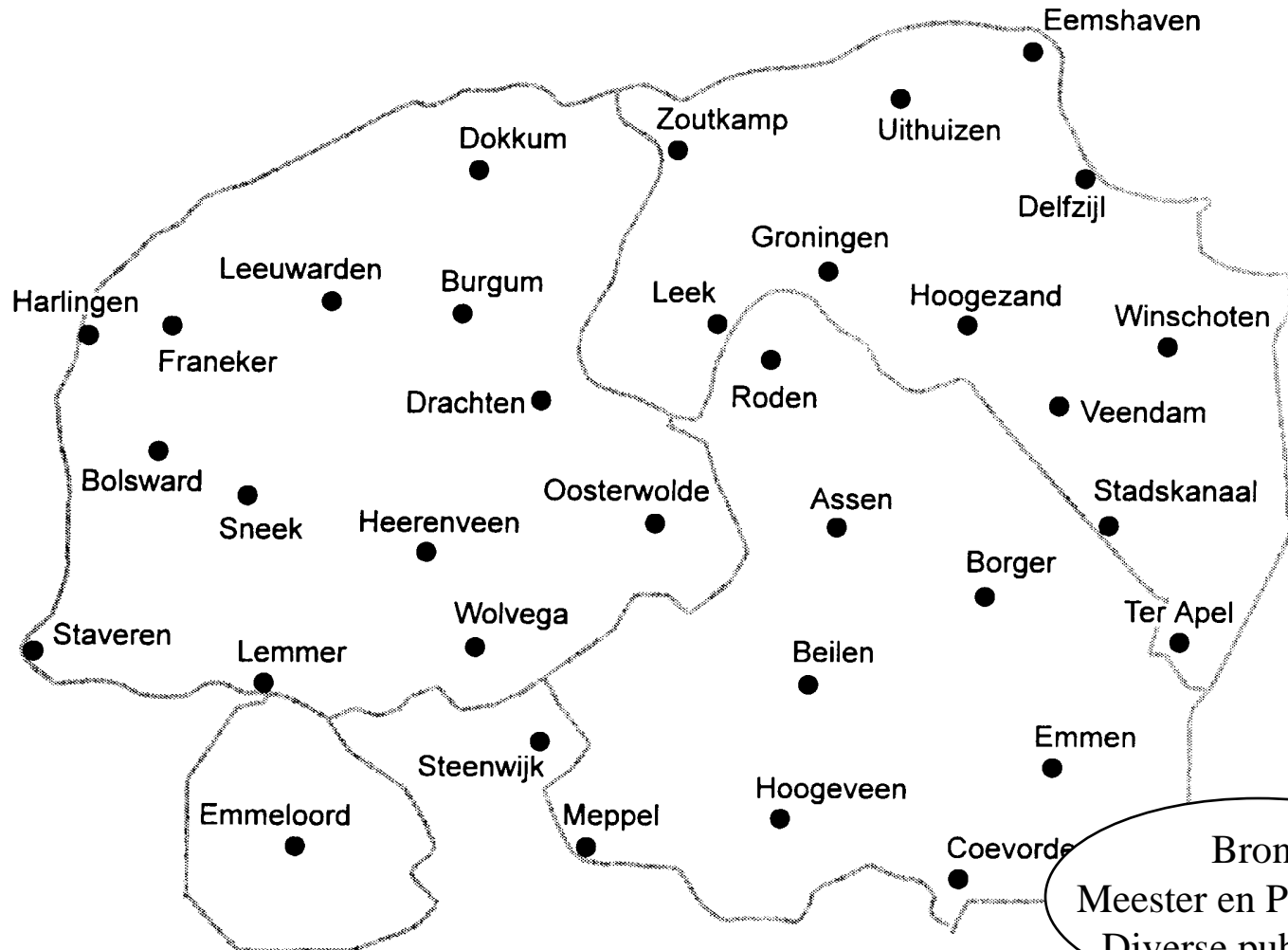
# AVERAGE VALUATION OF LOCATIONS IN HUNGARY, 1997/1998



# AVERAGE VALUATION OF LOCATIONS IN THE CZECH REPUBLIC, 2004



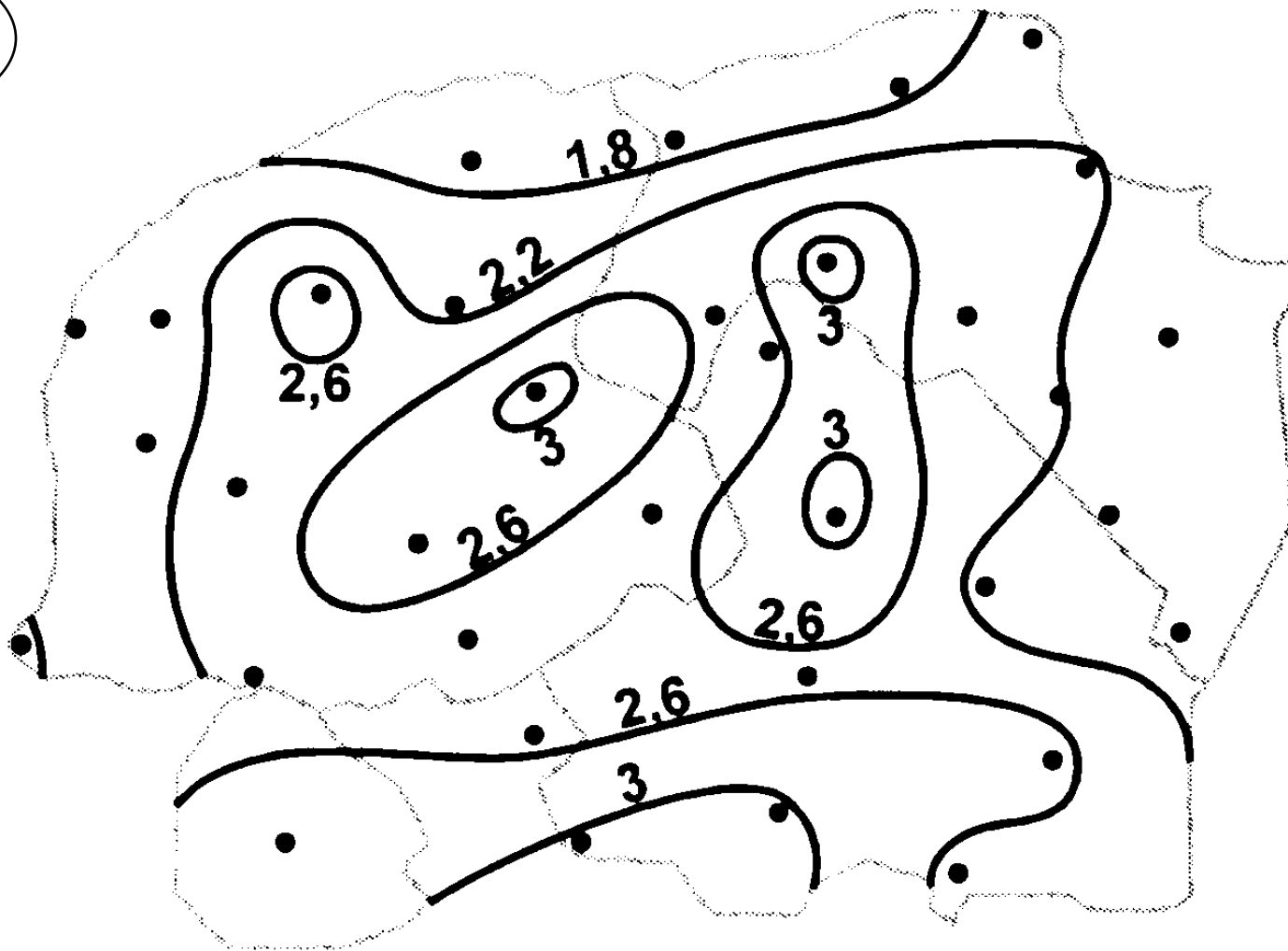
# SURVEY OF LOCATION VALUATION IN NORTH NETHERLANDS, 1986



Bron:  
Meester en Pellenbarg  
Diverse publicaties

# AVERAGE VALUATION OF LOCATION IN NORTH NETHERLANDS, 1986

Bron:  
Meester en Pellenbarg  
Diverse publicaties



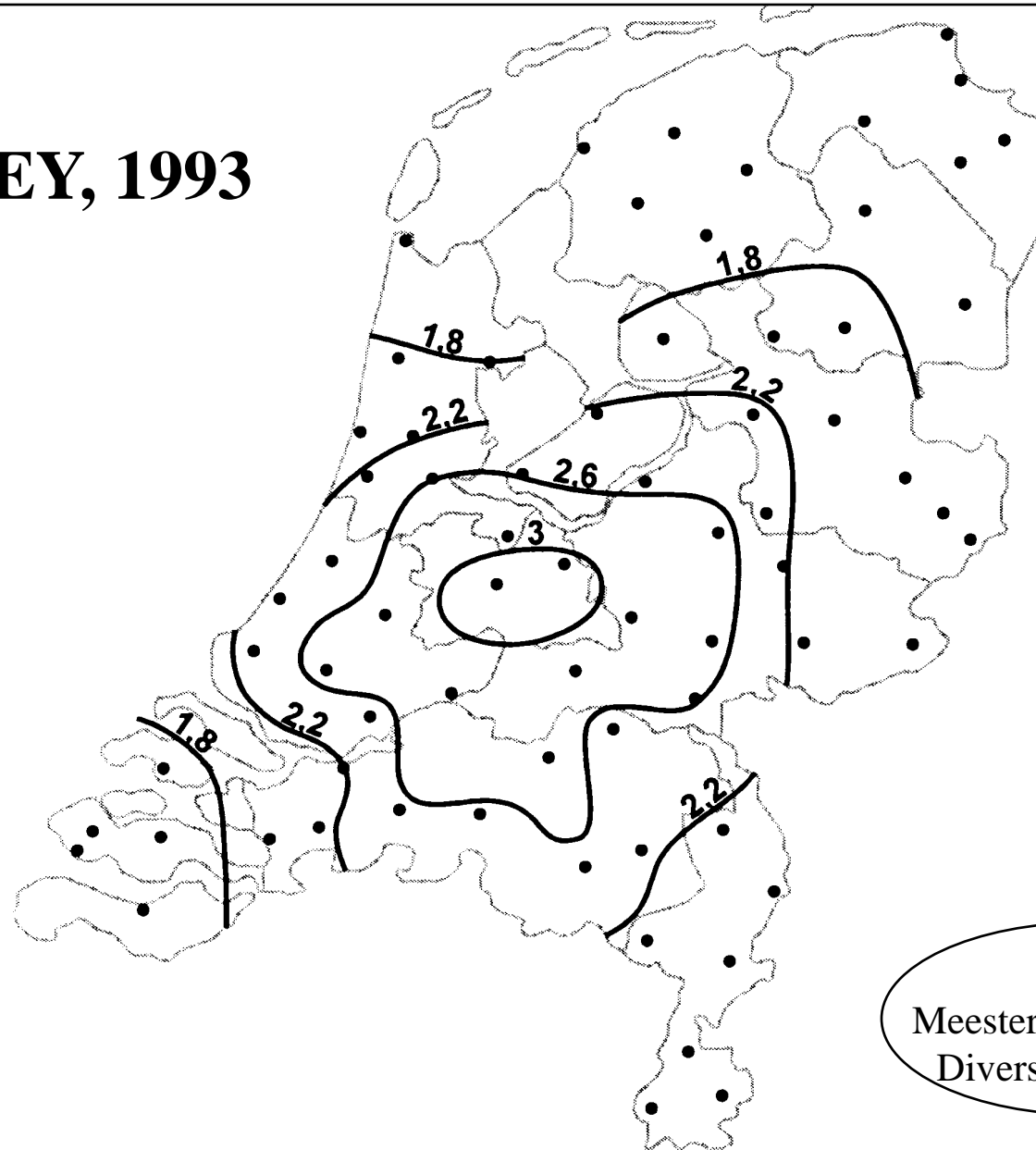


Comparisons in time:

*repeating the surveys  
at regular time intervals*

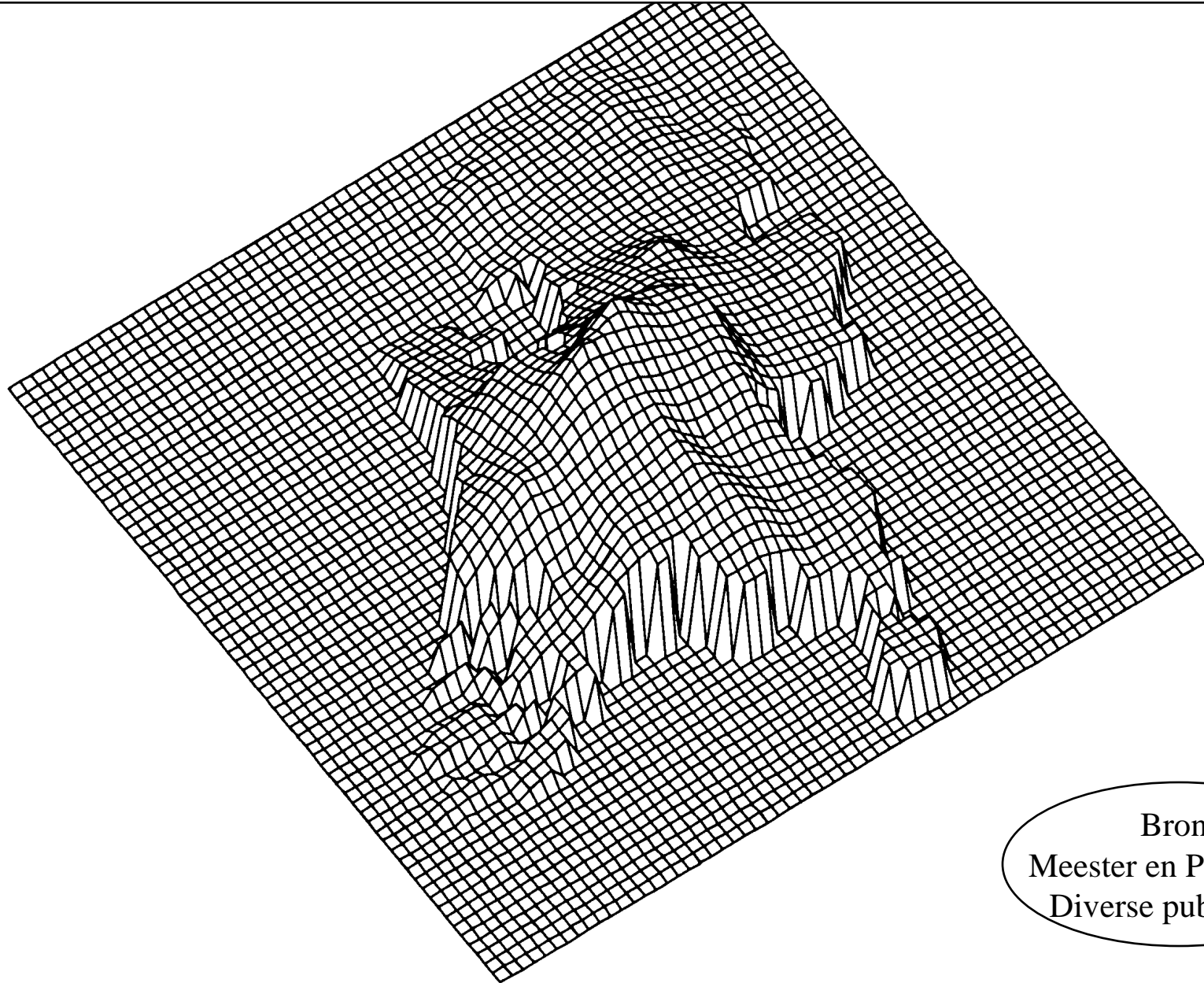
# AVERAGE VALUATION OF LOCATIONS

2<sup>ND</sup> SURVEY, 1993



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# 3-DIMENSIONAL KEY REPRESENTATION OF THE AVERAGE VALUATION OF LOCATIONS IN 1993



Bron:  
Meester en Pellenbarg  
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# AVERAGE VALUATION OF LOCATIONS

**3<sup>rd</sup> SURVEY, 2003**



# CHANGE IN AVERAGE VALUATION

1983-1993

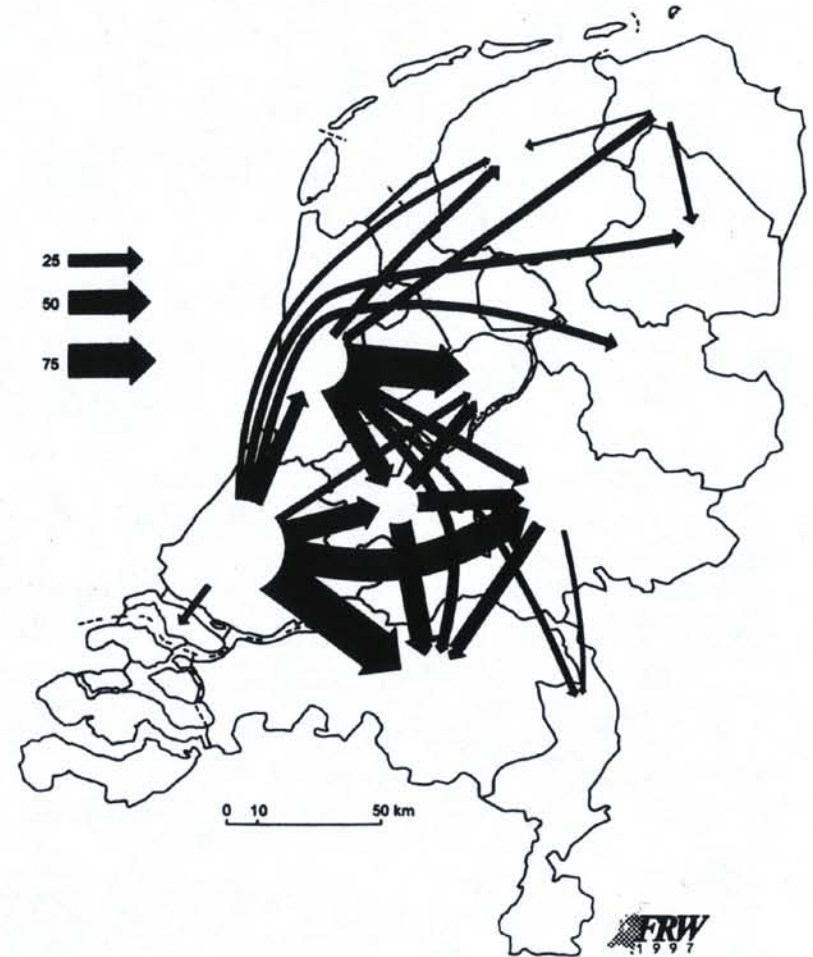
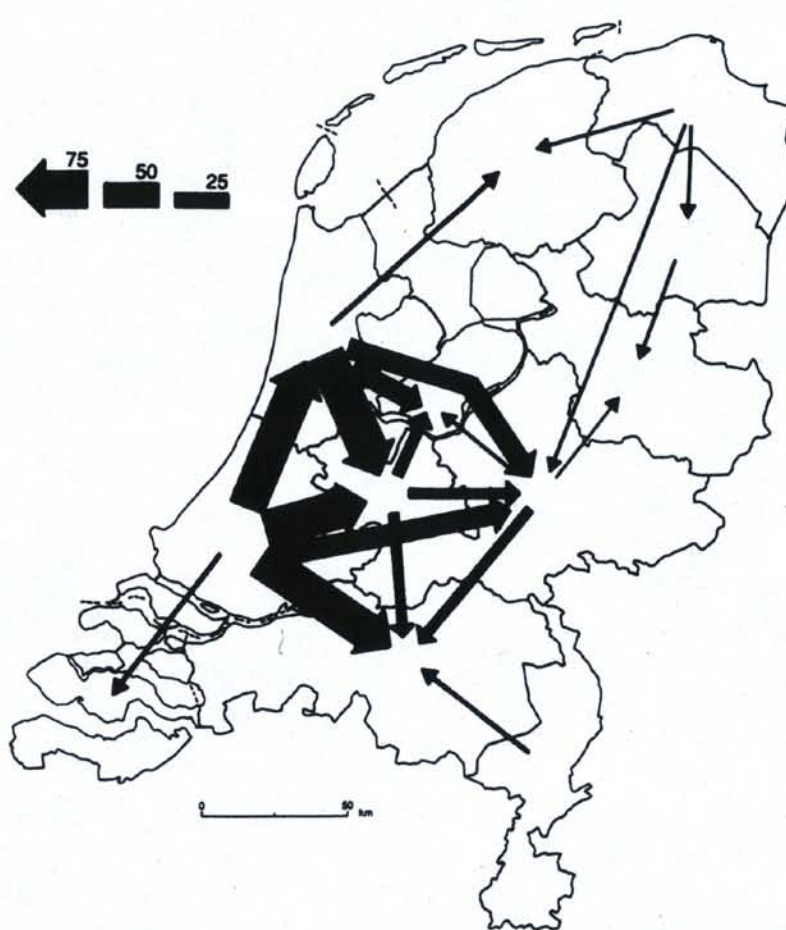
1993-2003



# INTERPROVINCIAL FIRM MIGRATION (balance of in- and outgoing migrations)

**1990/1991**

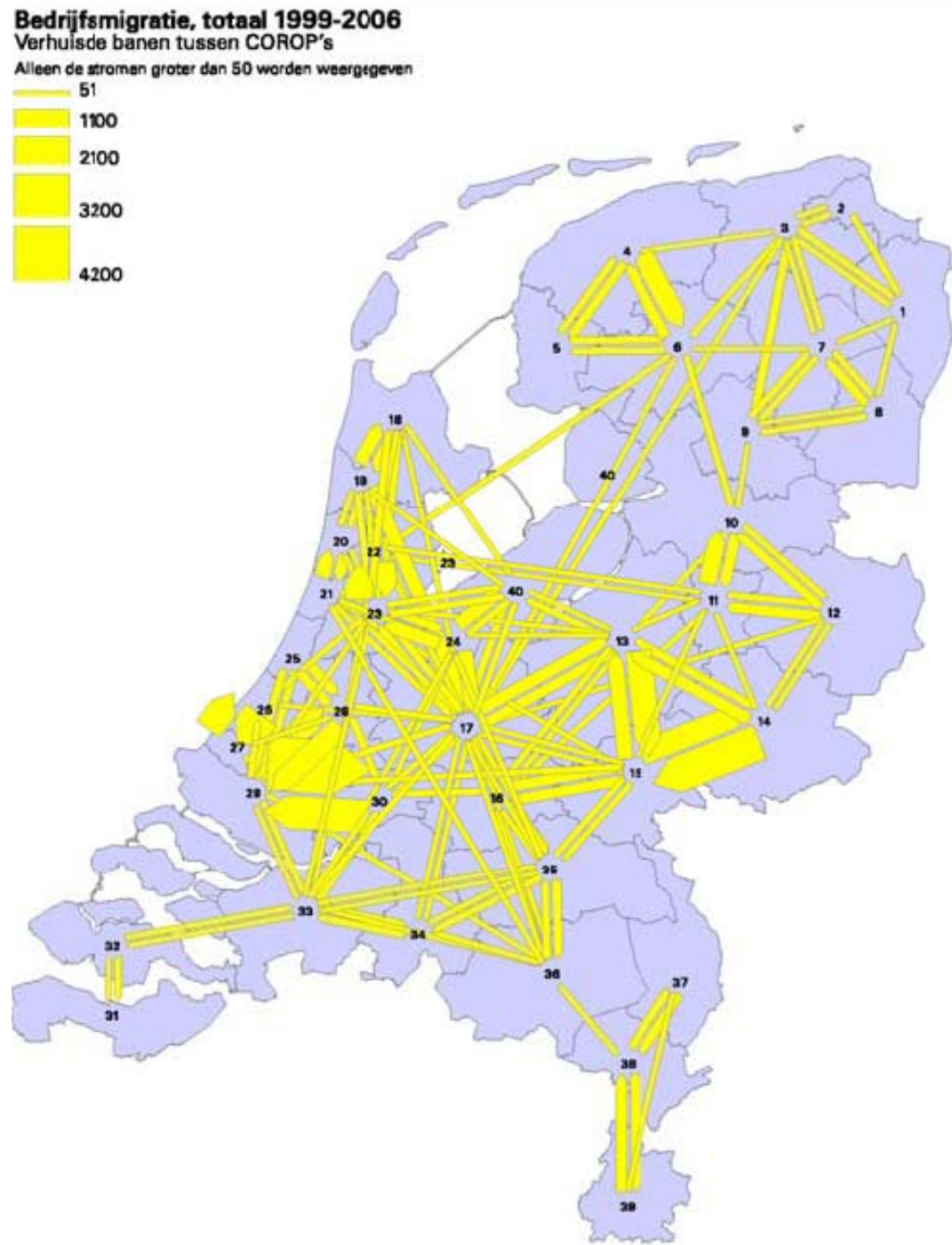
**1994/1995**



Source: Kemper and Pellenbarg 1993, 1997

Firm migrations  
in 1999-2006,  
national picture

Migration surplus  
between COROP  
regions (jobs)



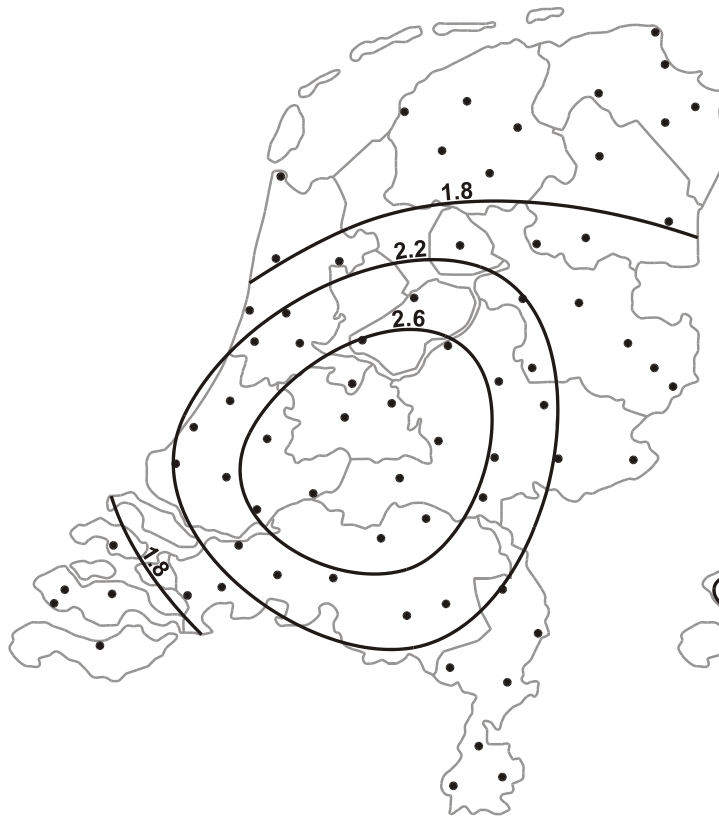
# LOOKING FOR STRUCTURES IN THE DATASET

- TREND SURFACE ANALYSIS
- CORRELATION ANALYSIS
- CLUSTER ANALYSIS
- REDUCING THE DISTANCE FACTOR
- FACTOR ANALYSIS (PCA)

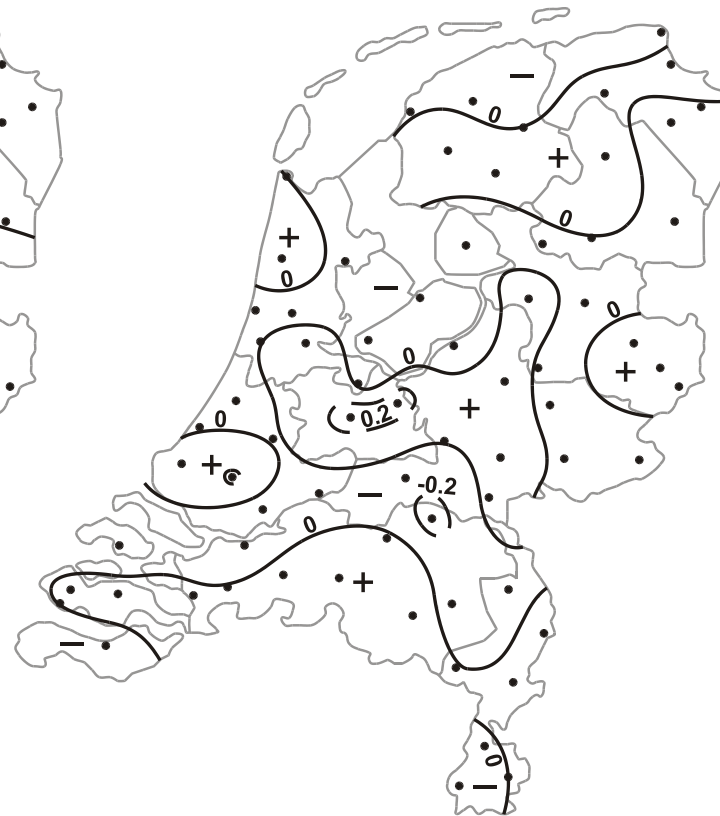


# Trend surface analysis (1993)

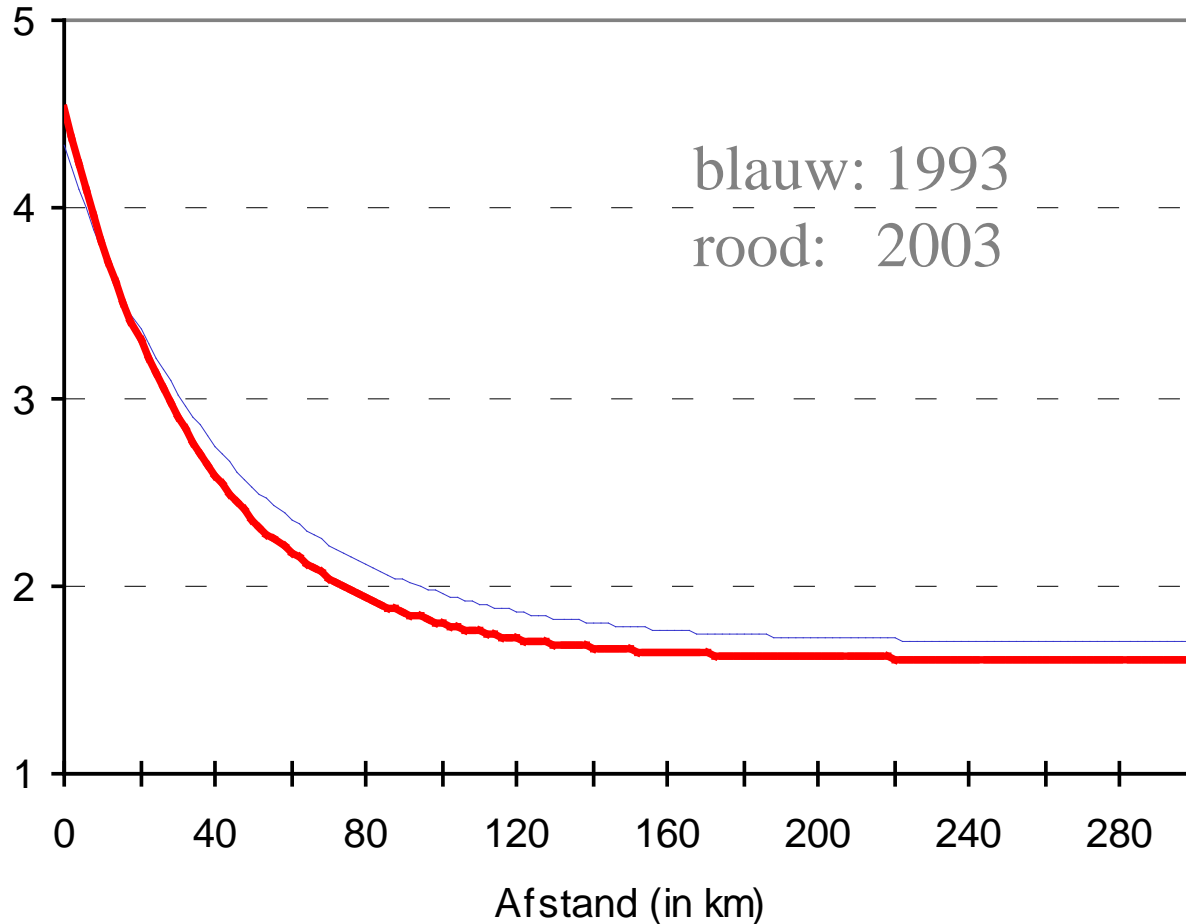
Expected values



Residuals



# Reducing values/ratings (per respondent) with the part that is a distance effect



# Valuation of locations without the distance effect (values 1993)

Observed ratings



Adjusted ratings



# Adjusted ratings in 2003



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# Adjusted ratings for different sectors

Manufacturing



Wholesale

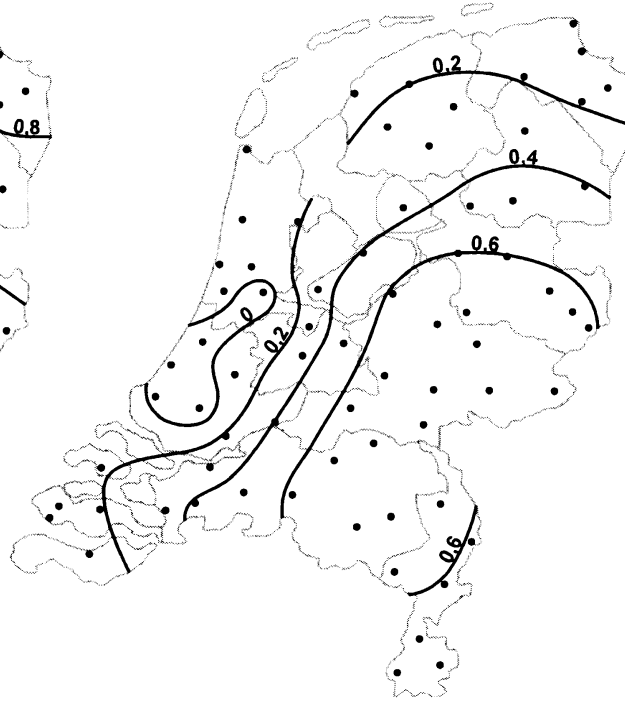
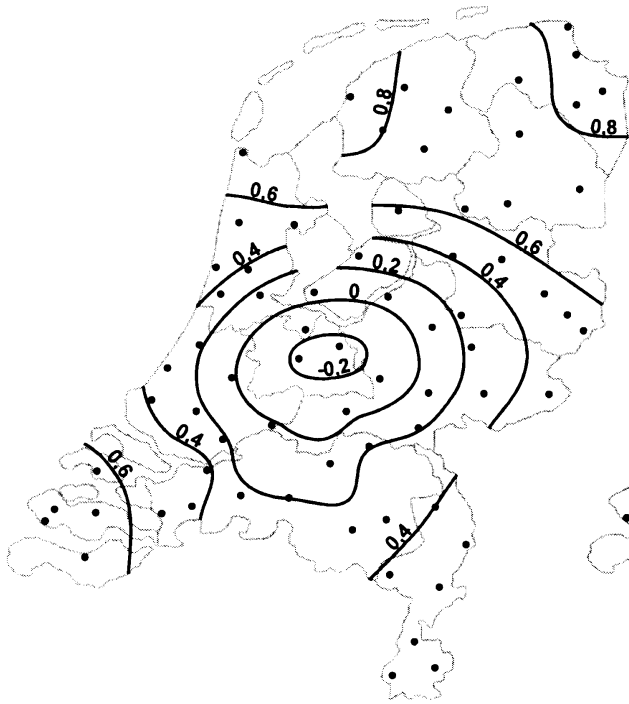


# Adjusted ratings for different sectors

## Services



# Principal components analysis, ratings of 1993



## **Factor 1**

Transport  
location

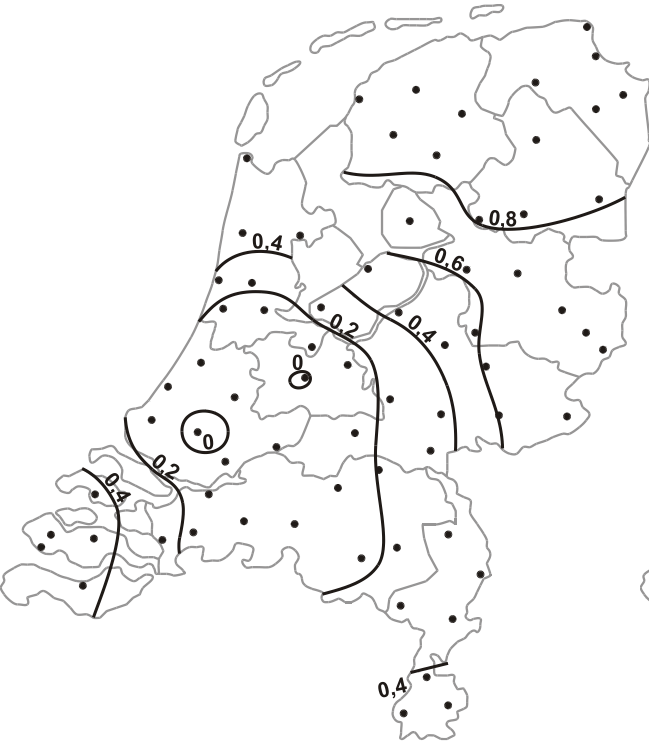
## **Factor 2**

Residential/landscape  
preference

## **Factor 3**

Agglomeration  
diseconomies

# Principal components analysis, ratings of 2003



**Factor 1**

Agglomeration?



**Factor 2**

?????

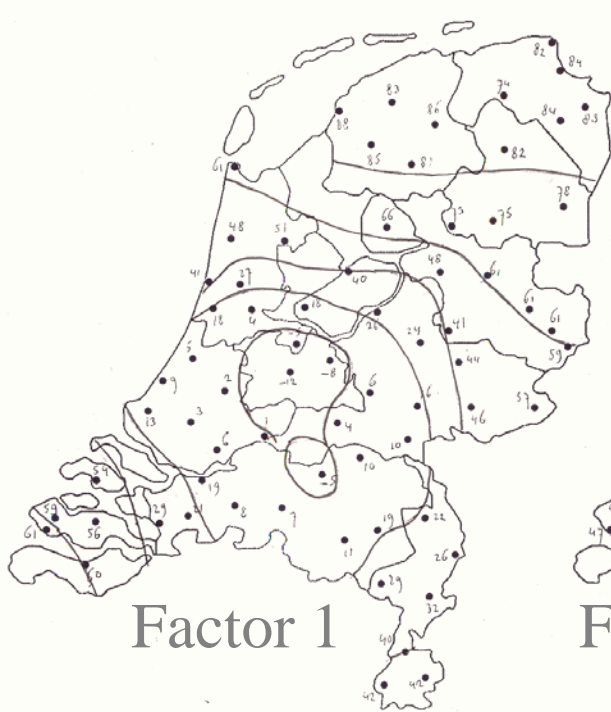


**Factor 3**

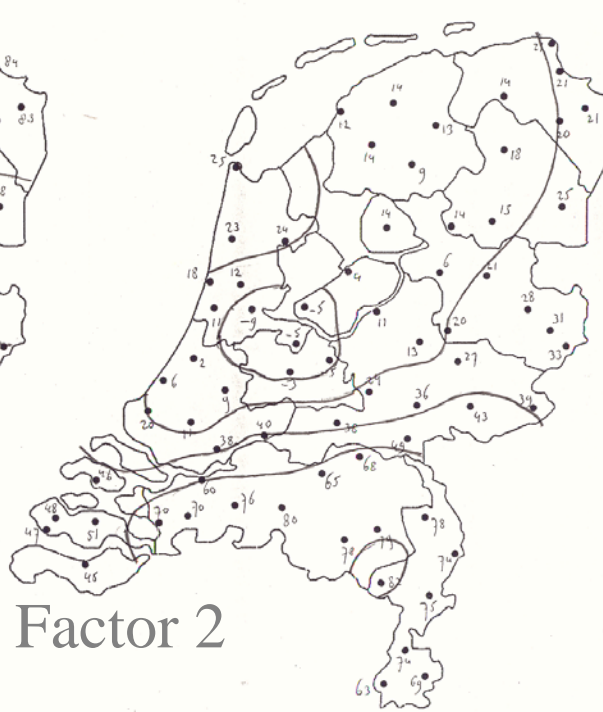
Transport  
location?



# PCA 2003, with 4 factors



Factor 1



Factor 2



Factor 3



Factor 4

# PCA 1993, with 4 factors





# Conclusions

- Comparisons in time + factor analysis create hypotheses about the *nature of locational preferences*
- Comparisons in space should inform us whether such preferences are *general or country-specific*
- Italy as a large and diversified country is a very interesting *next case* in this longitudinal and international research project