

Identify Business Angels based on firm surveys and a large scale firm-level data base for Germany

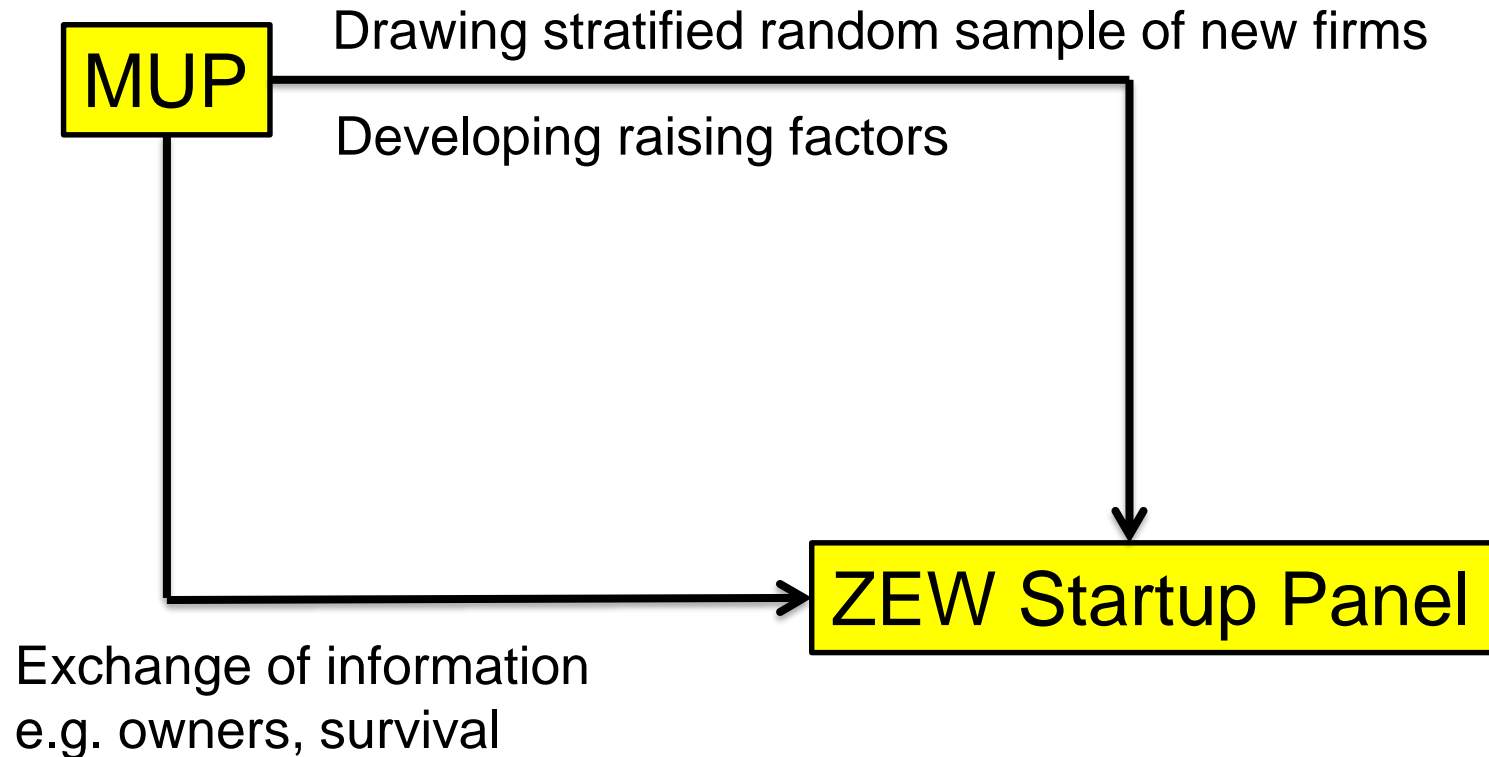
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Business Angels Europe
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Essen

Data Sources

- **Mannheim Enterprise Panel (MUP)** (in co-operation with the credit-rating agency *Creditreform*):
Firm data of Germany's firm population
 - 3,000,000 active firms
 - 5,500,000 closed firms
 - Longitudinal data of owner structure since 1999
- **ZEW Startup Panel** (*new in 2016: IAB/ZEW Start-up Panel*):
Firm survey of young firms (up to seven years old)
 - Telephone-interviews of 5,000-6,000 firms in each year
 - Focus on Hightech-Start-ups

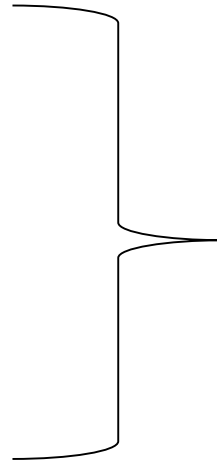
Links between MUP and ZEW Startup Panel



Availability of Information

MUP

- ❖ Foundation Date
- ❖ Turnover / Employees
- ❖ Managers, Owners (name, ...)
- ❖ Location/Address
- ❖ Credit rating
- ❖ „Hausbank“



ZEW Startup Panel

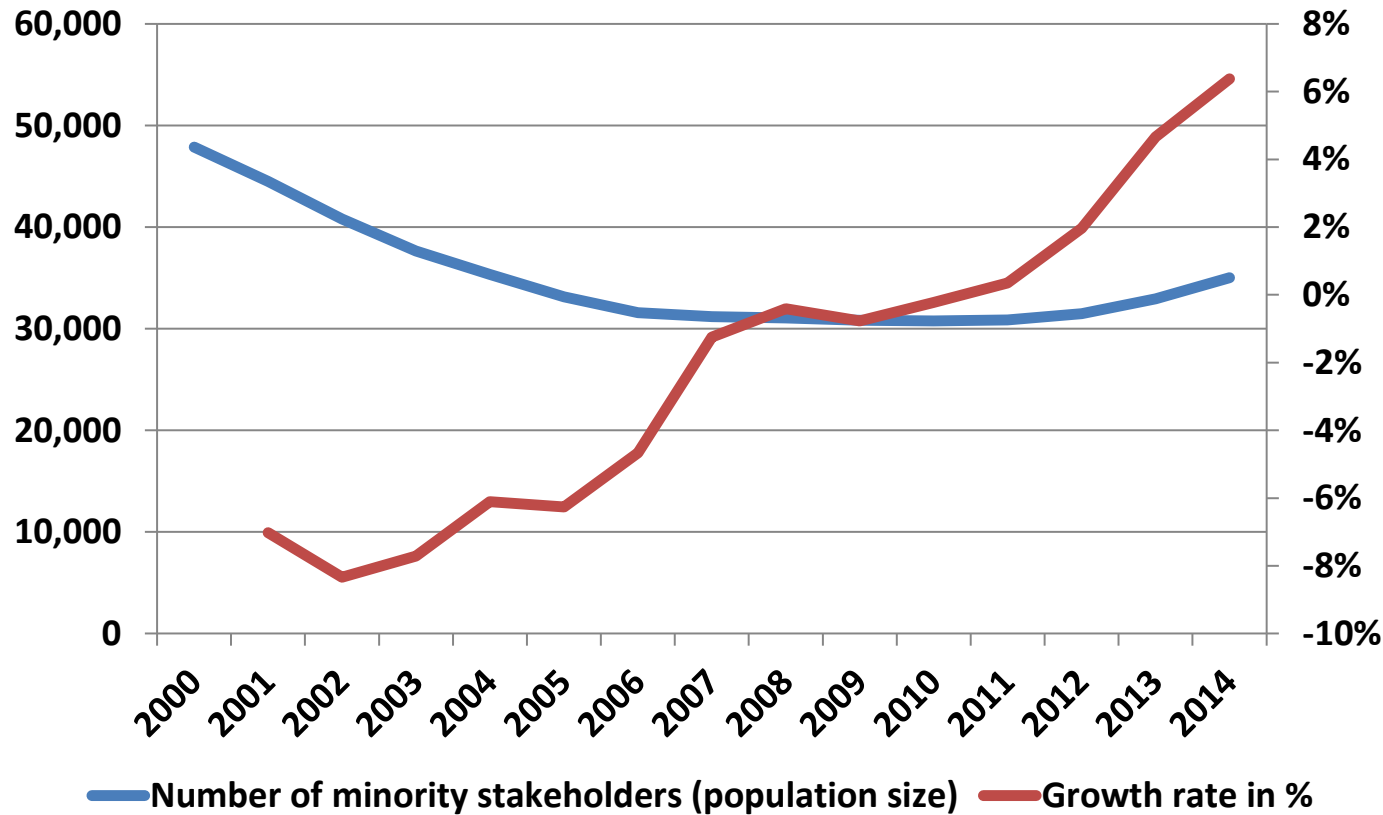
- ❖ Turnover / No. employees
- ❖ Founder/Founding Team
- ❖ Human capital of founder(s)
- ❖ Financing structure (type of owners + amount)
- ❖ Physical and intangible investment
- ❖ Special questions on business angels (no, investment type, contact, value added from BA)

Identification of Private Investors in the MUP

Identification of investors of young corporate firms (up to ten years old) in the large scale firm data base MUP

- Equity investments of persons who are not involved in the management
 - Equity share $\leq 25\%$ (minority stakeholders)
 - Excluding persons who are directly related to the firm's owners (spouses, children, parents)
 - Further family members and friends cannot be excluded (these persons cannot be considered as professional investors)
- result: a broad group of investors, which includes passive occasionally investors, professional passive investors and Business Angels

Population of Private Investors in the MUP



Source: Mannheim Enterprise Panel (MUP), ZEW

70% of the investments are realized in the year of foundation

Identification of Professional Private Investors

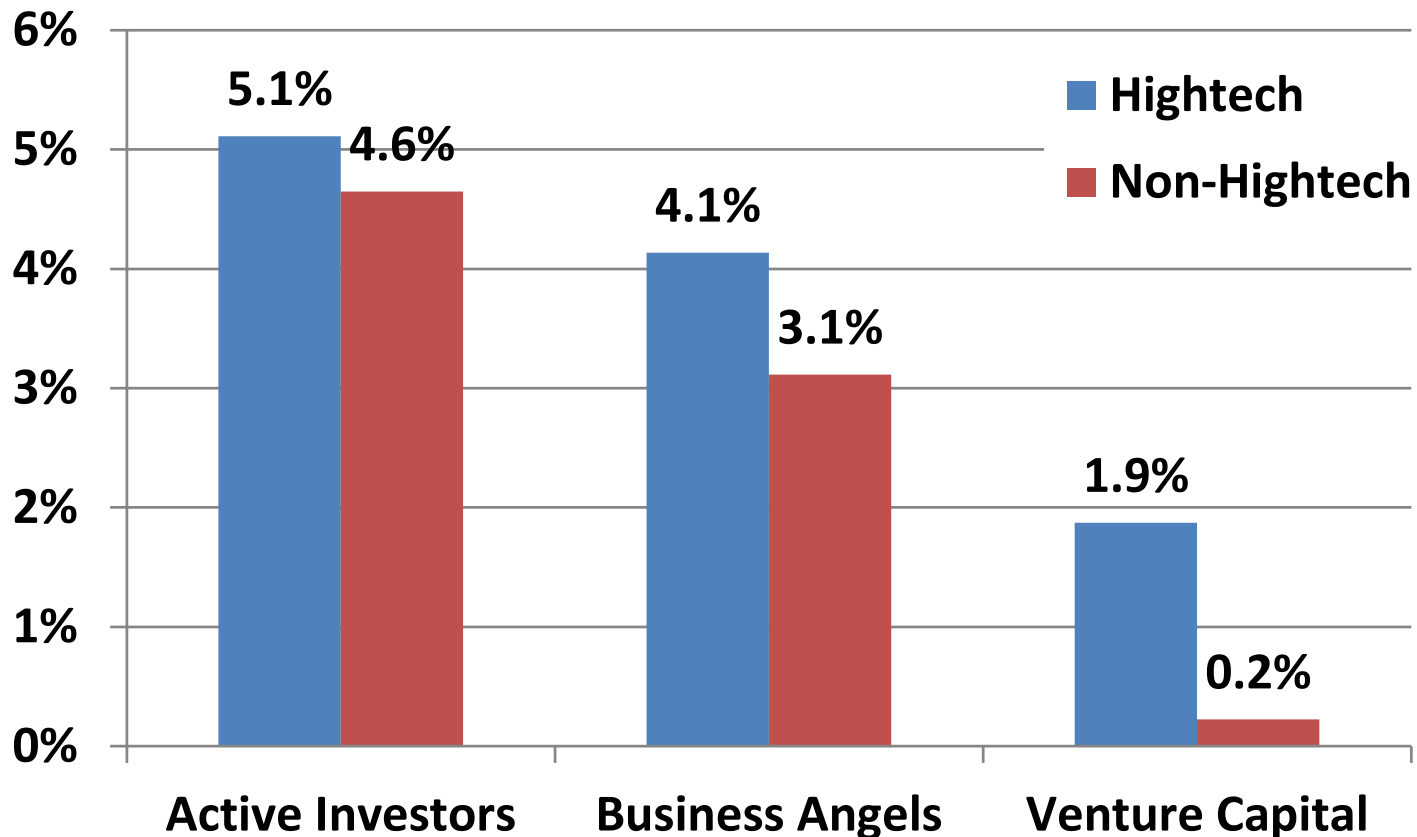
Survey 2013 of the **ZEW Start-up Panel**

- Identification due to investments:
*Investments in a startup by a private investor (loans or equity capital)
(but not Venture Capital companies)*
→ Identification of investors

+ *Active participation in the start-up*
→ Identification of **Active investors**
- Identification due to the type of investment:
*Active investors, who are equity shareholders, and hence sharing in
losses and in profits*
→ Identification of **Business Angels**

Start-ups receiving investments from private investors and VC-Companies: Share of population size

Foundation years 2009-2012



Source: ZEW Start-up Panel 2013, values weighted by population weights

Estimation of the Numbers of Business Angels

Estimation procedure for the foundation cohorts 2009-2012:

- Estimation of the number of start-ups financed by Business Angels:
ZEW Start-up Panel (see above)
- Estimation of the number of investments:
ZEW Start-up Panel
- Analysis of the owner structure of interviewed firms with Business Angel investments:
Mannheim Enterprise Panel (MUP)
- Identification of further equity investments of the identified Business Angels within the foundation cohort of 2009-2012: → **2,5 pro BA**:
Mannheim Enterprise Panel
- Assumptions regarding BA investments which are not visible in the MUP:
 - **Lower Margin**: identified BAs **also** engage in form of **invisible** investments
 - **Upper Margin**: identified BAs **only** engage in form of **visible** investmentsown calculations

Resultant Number of Business Angels

Results weighted by population weights:

In 2013, were engaged in the firms of the foundation cohorts 2009-2012:

- **Active Investors** (loans / equity capital): between **9,600 and 12,400**
- **Business Angels** (equity capital): between **6,300 und 9.100**
- (Equity-)Investors altogether (acc. to MUP, see above): 14,000
- **Passive** (visible Equity-)Investors: between **4,900 and 7,700**

Value Added by Business Angels

Hightech

