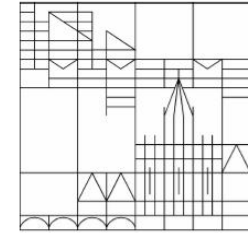# Survival and Growth of New Organizational Forms

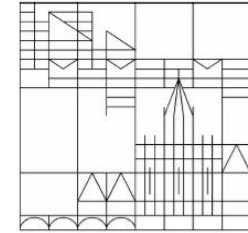## The German Local Exchange Trading Systems

Simone Wagner
University of Konstanz, Germany
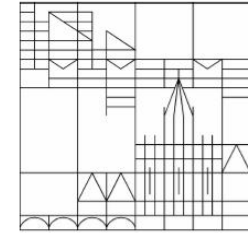Simone.Wagner@uni-konstanz.de

Contents

- Local Exchange Trading Systems

- Objectives of the Study

- Theoretical Background and Hypothesis
  - entrepreneurial characteristics
  - attributes of the new organisation itself
  - entrepreneurial environment

- Methodology

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Survival and Growth of Local
Exchange Systems
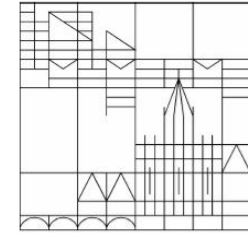
Local Exchange Trading Systems

- Definition: special form of social movement
  - networks of mutual support and community-building especially for poor and unemployed
    - building alternative, local economy with own local currency
    - facilitating indirect exchange of goods and services
    - participation of socially excluded people rich in time but short in money

- Characteristics
  - no "economic institutions of capitalism": neither monetary incentives nor enforceable contractual arrangements
    - local currency: time vs. money based
    - no interests
    - no or extremely generous credit ceiling
    - no banking secrecy
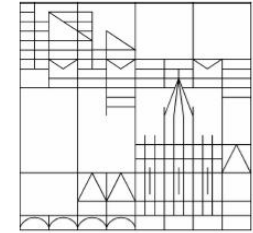
Objectives of the Study

- Objective
  - survival chances of Local Exchange Systems
  - organizational growth of Local Exchange Systems

- Research Questions
  - individual characteristics of founder
  - attributes, structural characteristics of Local Exchange System itself
  - environmental attributes
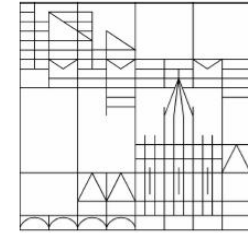
Theoretical Background

- Indicators: evaluation of success of the Local Exchange Systems
  - survival
    - Local Exchange Systems are Non-Profit Organisations
    - no transfer with capital gain possible
    - closure of Local Exchange System:
      "final manifestation of unsuccessful organization performance" (Carroll 1987: 44)

  - growth
    - sales trend not suited as indicator
      (no profits; no monetary dimensions)
    - employee trend: modified to participant trend
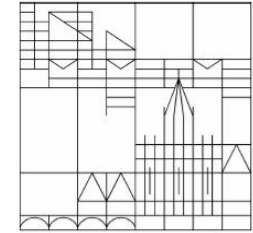
Entrepreneurial Characteristics

- Human Capital Theory
  - greater human capital increases productivity resulting in higher profits
  - traditionally focus on earnings of employees

- Transfer to entrepreneurial activity
  - greater human capital of founder increases his productivity resulting in better prospects of the foundation
  - especially modified form of specific human capital (industry-specific experience, prior self employment experience, leadership experience)
  - selectivity effects: well-endowed founders: better selection of promising projects

Entrepreneurial Characteristics

- Human capital and Local Exchange Systems
  - higher human capital of entrepreneur better prospects of Local Exchange System
    - better organization; public relations
    - selectivity effects: "a priori"
      (resources, knowledge of legal basis, planning)
  - forms of human capital
    - general human capital: no indicators available
    - greater importance of specific human capital
    - modified form of specific human capital
      (prior experiences with Local Exchange Systems, Non-Profit Organizations)

- *Hypothesis:*

  Human Capital of the founder will positively influence the prospects of the Local Exchange Systems.
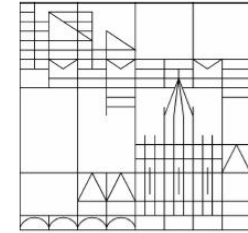
Attributes of the new organization

- Organizational design
  - early founding: important organizational characteristics influencing prospects

- Organizational design with Local Exchange Systems
  - currency, rules, constitution
  - important for opportunistic behaviour and free riding
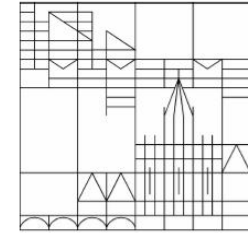
- *Hypothesis*

  The success of the Local Exchange Systems is related to these organizational attributes.

Attributes of new organization

- *Liability of newness* (Stinchcombe 1965)
  - many organizations die young: higher risk of failure
  - missing established relations, rules, roles, routines
- *Liability of adolescence*
  - inverted u-shaped risk pattern: initial rising risk
    - initial stock of resources
    - expectations of rational founder
  - especially Non-Profit Organizations
    - lower stress of competition
  - after adolescence:
    - judgement ⇨ failure when expectations were disappointed
- Followers
  - better prospects: "piggybacking upon existing experience" (Bates 1990: 12)
    - established relations, internal routines
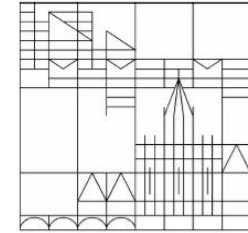
Attributes of new organizations

- Local Exchange Systems and age dependent survival chances
  - disassociate themselves from regular economy (no stress of market competition)
  - strong ideological approach: partially utopian objectives
  - danger of disappointing these euphoric expectations after period of protection (leap of faith)
- *Hypothesis*

  The risk pattern of Local Exchange Systems will follow a liability of adolescence.

- Local Exchange Systems as followers
  - stable affiliation to existing scheme: resources, knowledge, members
- *Hypothesis*

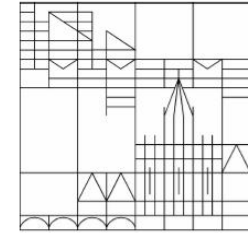 *Better survival chances are predicted for merger or spin-off systems.*

Attributes of new organizations

- *Liability of smallness*
  - large new organizations ➪ better survival chances
  - better cope with random shocks from the environment, better raise capital, better taxation conditions, better position in competing for qualified labour

- Local Exchange Systems and size dependent survival chances
  - distinct size at starting point for winning participants and diverged supply
  - too large systems: anonymous, no social control possible

  (problems in securing transactions)

- Hypothesis

  For Exchange Systems an u-shaped pattern between size and mortality is expected, i.e. a survival of the medium size.
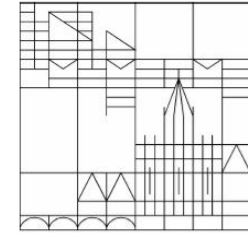
Entrepreneurial Environment

- Organizational imprinting: density dependence of survival chances:
  - organizations of same population linked to each other through processes of legitimation and competition
- Density dependence and Local Exchange Systems
  - limited carrying capacity of niche at starting point
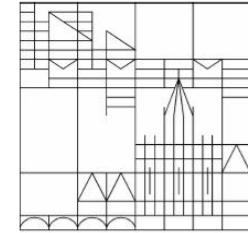- Hypothesis

  Mortality rate of Local Exchange Systems will decrease with increasing legitimation and increase as far as competition dominates the process.

- Other environmental forces at founding:
  - *task, institutional environmental variables* and *effects of the political environment*
- Relevant variables for Local Exchange Systems at starting point
  - high regional employment rate: +
  - regional green orientation (percent voting greens in district): +

Methodology

- Data
  - standardized telephone interview of all capable Local Exchange Systems (N = 316)
    - survivor bias: dominance of successful schemes in sample
  - statistical bureau
- Methods
  - survival chances
    1. nonparametric, bivariate life-table estimate
       - two censor variables to avoid survivor bias:
         - *failure* and
         - *failure or less than 30% active members*
    2. multivariate analyses with stronger censor variable
       - cox regression model
       - logistic regression model (failure within 5 years or less than 30% active members)
  - organizational growth
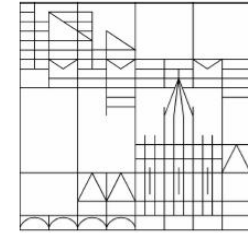   - OLS regression model (participant trend, logarithm)

Methodology

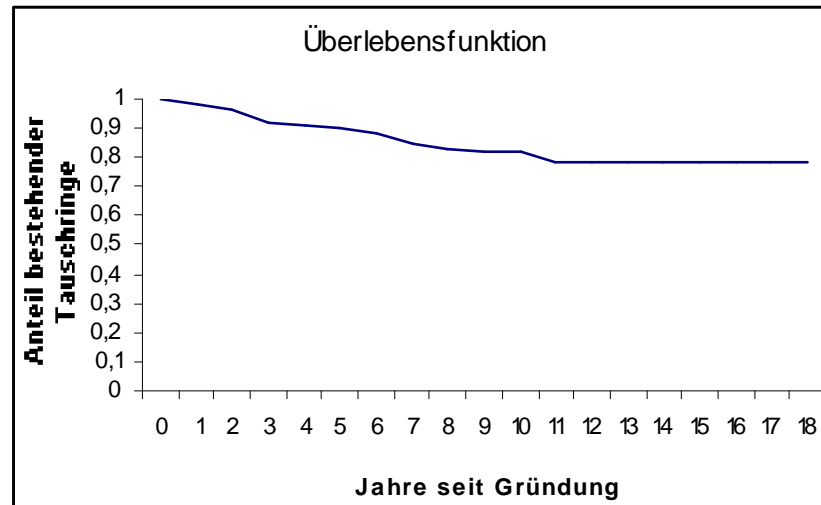**Used variables and expected effects on survival chances**

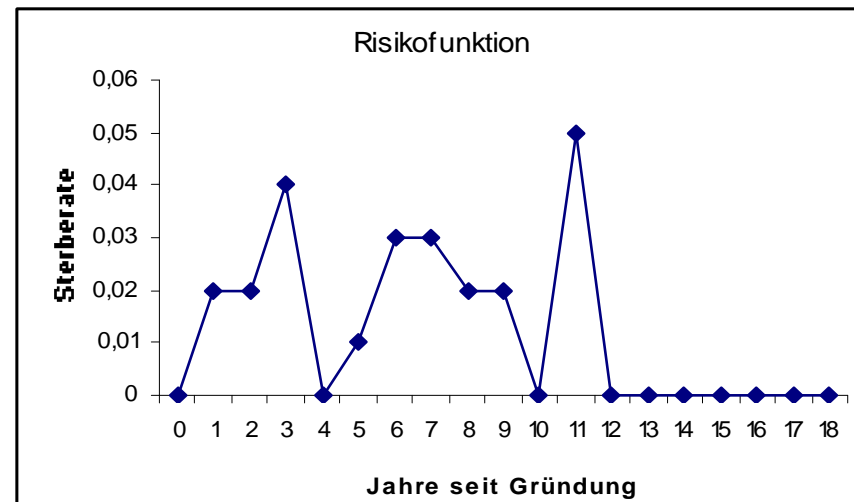|	Variable	Direction
entrepreneurial characteristics	specific human capital • personal experience • indirect experience • medial experience	+
attributes of organization	age follower size organizational degree currency (time-based) rules (index)	+ + +/- + + +
environmental characteristics	population density high regional unemployment rate high percentage voting the greens in region	+/- + +

Results

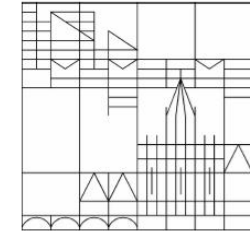- Survival of Local Exchange Systems

Survival Function

Überlebensfunktion

Source: Tauschringkoordinatorenbefragung 2005; N = 309
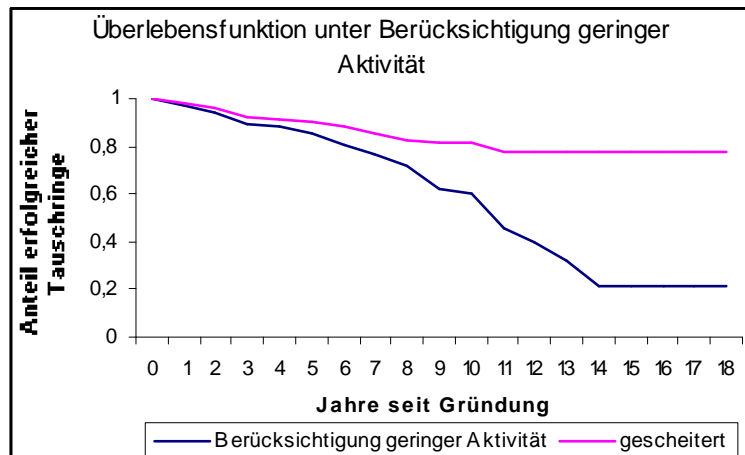
Hazard Function

Risikofunktion

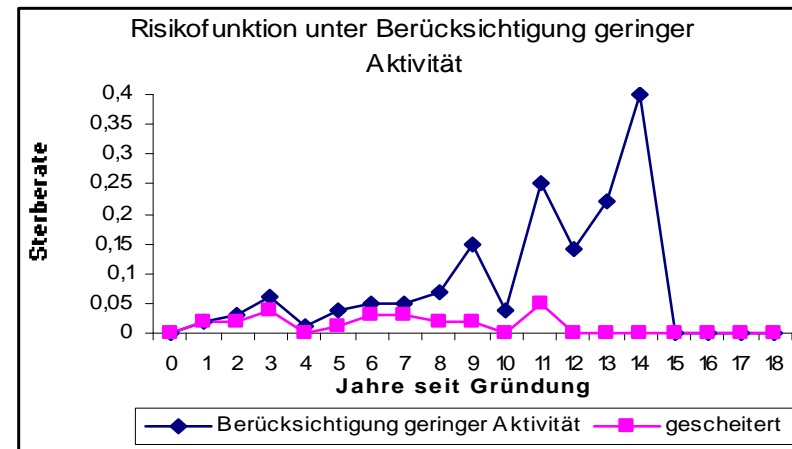Source: Tauschringkoordinatorenbefragung 2005; N = 309

Results

- Survival of Local Exchange Systems controlling for activity

survivor functions regarding activity

Überlebensfunktion unter Berücksichtigung geringer Aktivität

Source: Tauschringkoordinatorenbefragung 2005; N = 298 resp. 309

hazard functions regarding activity

Risikofunktion unter Berücksichtigung geringer Aktivität
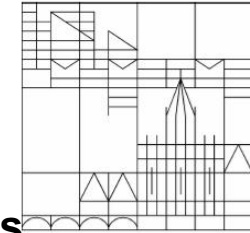

Source: Tauschringkoordinatorenbefragung 2005; N = 298 resp. 309

- Censor variable "failure": over estimation of survival chances
  - many schemes due to no/extremely low activity level no longer viable but still remain (formal vs. operative survival)
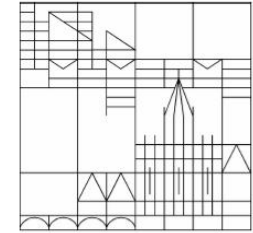
Results

Logistic regression: failure 5 years or less than 30% active members

Variable	(1)	(2)	(3)
HKpers	-0,263 (0,281)	0,054 (0,361)	0,091 (0,375)
HKind	0,012 (0,348)	0,033 (0,352)	0,026 (0,372)
HKmed	0,059 (0,314)	0,016 (0,320)	-0,037 (0,327)
neu		1,298 (0,812)+	1,359 (0,823)*
lgröße		2,496 (1,492)*	2,679 (1,547)*
lgröße²		-0,370 (0,228)+	-0,393 (0,235)*
recht		-0,061 (0,402)	0,012 (0,410)
geld		-0,494 (0,356)	0,519 (0,369)
regel		-0,042 (0,075)	-0,045 (0,076)
dichte			-0,005 (0,009)
dichte²			0,000 (0,000)
alos			0,033 (0,034)
ideol			-0,040 (0,039)
Konstante	-1,107 (0,348)***	-6,352 (2,541)**	-7,058 (2,758)**
N	266	266	266
Pseudo R²	0,003	0,036	0,046
Chi²; df	0,714; 3	9,650; 9	12,549; 13

Source: Tauschringkoordinatorenbefragung 2005; statistical bureau: Statistische Jahrbücher
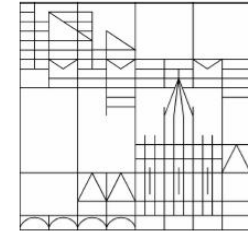
(***) 1% significance, (**) 5% significance, (*) 10% significance, (+) tend. significance, standard error in parenthesis
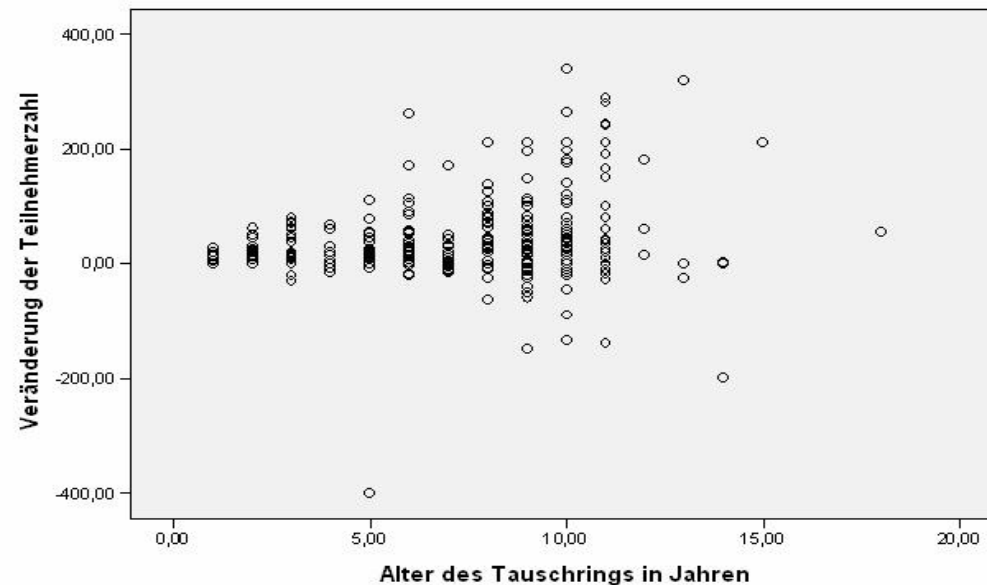
Results

- Interpretation: effects on survival of Local Exchange Systems
  - almost no empirical evidence for ecological assumptions considering the survival chances of Local Exchange Systems
  - however strong survivor bias and little explanatory power of logistic regression models

- Successful schemes
  - follower systems
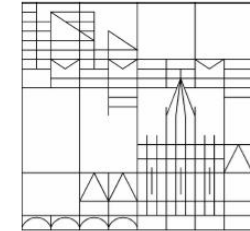 - smaller or larger systems: liability of the medium size

Results

- Growth of Local Exchange Systems
  - only surviving systems in analysis
  - information about number of participants at point of founding and survey
  - dependent variable:
    difference of participants at point of survey and founding (logarithms)
  - methods: OLS Regression models

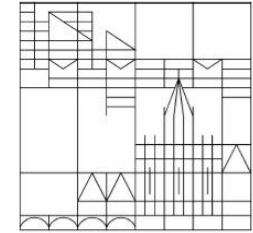**participant trend regarding age of Local Exchange System**

Source: Tauschringkoordinatorenbefragung 2005; N = 248

Results

OLS Regression: Participant trend (logarithm): standardised beta coefficients

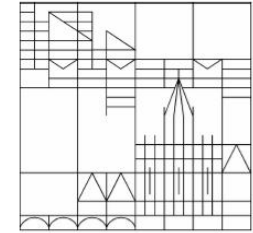| Variable	(1)	(2)	(3)
HKpers	-0,101 (-1,559)	-0,079 (-1,089)	-0,082 (-1,118)
HKind	0,024 (0,364)	0,039 (0,590)	0,038 (0,572)
HKmed	-0,093 (-1,423)	-0,085 (-1,307)	-0,085 (-1,300)
neu		-0,046 (-0,634)	-0,049 (-0,673)
TRalter		0,187 (2,708)**	0,191 (2,667)**
regel		0,009 (0,143)	0,009 (0,134)
recht		-0,096 (-1,467)	-0,025 (-0,367)
geld		-0,022 (-0,336)	-0,097 (-1,470)
alos			-0,023 (-0,354)
ideol			-0,014 (-0,212)
N	243	243	243
R²	0,018	0,056	0,057

Source: Tauschringkoordinatorenbefragung 2005; statistical bureau: Statistische Jahrbücher
(***) 1% significance, (**) 5% significance, (*) 10% significance, (+) tend. significance, standard error in parenthesis

Results

- Interpretation: effects on growth of Local Exchange Systems
  - again: almost no empirical evidence for ecological assumptions
  - population density due to colinearity effects not included

- Effects on growth
  - age of the system: liability of newness – social acceptance important for systems' growth

Thank you for your attention!