

# Preferred citation style for this presentation

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# Accessibility, Spatial Organisation and Demography in Switzerland through 1920 to 2000: First Results

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# Introduction

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Project: “Development of the Transit Transport System and its Impact on Spatial Development in Switzerland”

within COST 340 “Towards a European Intermodal Transport Network: Lessons from History”

# Goal

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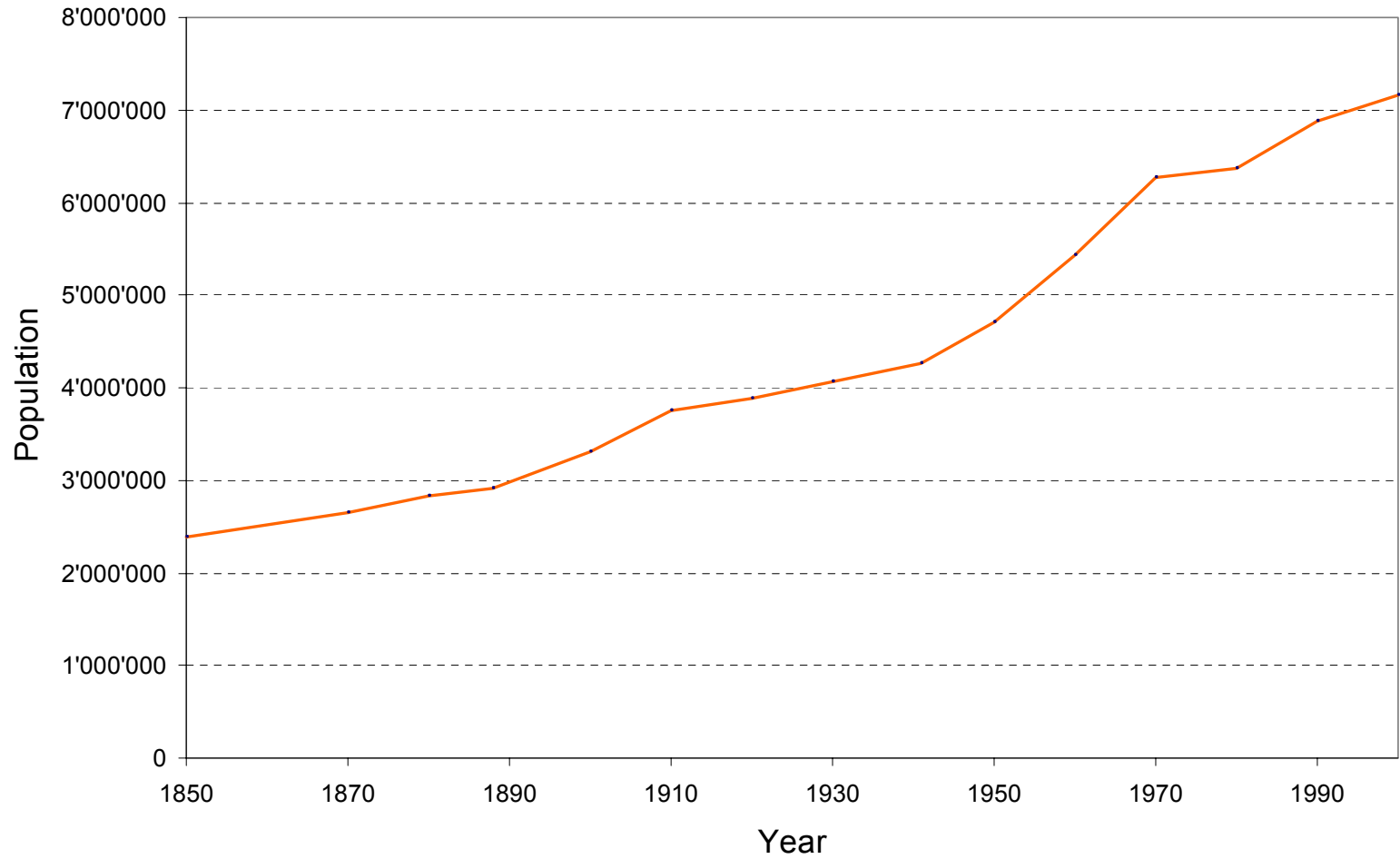
General statements about the population its development and its spatial distribution in Switzerland

Following questions are of interest:

- When did the population grow?
- How did the population grow?
- Where did the population grow?
- The role of accessibility

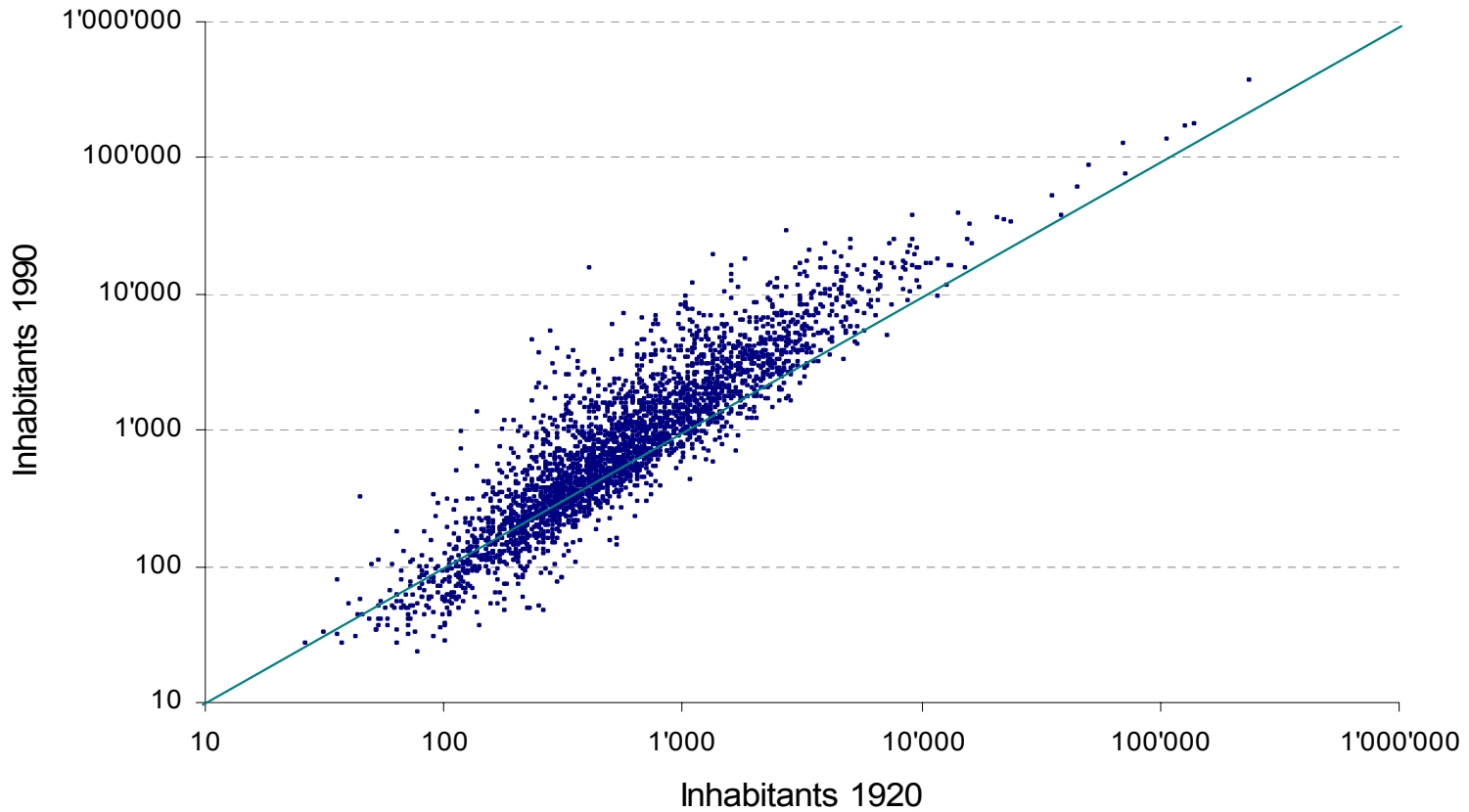
# Population development in Switzerland

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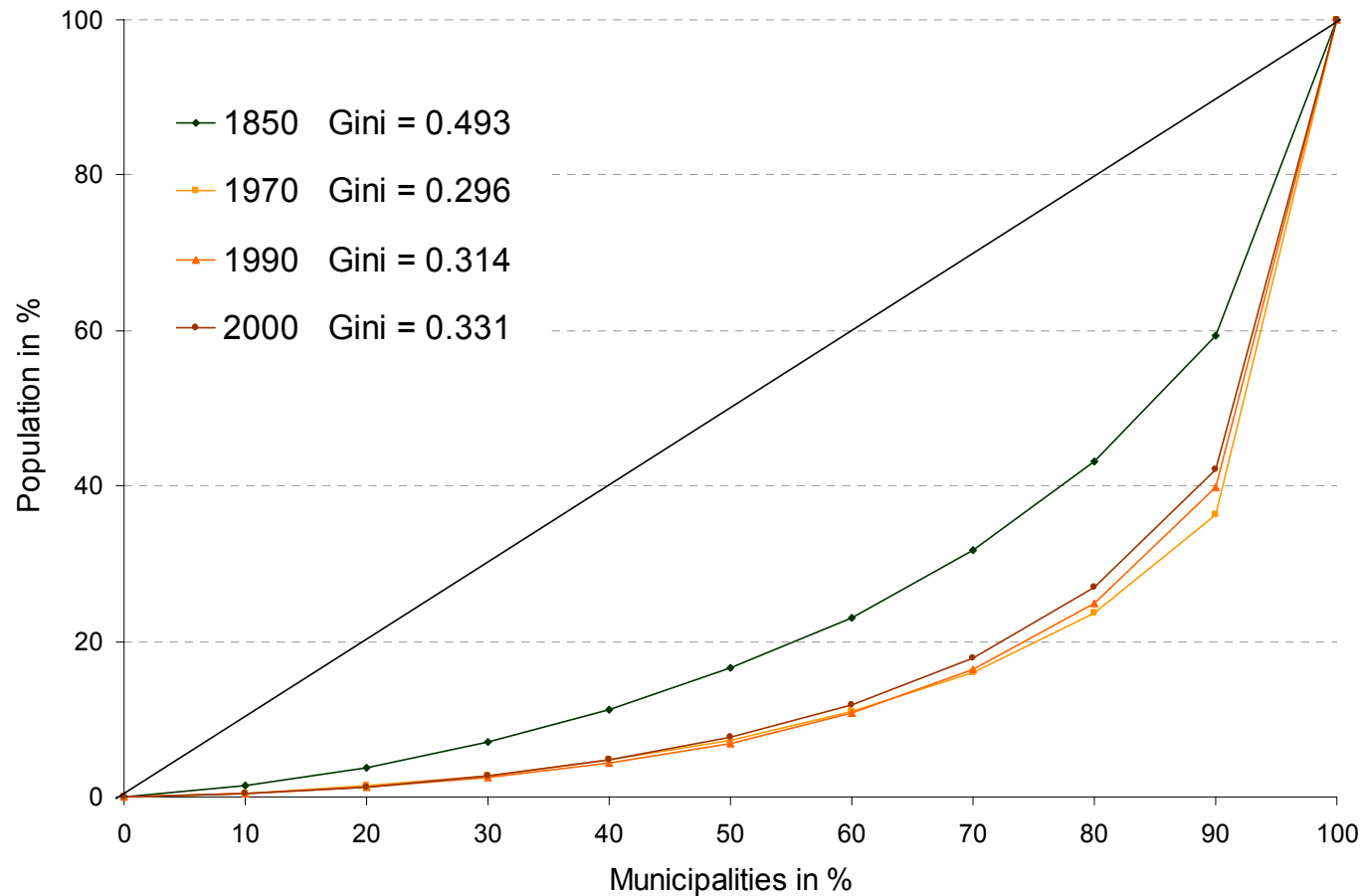


# Population growth of municipalities (1920-1990)

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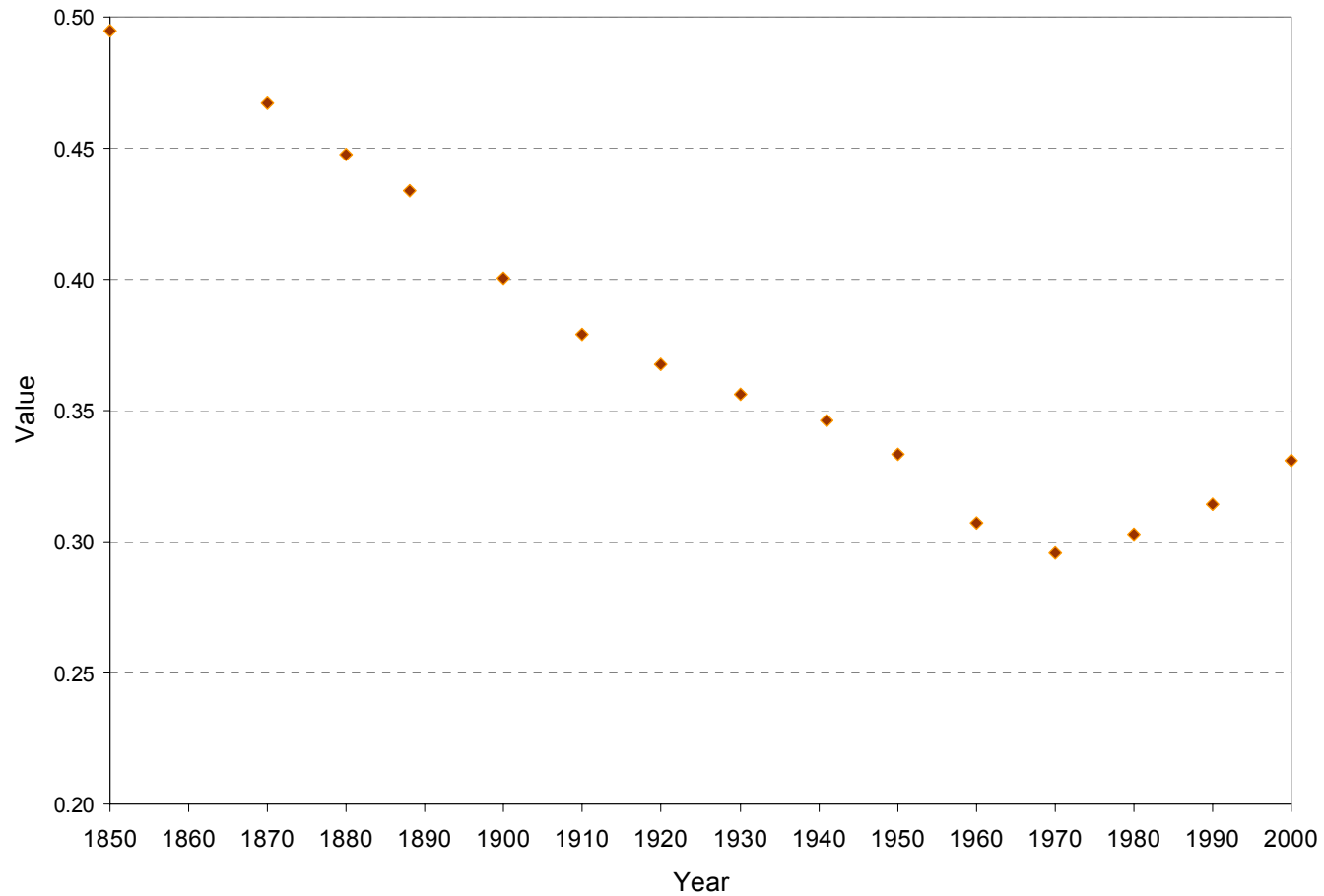


# Lorenz curves based on municipal population size



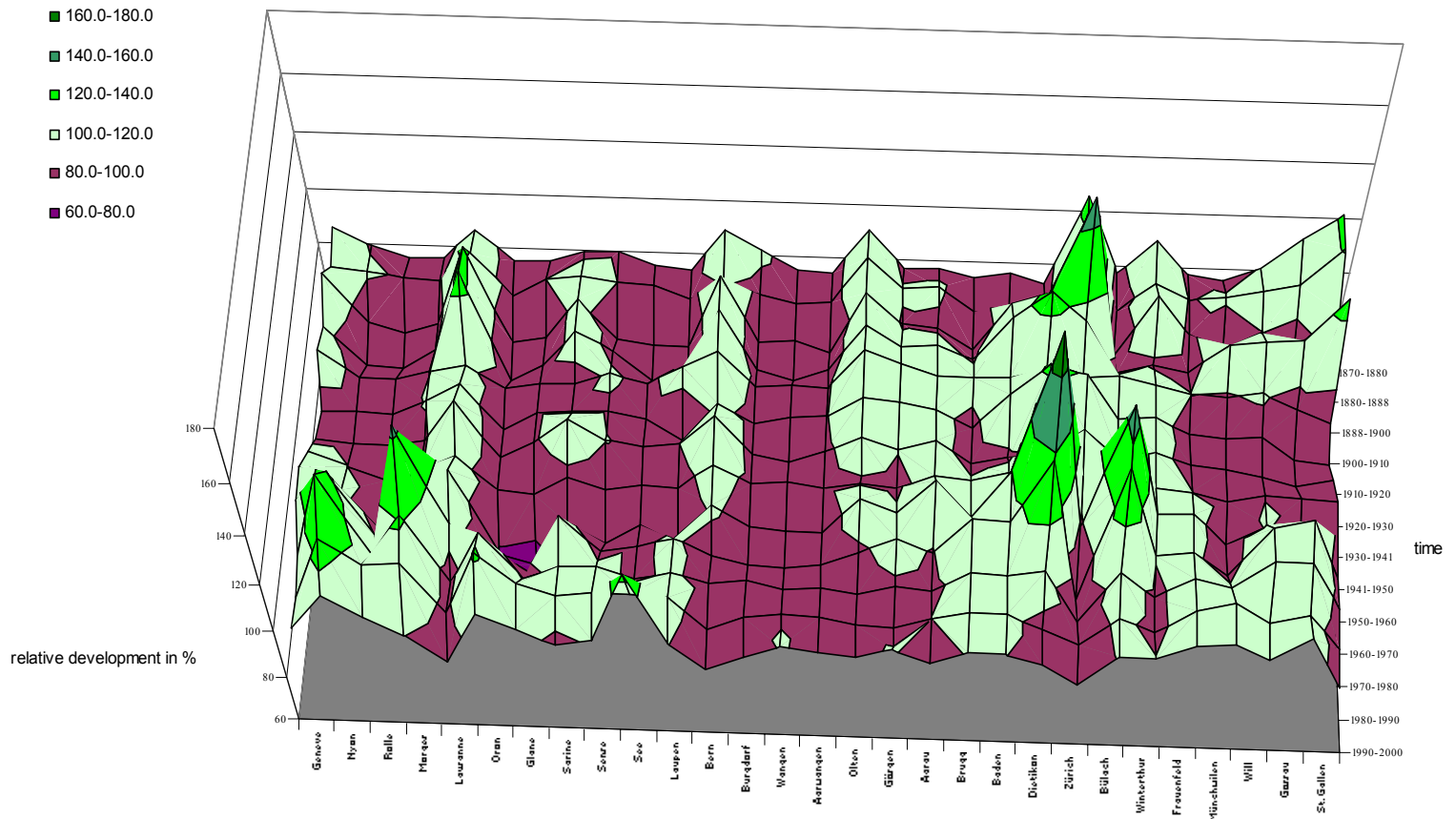
# Development of the Gini index of the municipalities

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# Longitudinal axis Mittelland



Accessibility is defined as (Geurs and Ritsema van Eck, 2001):

...the extent to which the land-use transport system enables [groups of] individuals or goods to reach activities or destinations by means of a [combination of] transport mode[s].

# Potential Accessibility

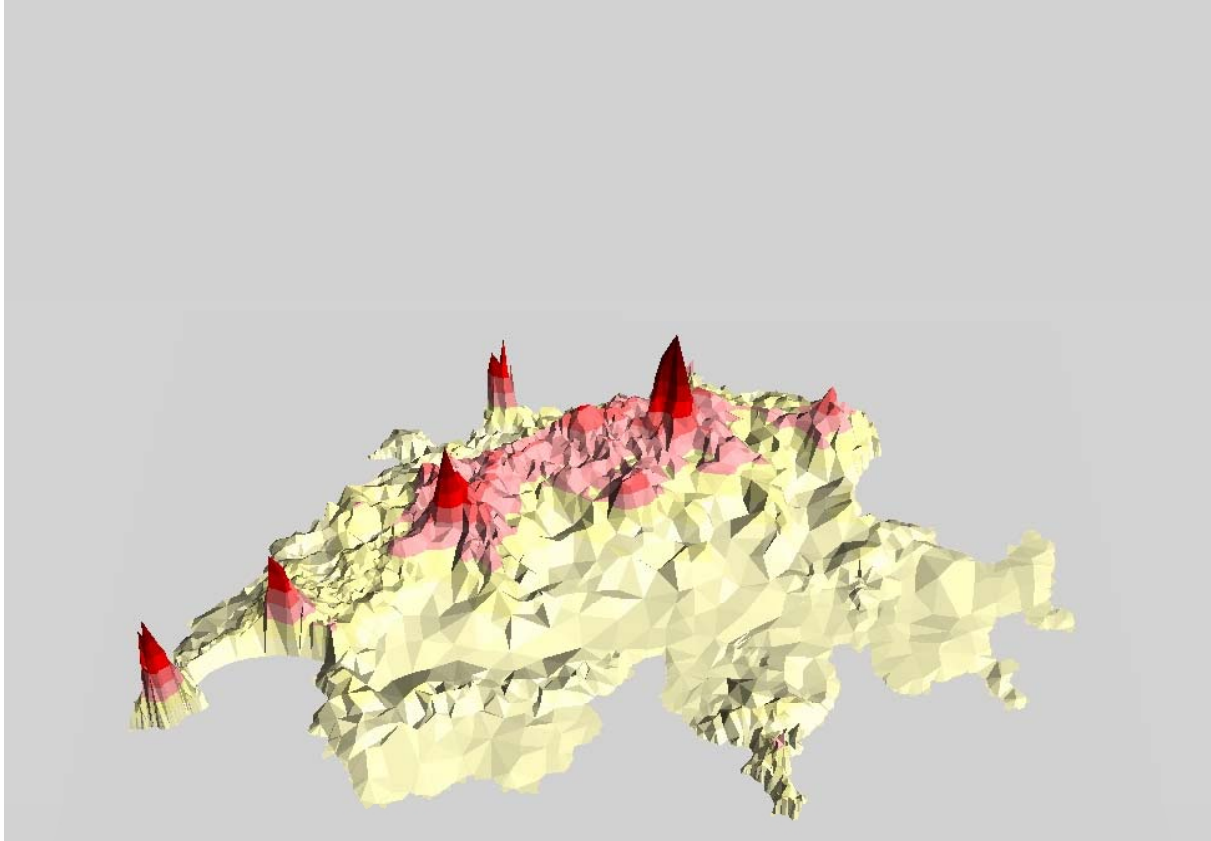
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$$AccPop_i = \sum_{j=1}^{j=2903} A_j * \exp(-\beta * c_{ij})$$

- $AccPop_i$       accessibility to people living in municipality,  $i$
- $A_j$               the number of residents of municipality,  $j$
- $c_{ij}$              travel time by private vehicle between the  
municipality  $i$  and municipality,  $j$
- $\beta$                 exponent

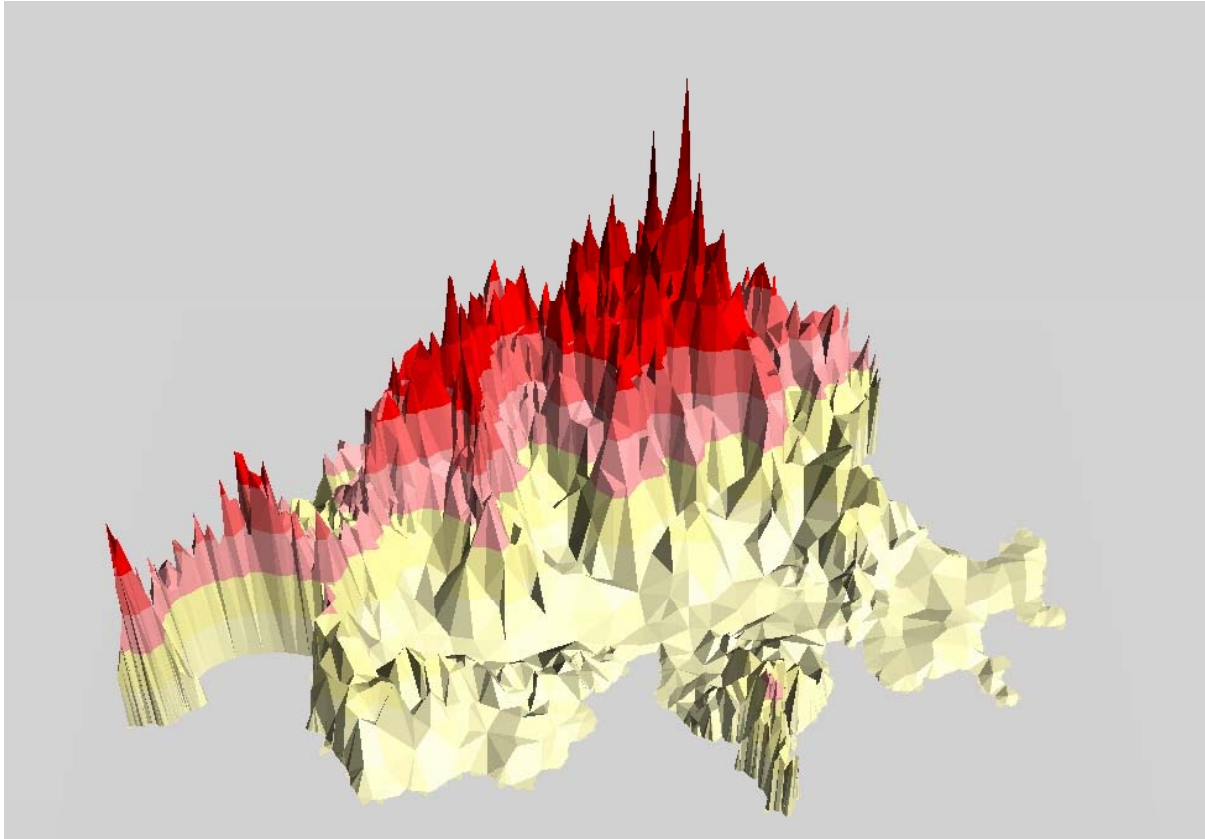
# Absolute Accessibility for the Year 1950

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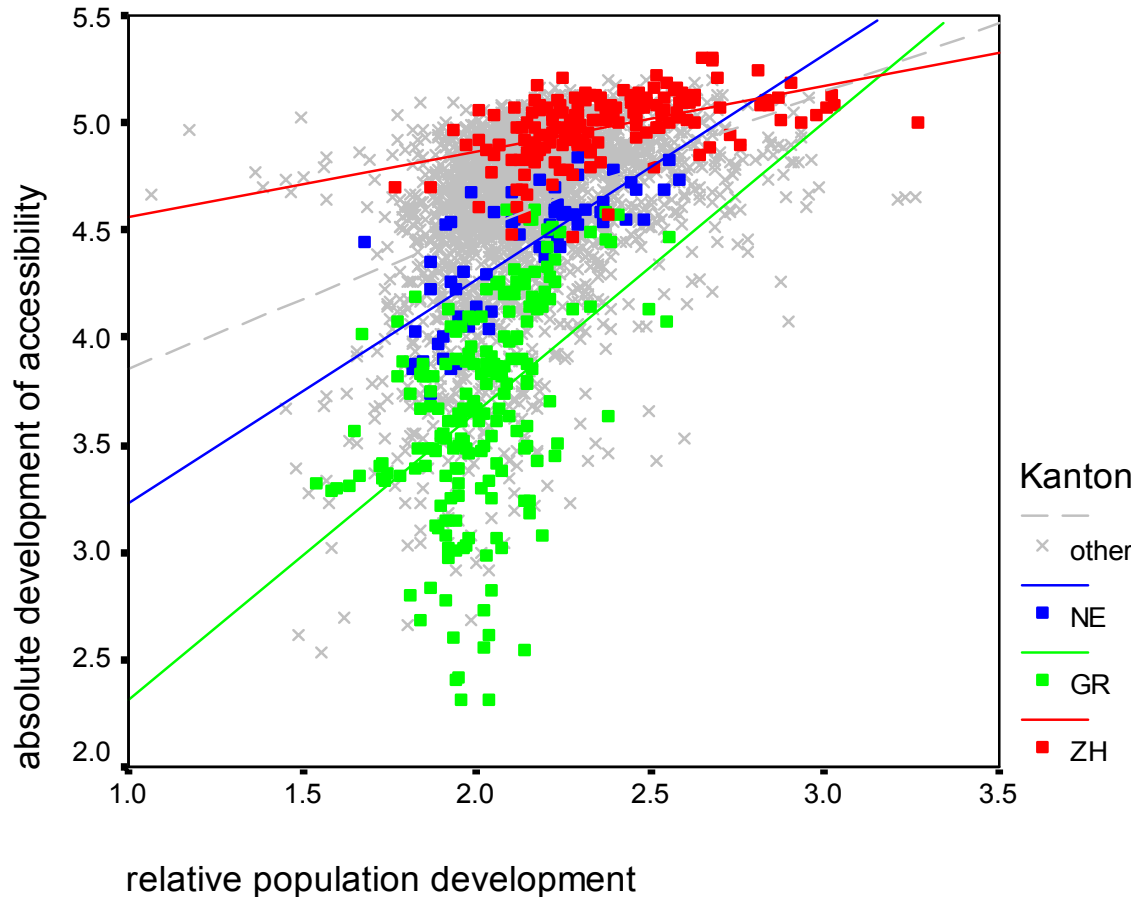


# Absolute Accessibility for the Year 2000

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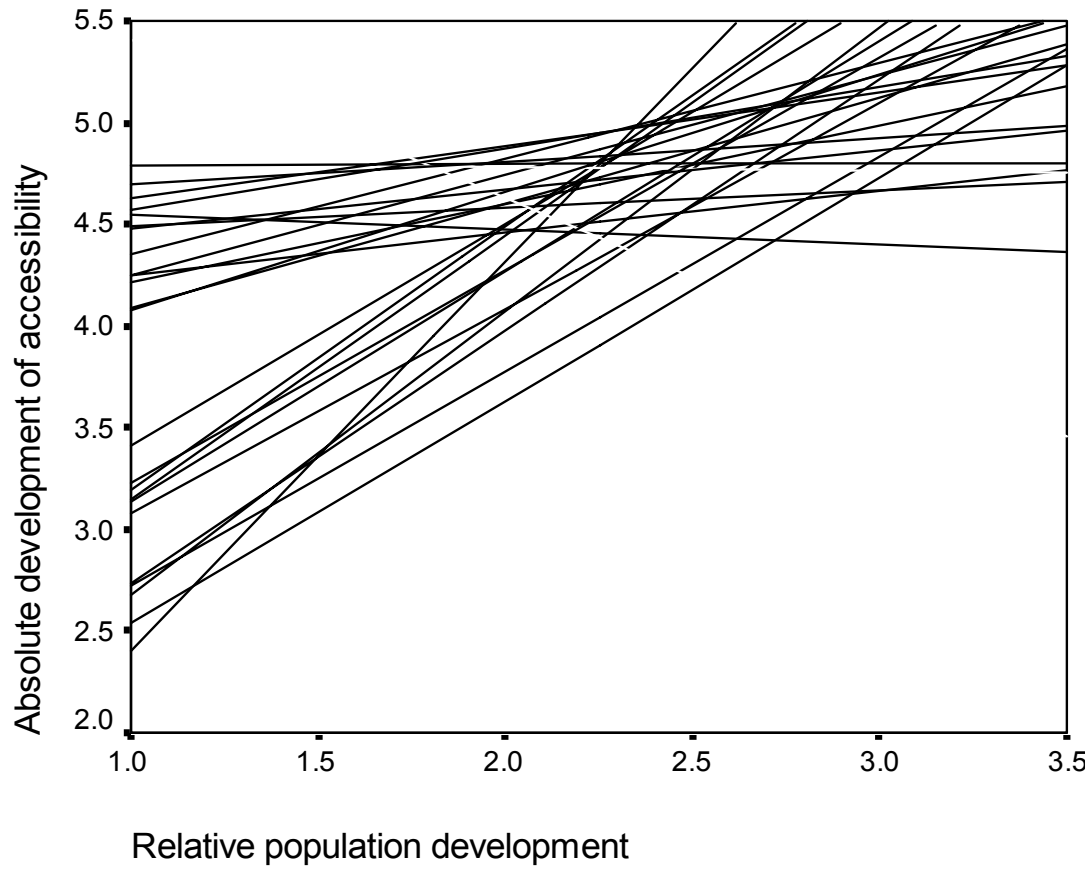


# Accessibility and population development (1950 - 2000)



# Accessibility and population regression lines (all Kantone)

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# Conclusion

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- Tripling of population - but unequal patterns of growth
- The process of concentration was followed by a period of deconcentration from 1960 onwards
- Only the agglomerations and the regions of the Mittelland show this deconcentration
- The process of deconcentration lead to a spread out and a growing together of the different agglomerations in the Mittelland



# Further Work

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More precise road network, including the Hauptstrassen

Enlargement of the model to border areas in neighbouring countries

Accessibility based on public transport services

Other activity points, such as places of work and shopping opportunities

Calibration of the factor,  $\beta$  for the potential function across periods

# Literature

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