



Global Entrepreneurship Monitor



# Human Capital and Entrepreneurial Activity in UK City Regions

**EPRC Seminar 4 May 2011**

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# GEM UK City Region Analysis

- “Loose” Definition of City Region based on LA-based TTWAs for City regions as calculated by State of the Cities Database (University of Sheffield)
- Total for UK of 62 City Regions
- Pooled Dataset – 2003-2009 – number of observations around 92,000 (half the overall pooled dataset)
- Minimum sample size of 1,000 to be included in the current analysis
- Current sample 27 City Regions (more to come)

# **Total early-stage Entrepreneurial Activity (TEA)**

**% of adults actively starting a business  
(nascent entrepreneurship rate)**

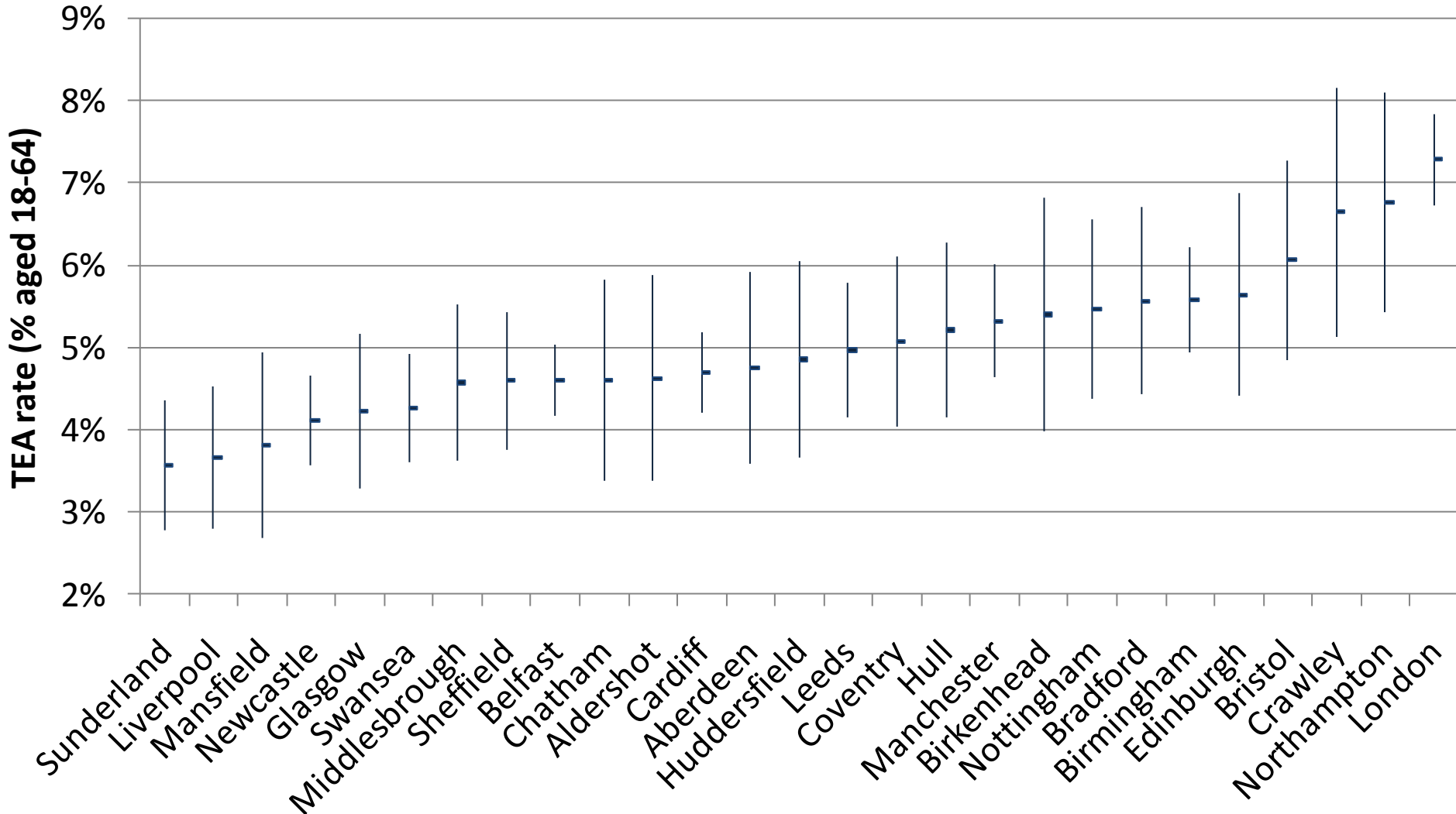
**+**

**% of adults running a new business  
(owner/managers of businesses < 3½ yrs old)**

**=**

**Total early-stage Entrepreneurial Activity  
(TEA)**

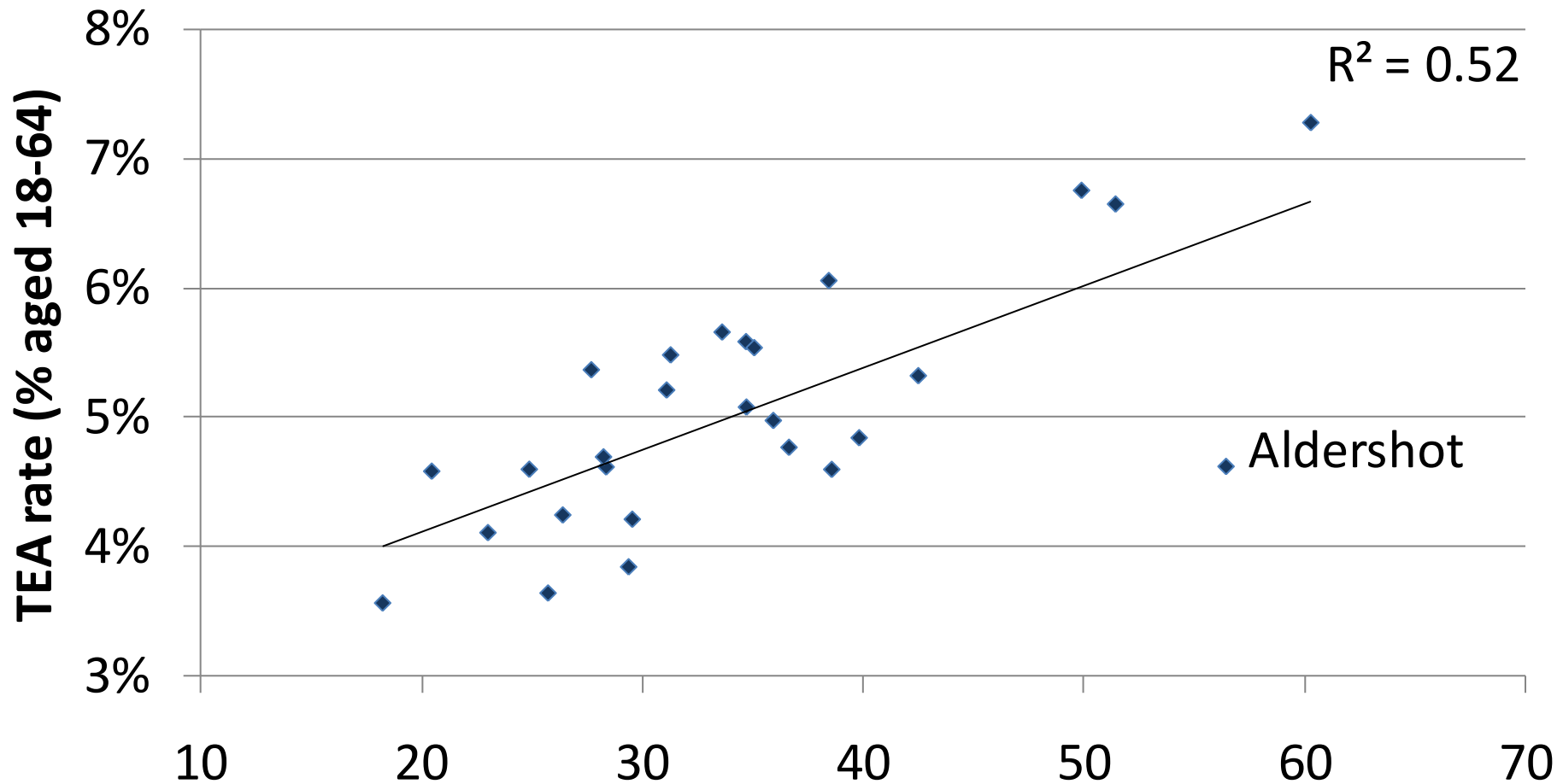
# TEA rate estimates and 95% Confidence Intervals for 27 City-Regions of the UK



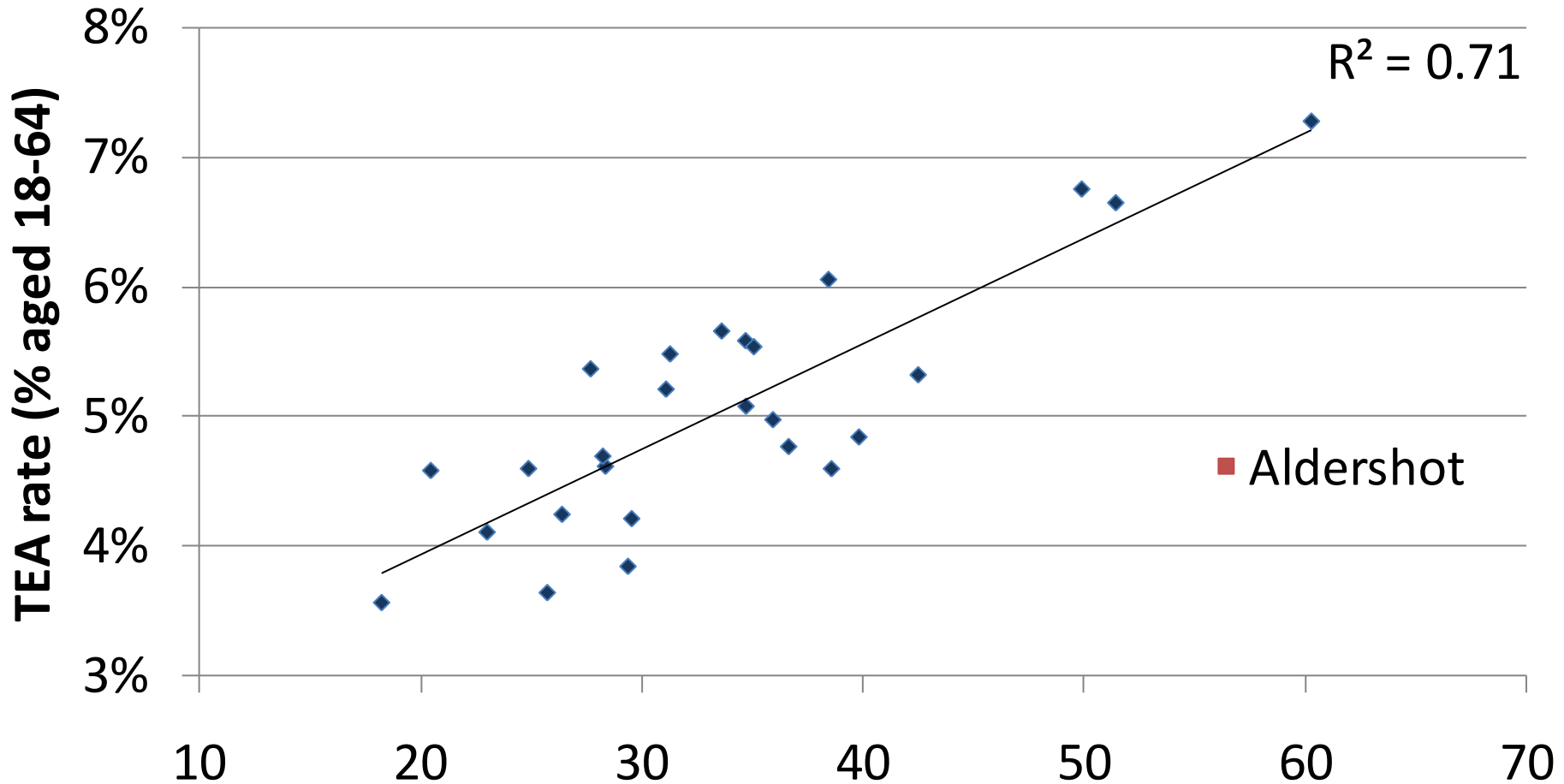


# Validation

# VAT registrations per 10,000 adults, 2003



# VAT registrations per 10,000 adults, 2003



# **Human Capital effects on Entrepreneurial Activity at the City Region population level**

**TEA rate = f{Demand, General HC, Specific HC}**

**Demand: Wealth**

**General human capital:**

- ✓ **Education levels**
- ✓ **Health levels (neglected in the ent. literature)**

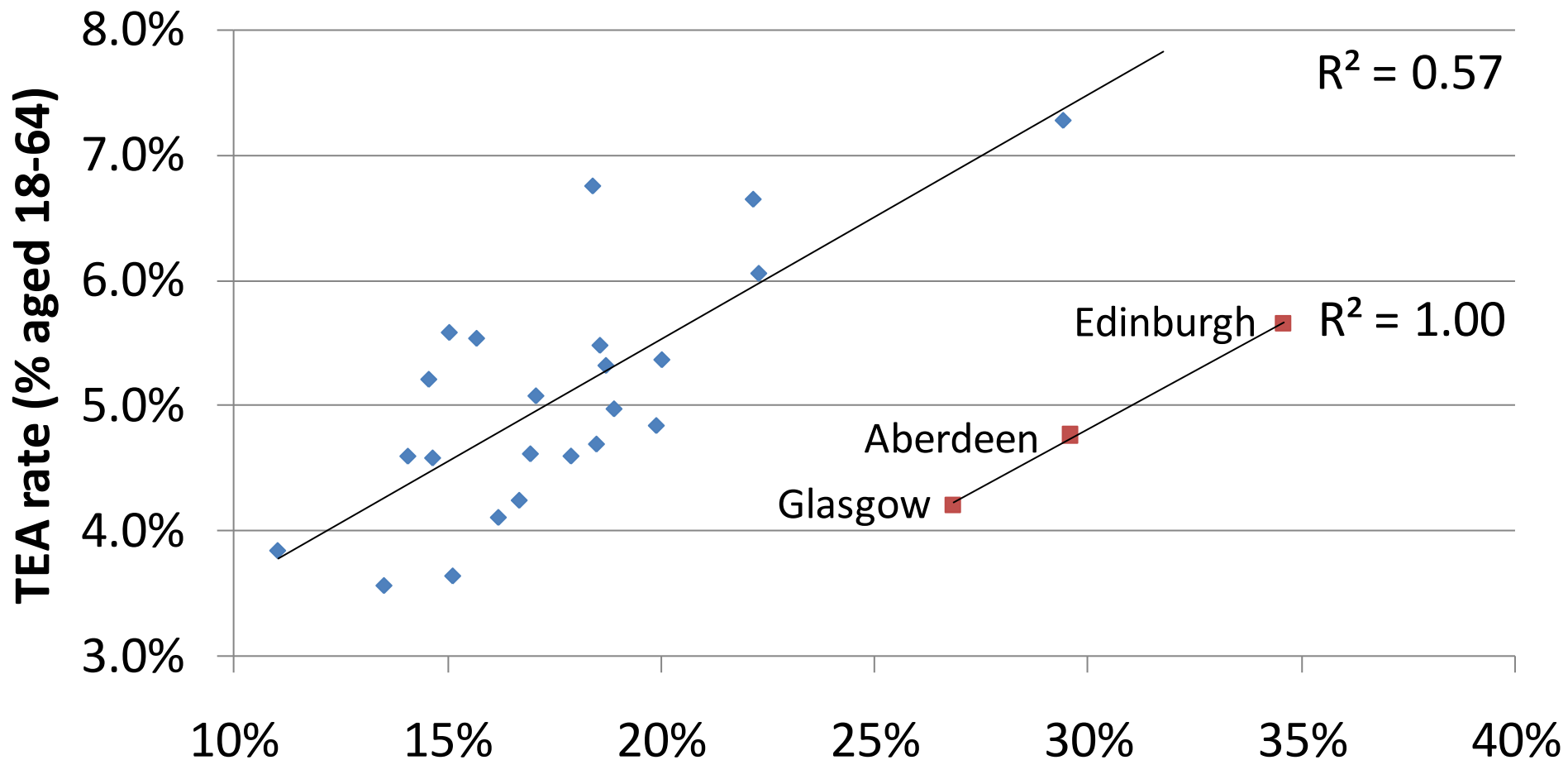
**Specific human capital:**

- ✓ **Relevant work experience**
  - e.g. non-routine work, managing others, business experience
- ✓ **Learning from other entrepreneurs**

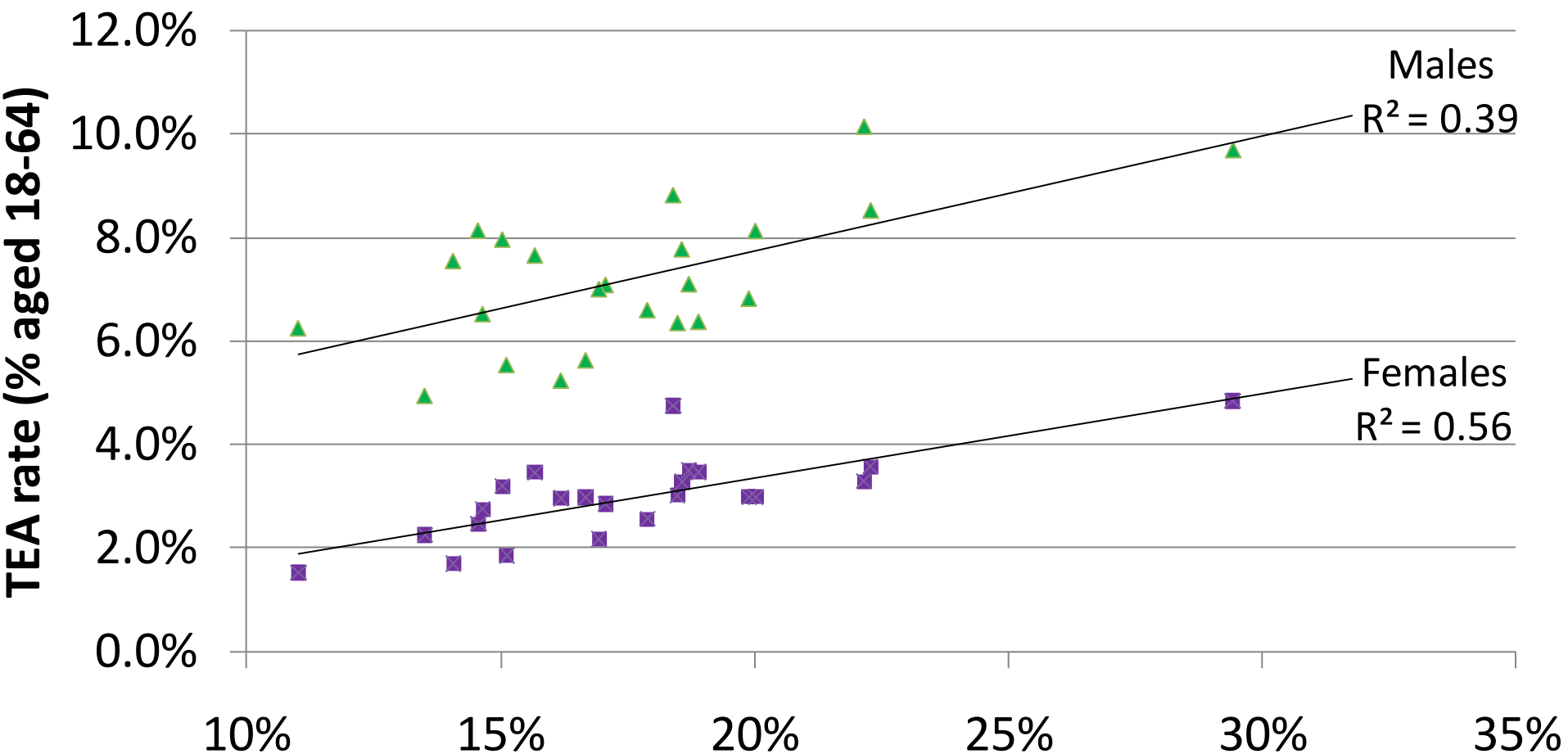


# Education

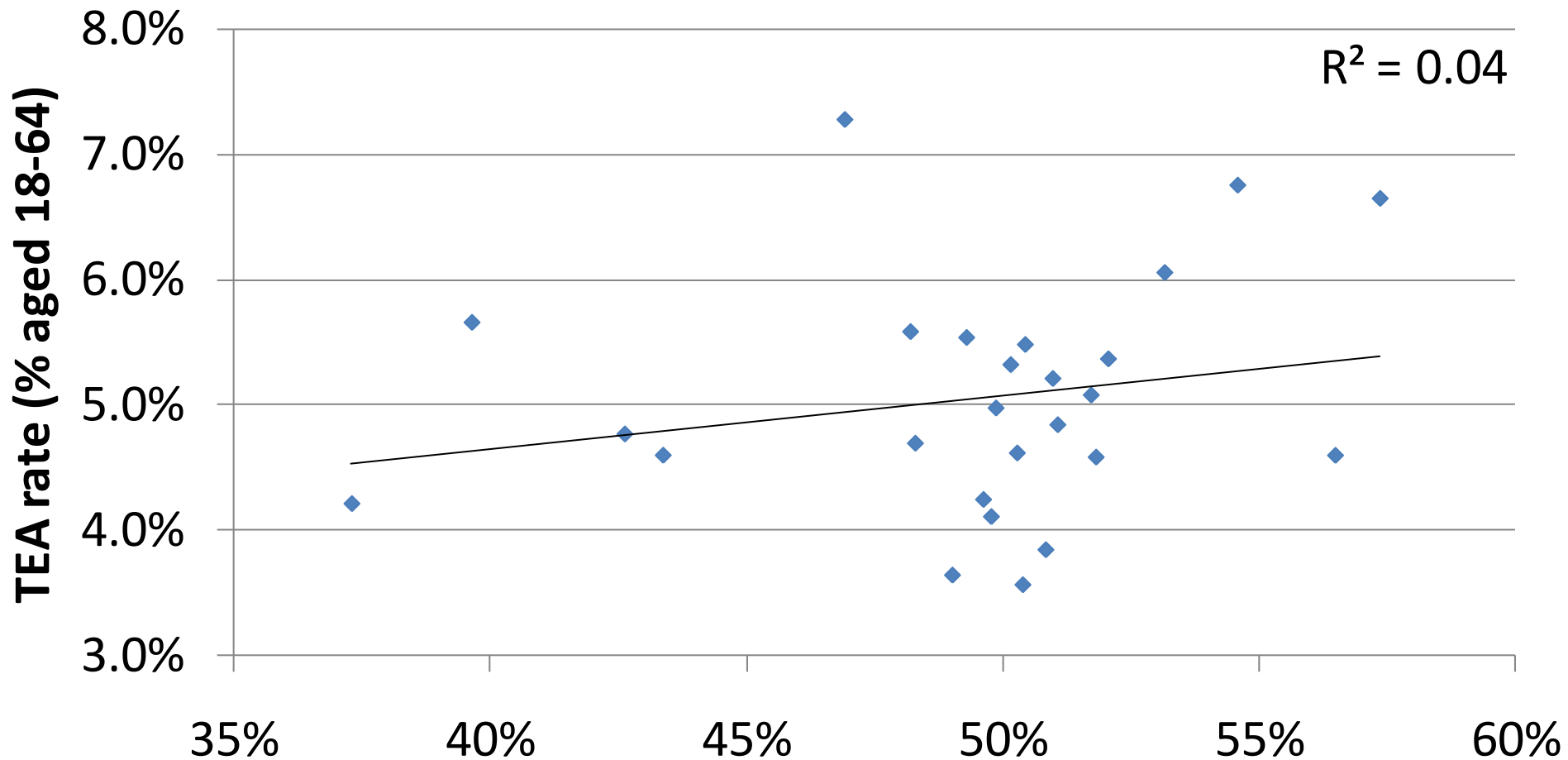
# The percentage of 16-74 year olds who have highest qualification attained level 4/5\*\*, census 2001



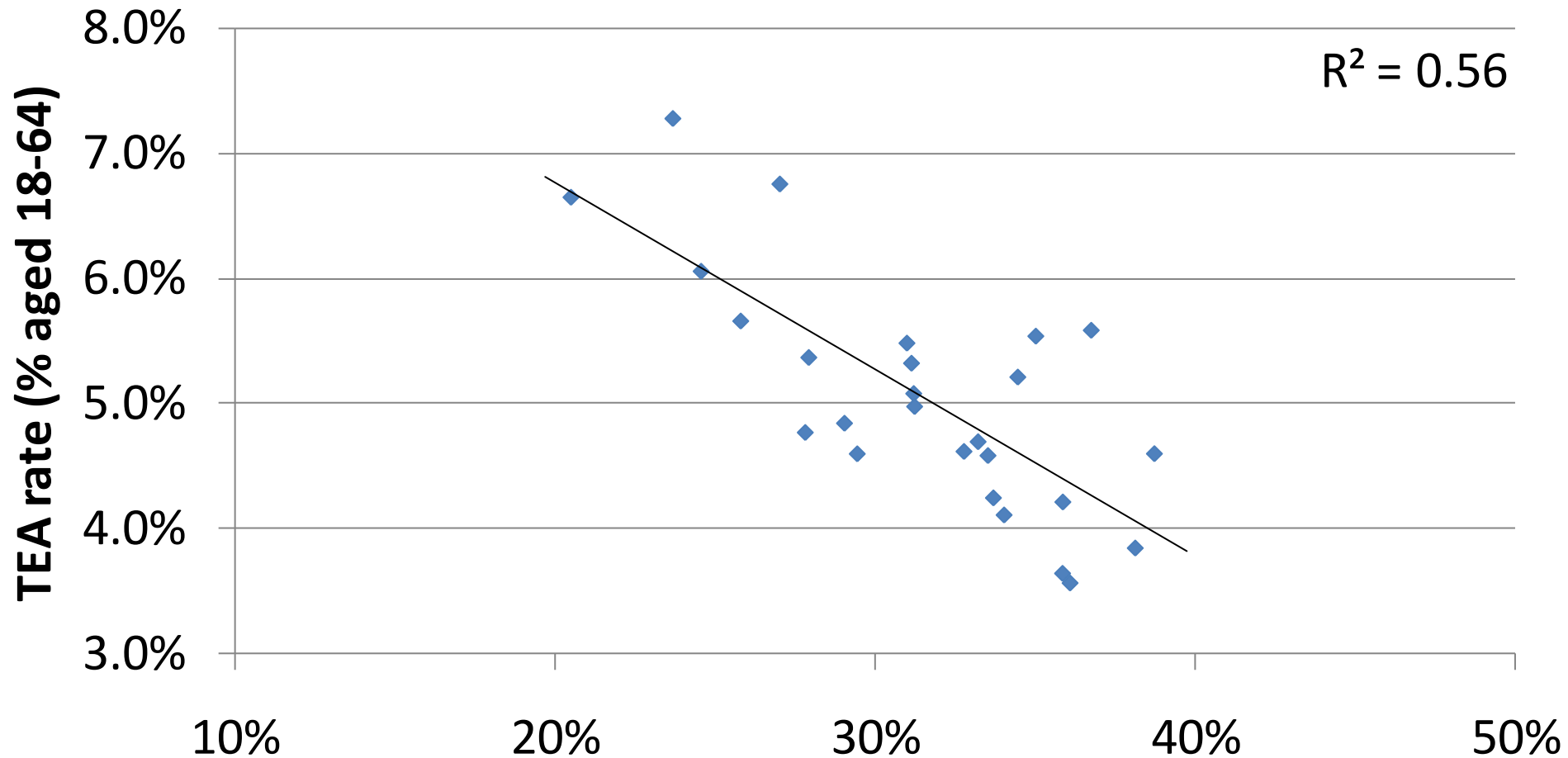
# The percentage of 16-74 year olds who have highest qualification attained level 4/5\*\*, census 2001 (excluding Scotland)



# % People aged 16-74 with qualifications below level 4/5, census 2001



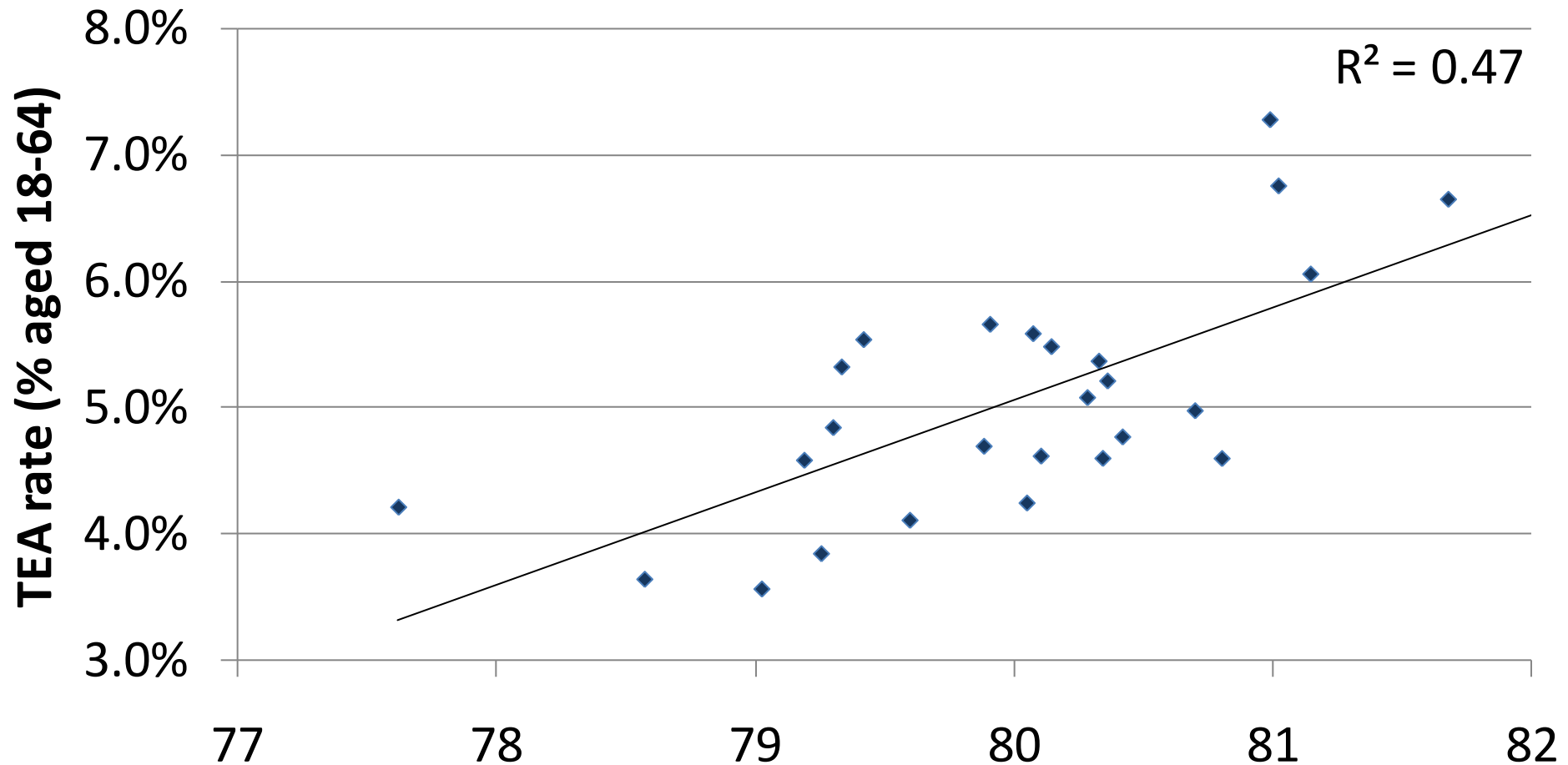
# % People aged 16-74 with no qualifications, census 2001



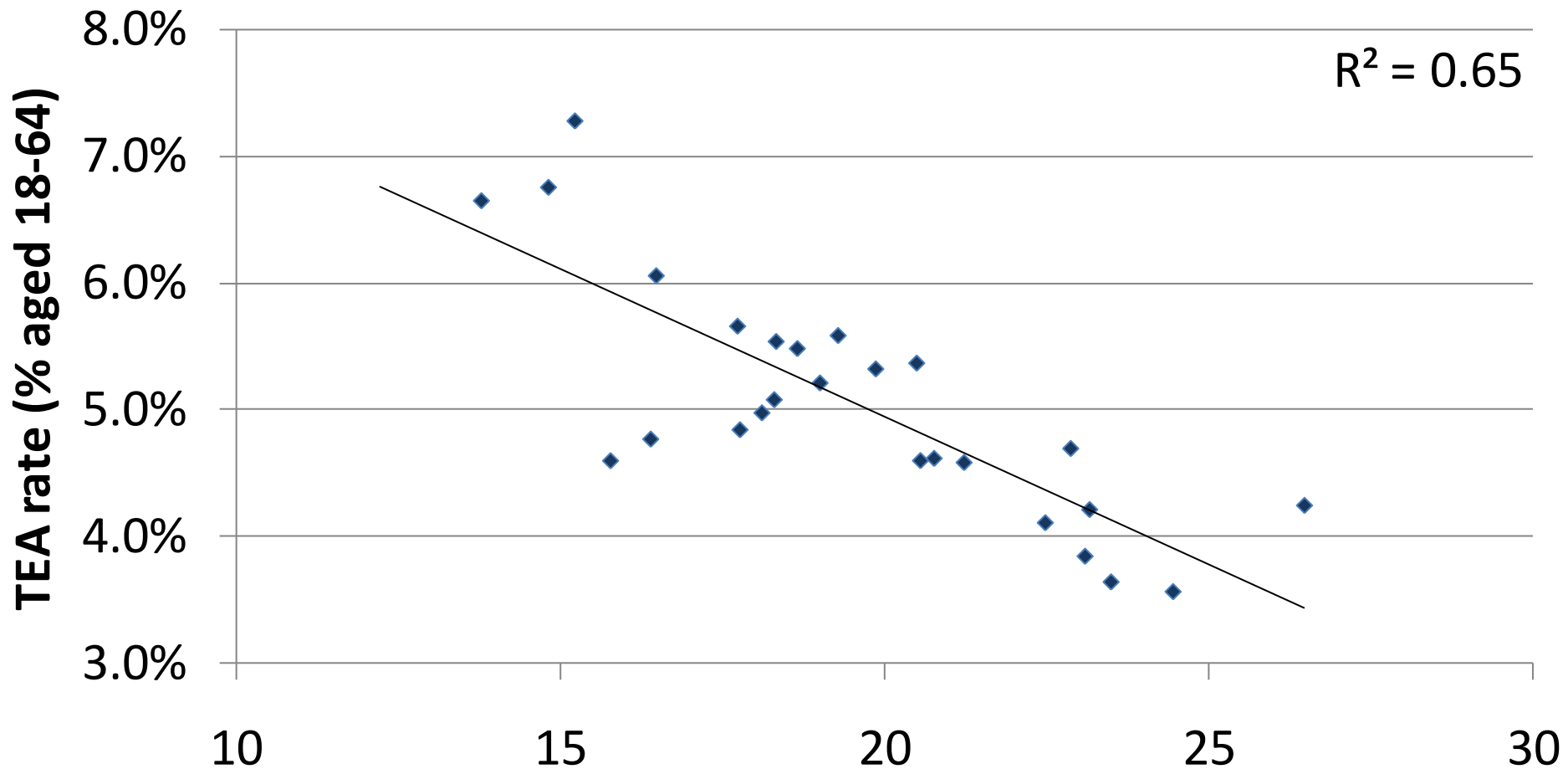


# Health

# Female life expectancy at birth, 3 year rolling average 2001-2003, ONS



# % of all people with limiting long term illness Census 2001





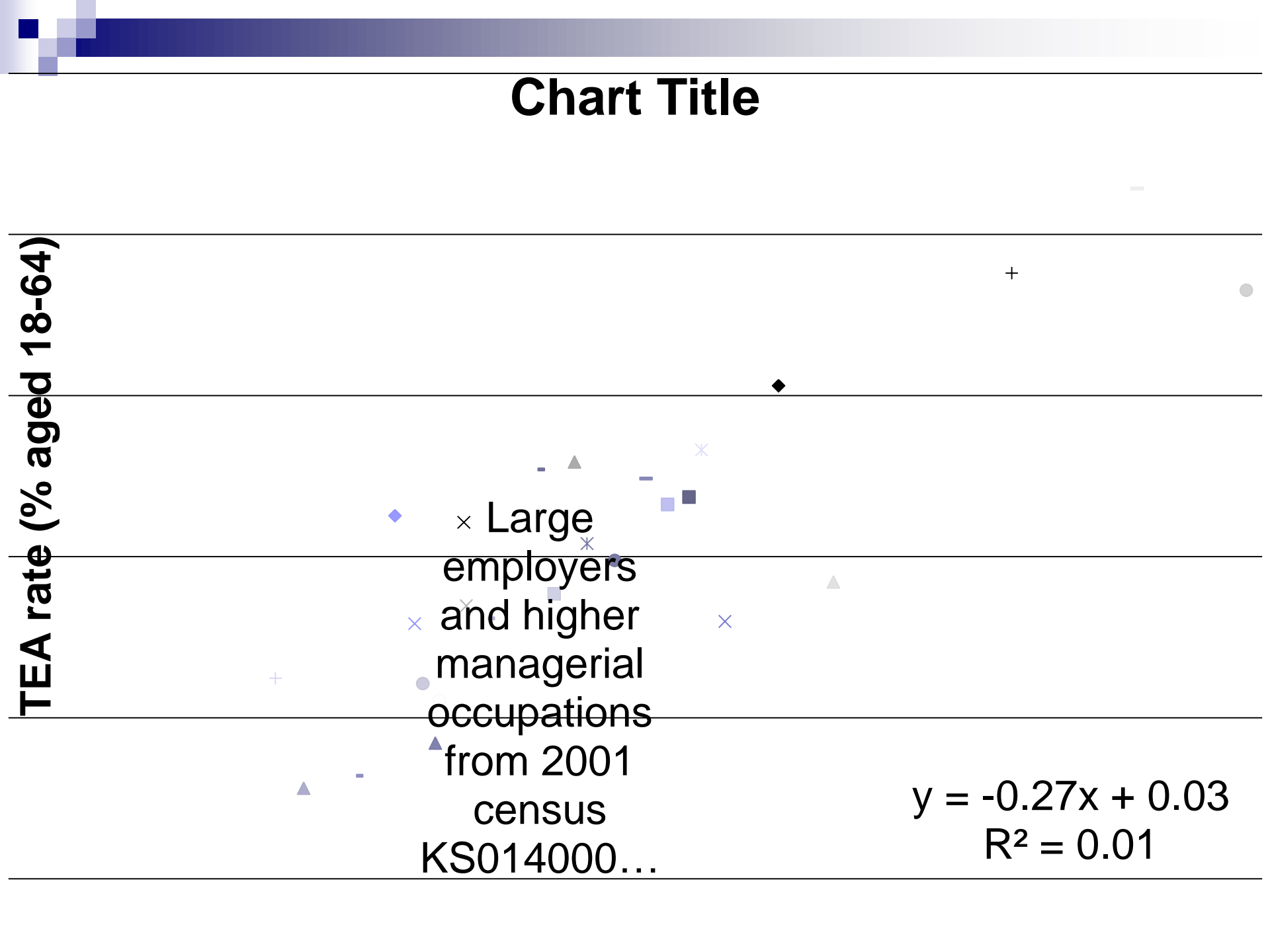
# **Relevant work experience**

# Chart Title

TEA rate (% aged 18-64)

× Large employers and higher managerial occupations from 2001 census  
KS014000...

$$y = -0.27x + 0.03$$
$$R^2 = 0.01$$



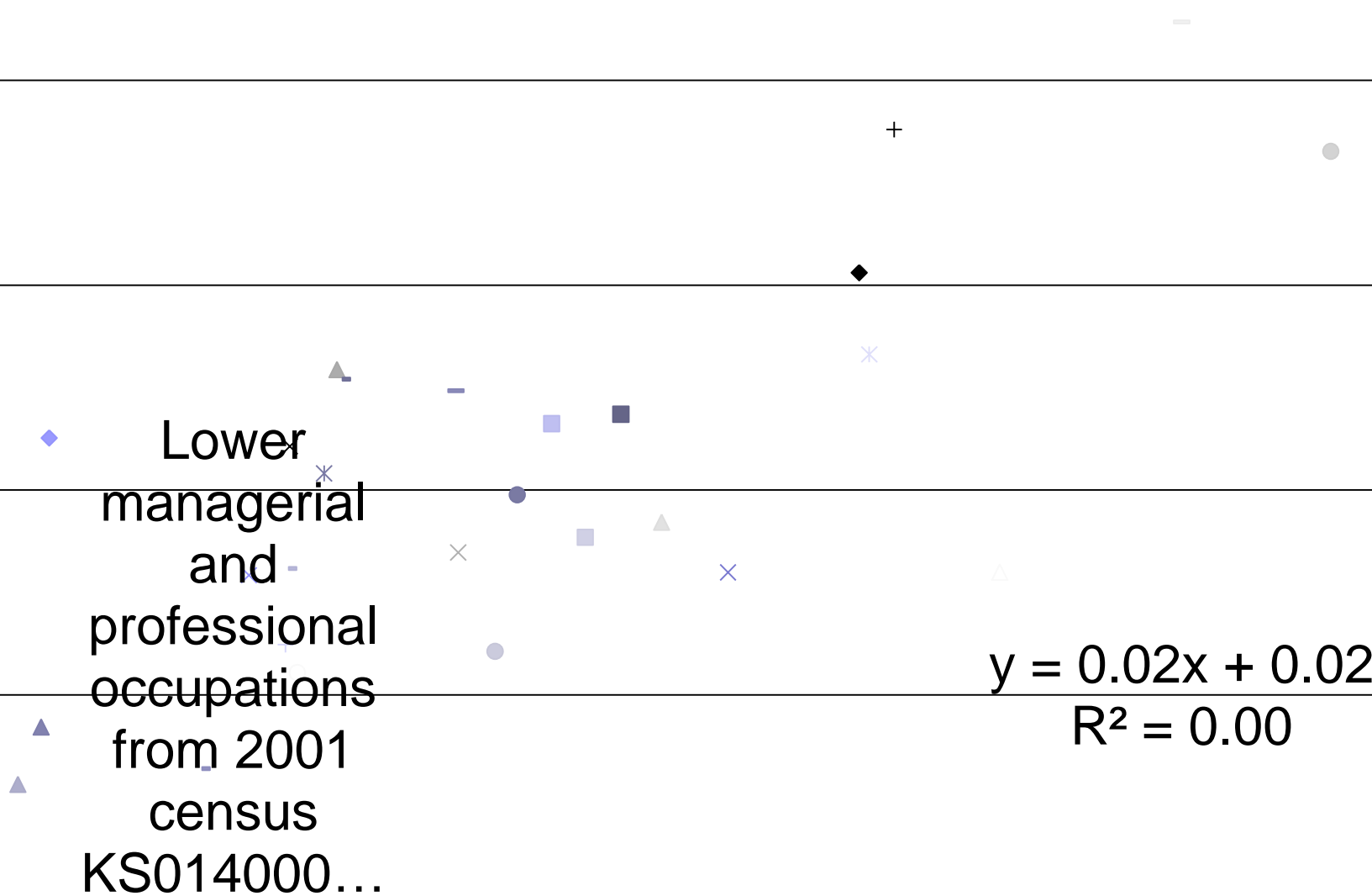
# Chart Title

TEA rate (% aged 18-64)

Lower  
managerial  
and  
professional  
occupations  
from 2001  
census  
KS014000...

$$y = 0.02x + 0.02$$

$$R^2 = 0.00$$

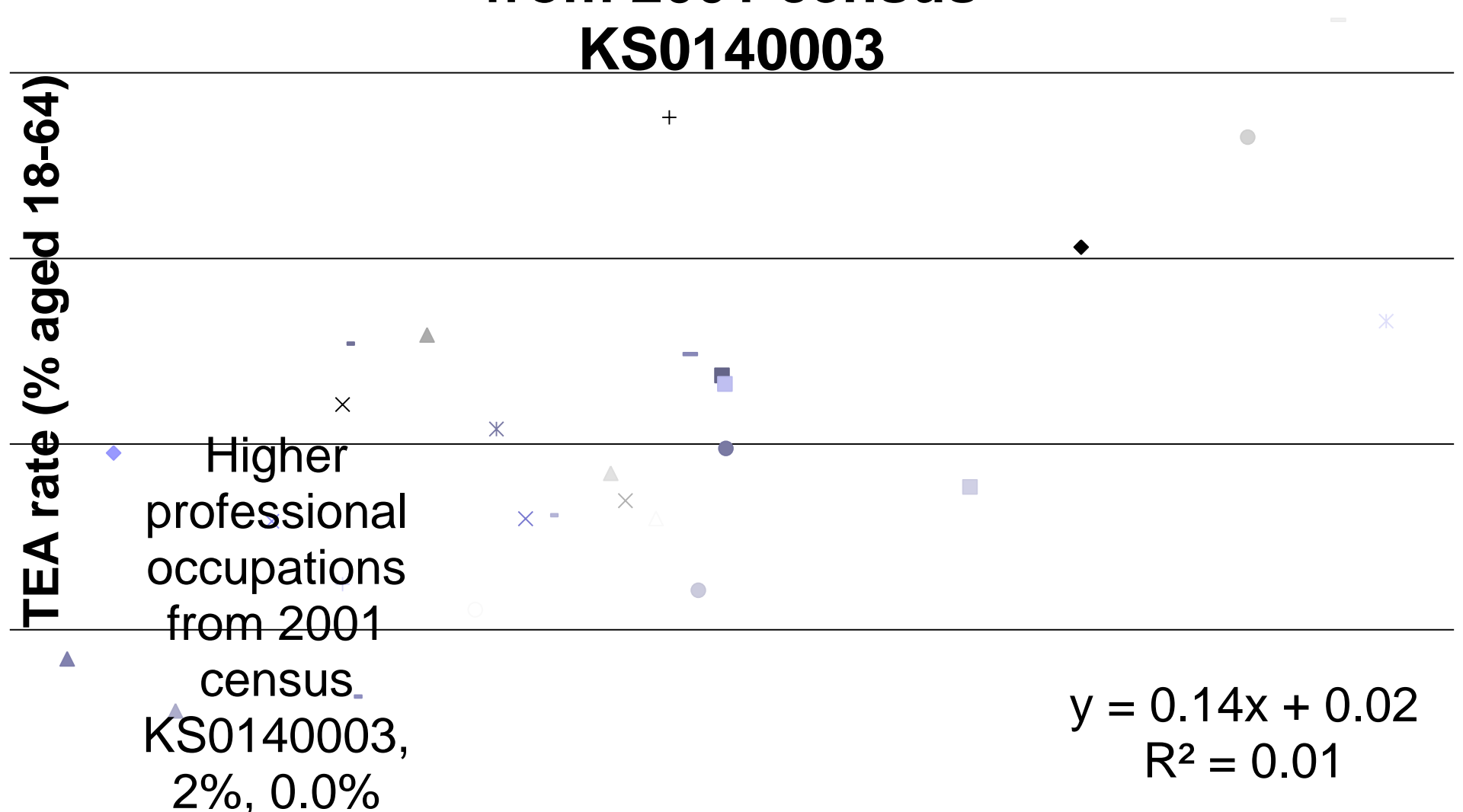


# Higher professional occupations from 2001 census KS0140003

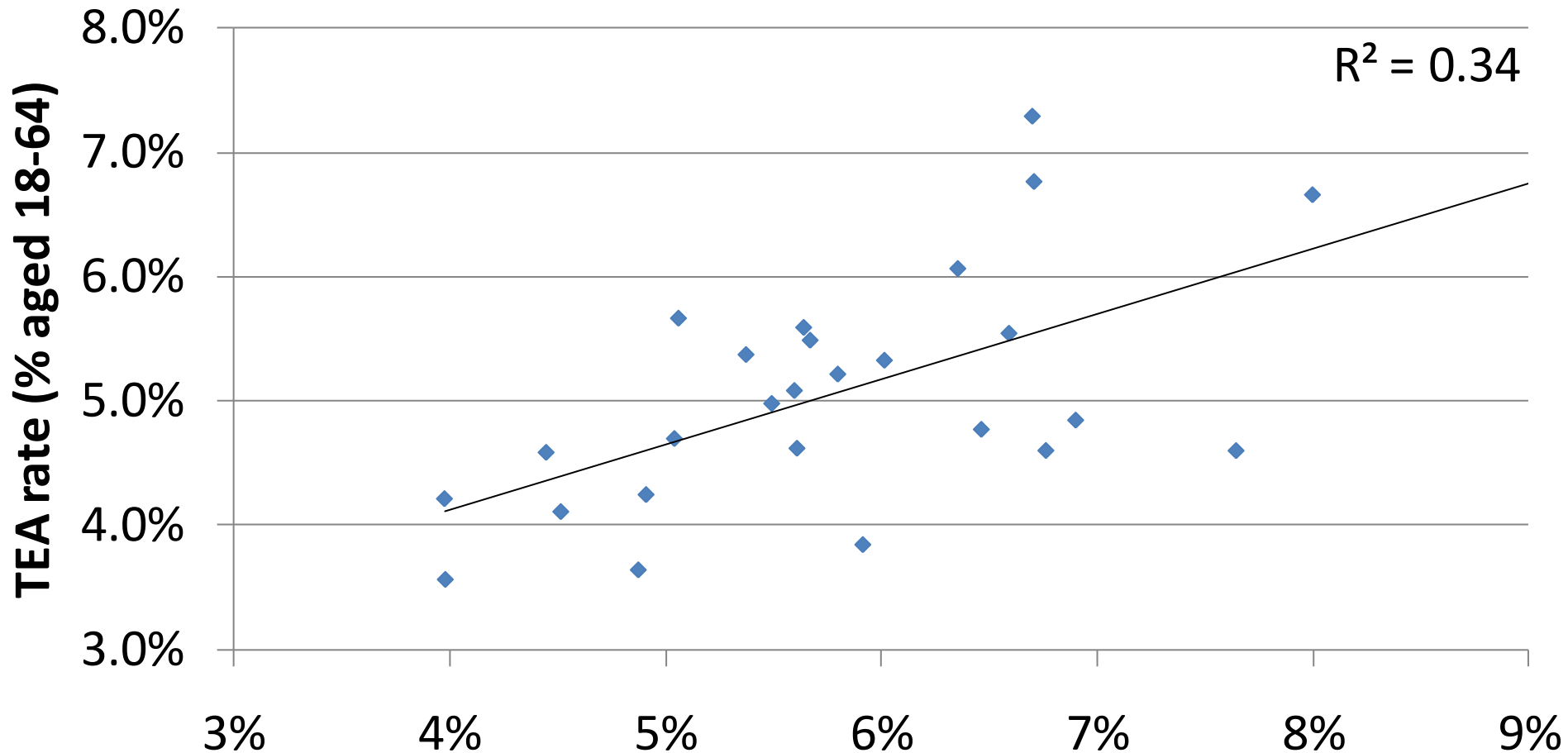
TEA rate (% aged 18-64)

Higher professional occupations from 2001 census.  
KS0140003, 2%, 0.0%

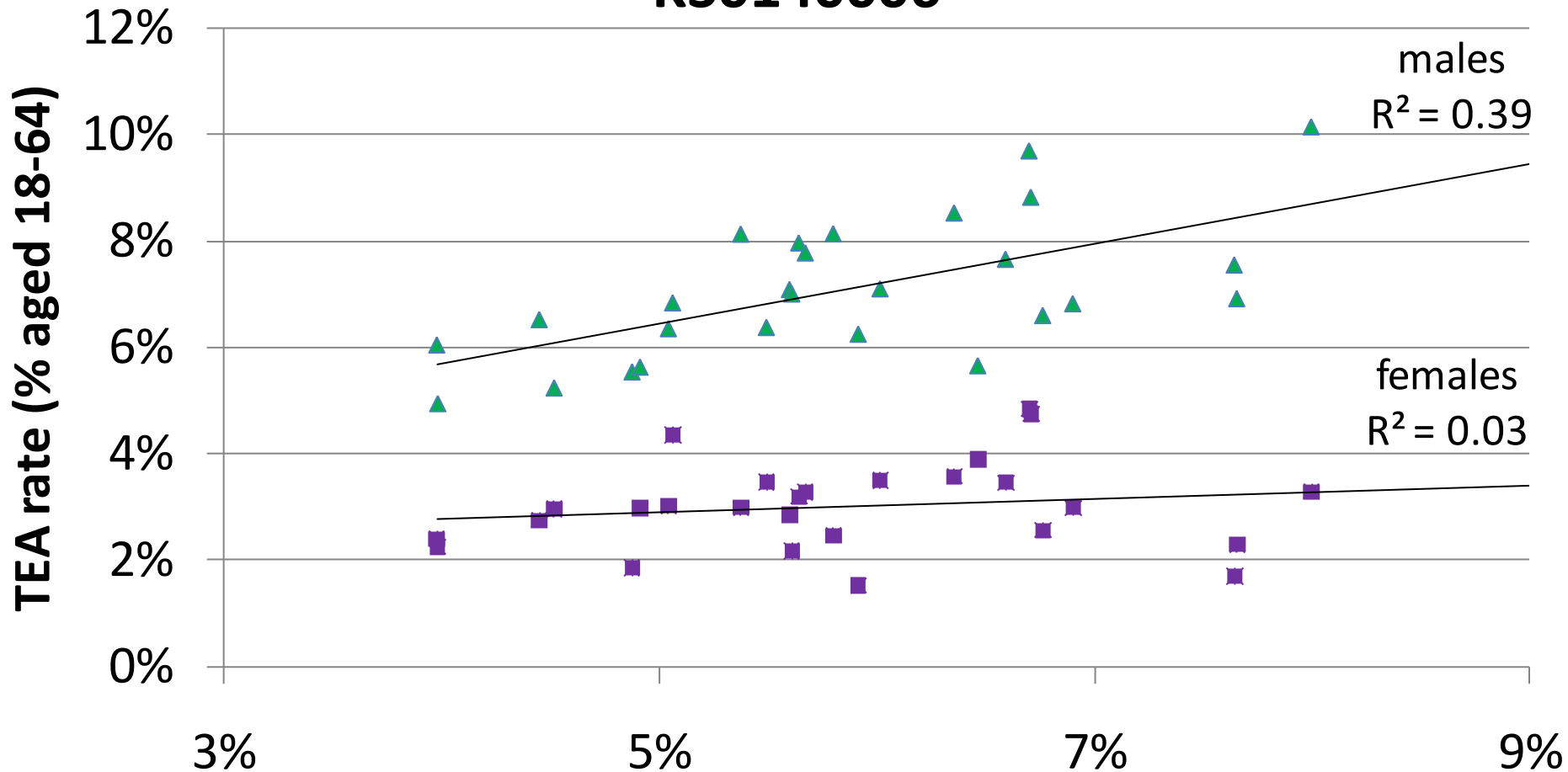
$$y = 0.14x + 0.02$$
$$R^2 = 0.01$$



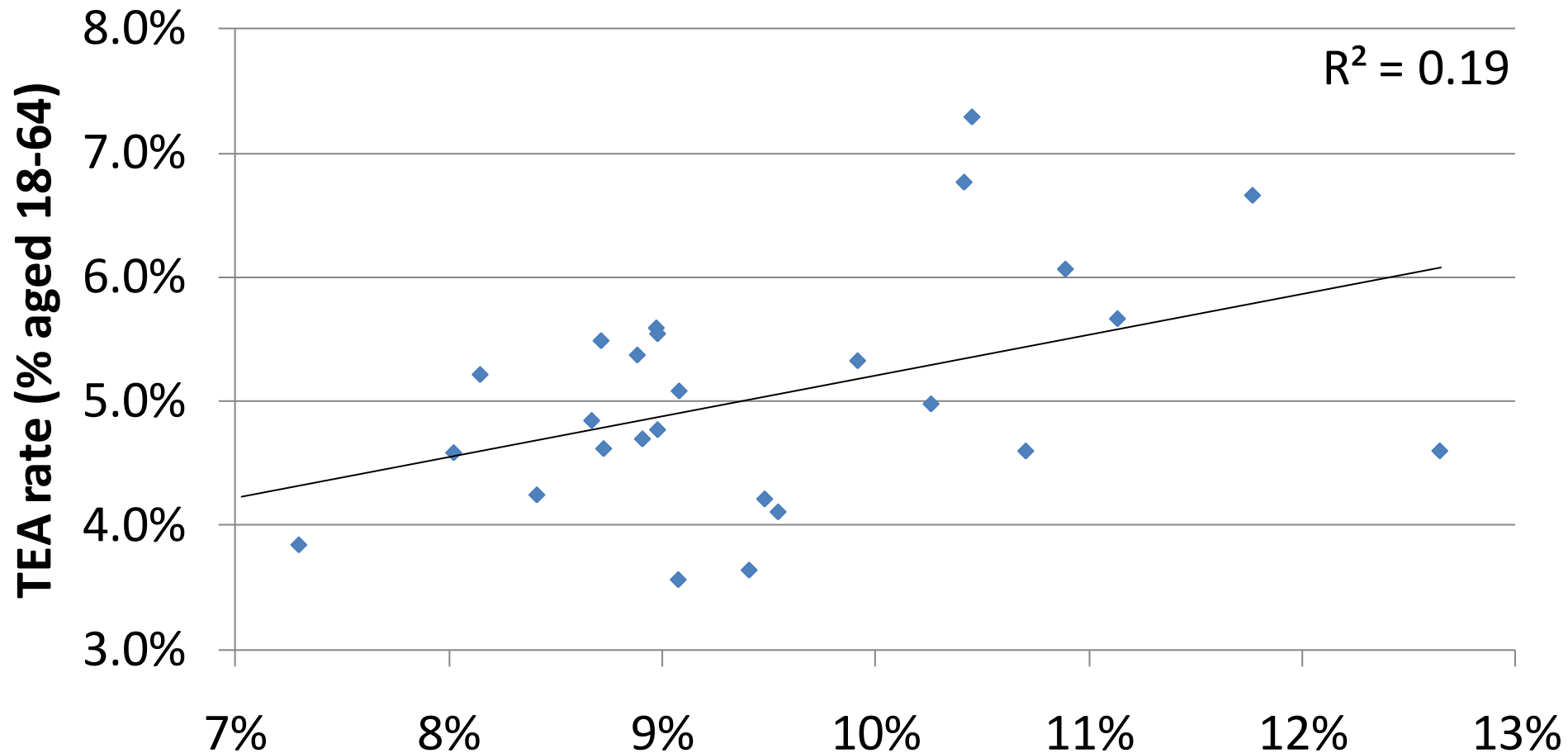
# Small employers and own account workers from 2001 census KS0140006



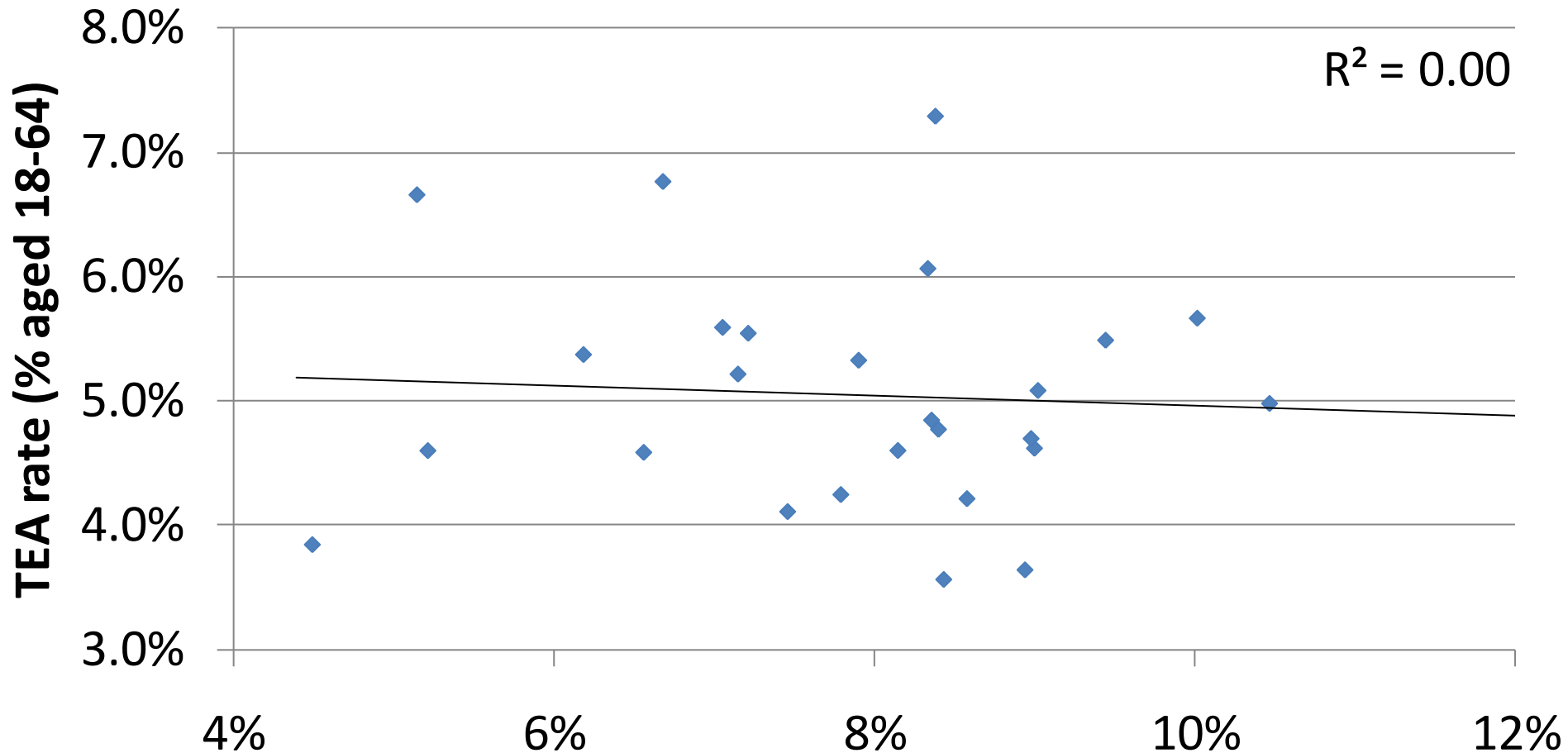
# Small employers and own account workers from 2001 census KS0140006



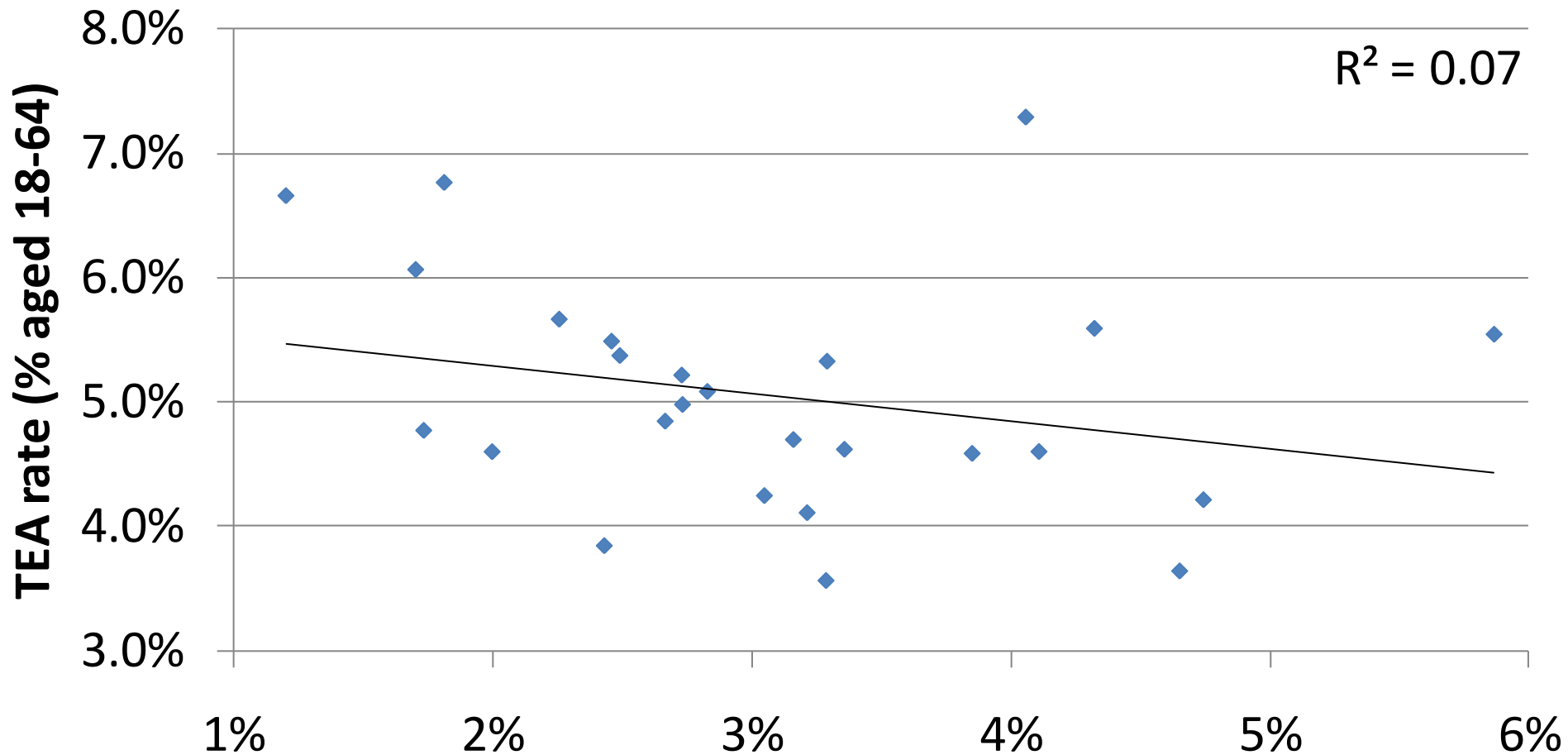
# Intermediate occupations from 2001 census KS0140005



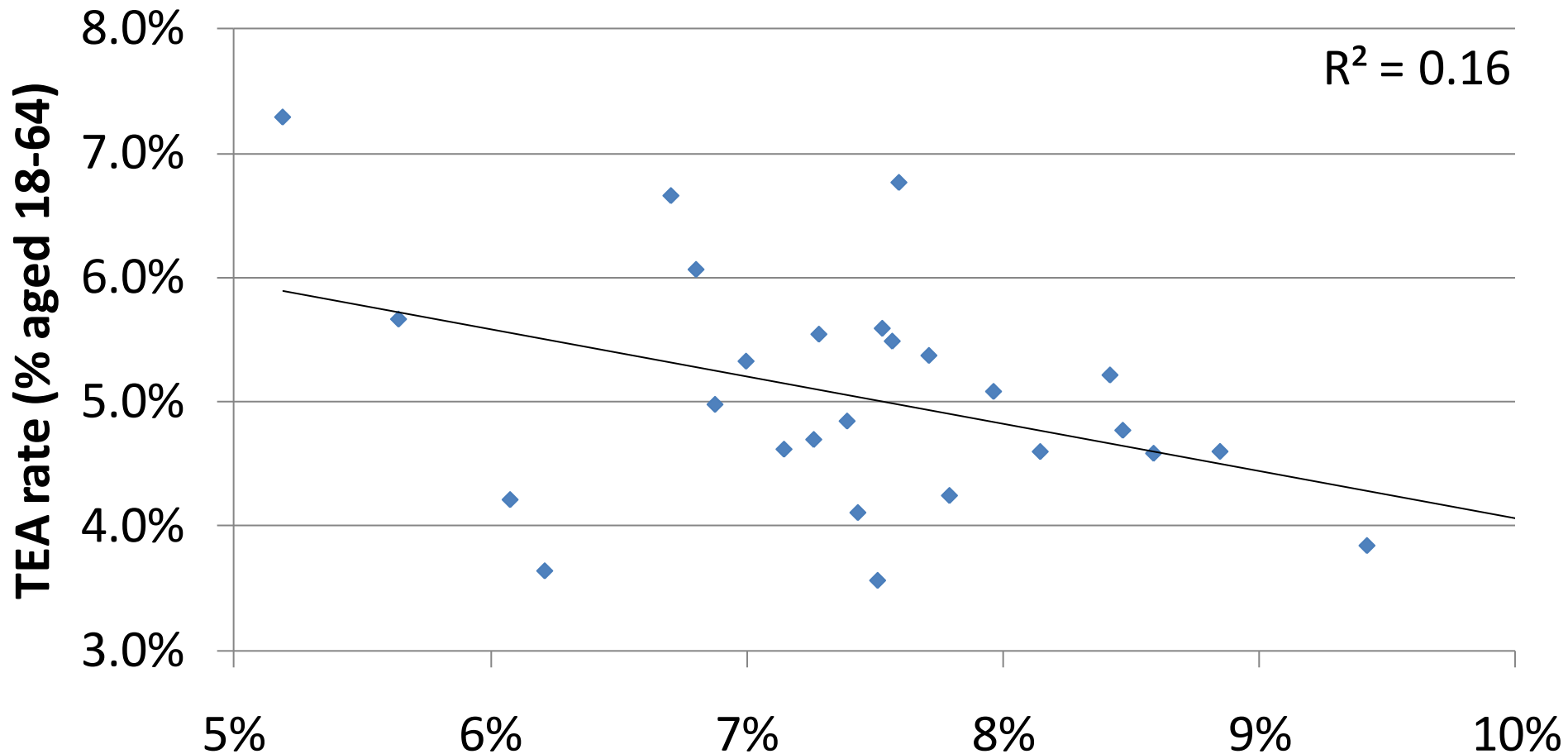
# Full-time students from 2001 census KS0140012



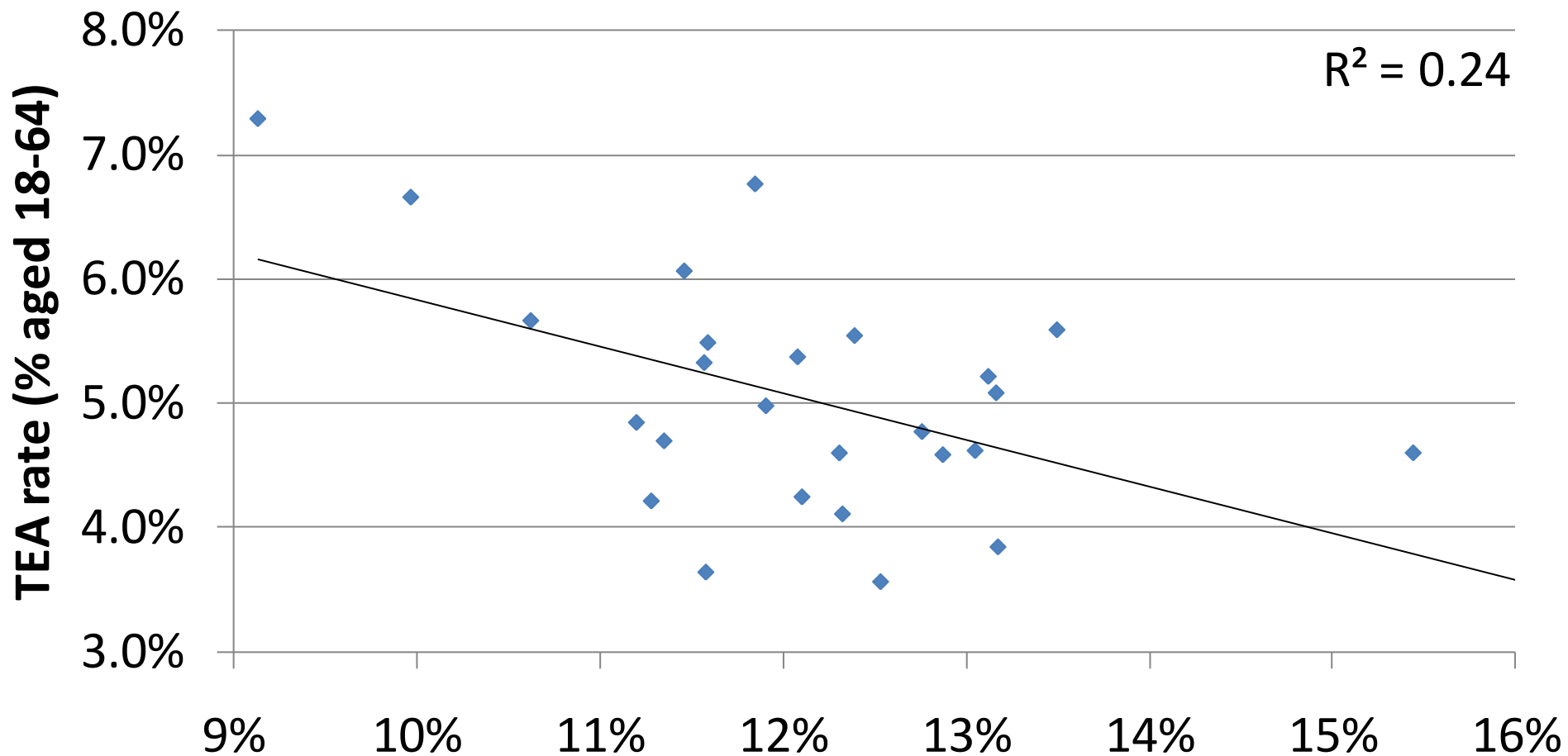
# Never Worked from 2001 census KS0140010



# Lower supervisory and technical occupations from 2001 census KS0140007

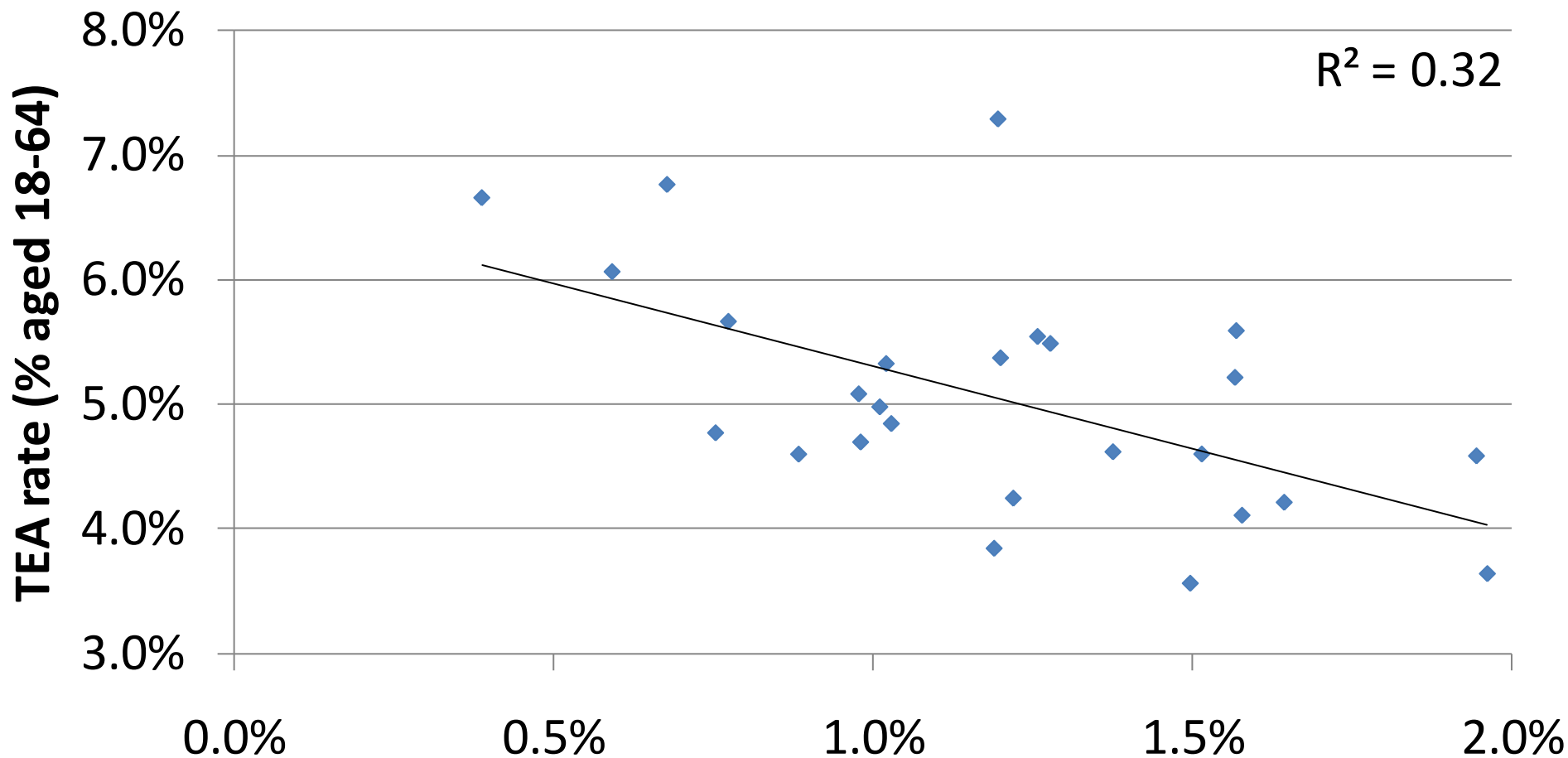


# Semi-routine occupations from 2001 census KS0140008





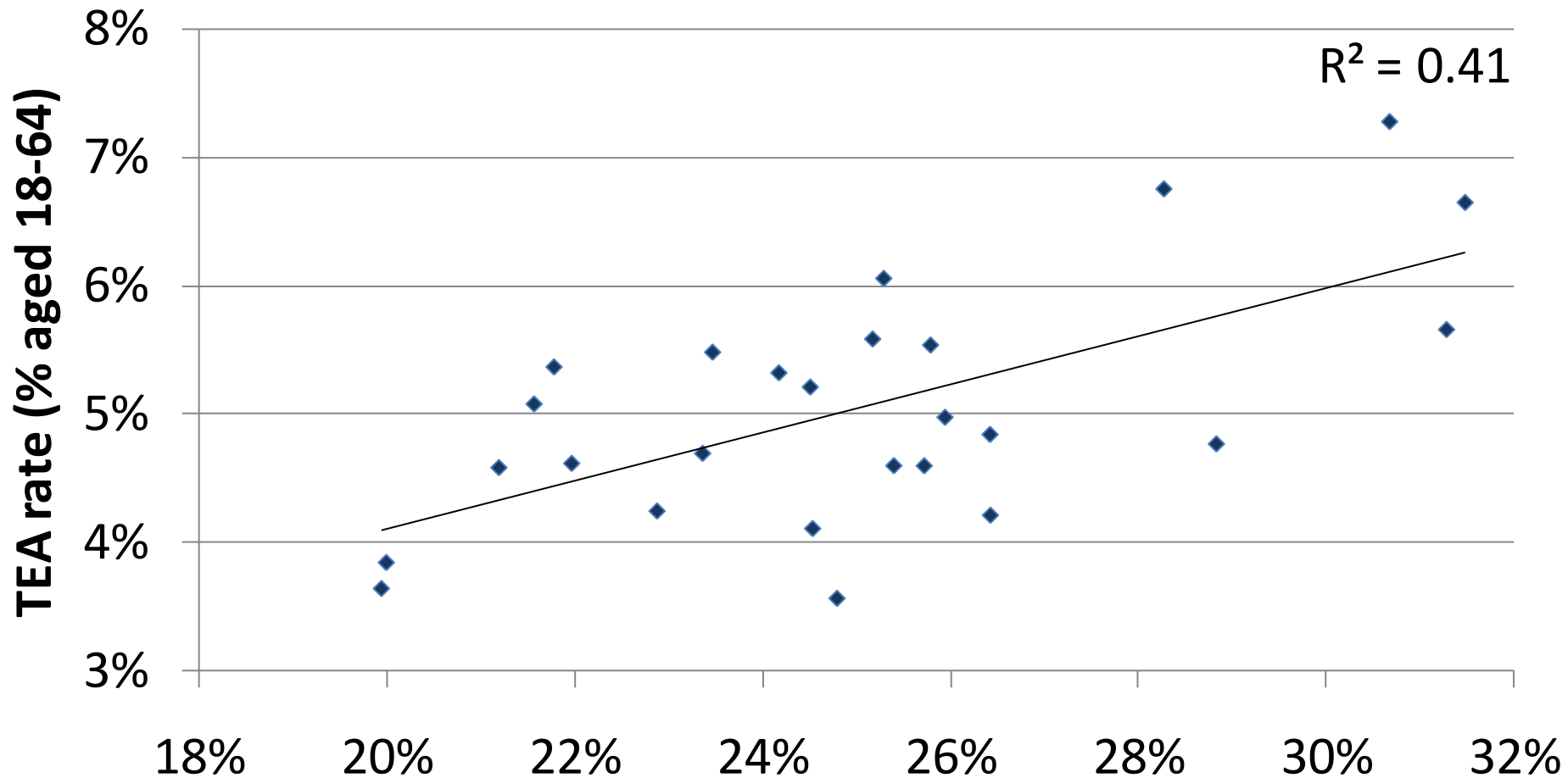
# Long-term unemployed from 2001 census KS0140011



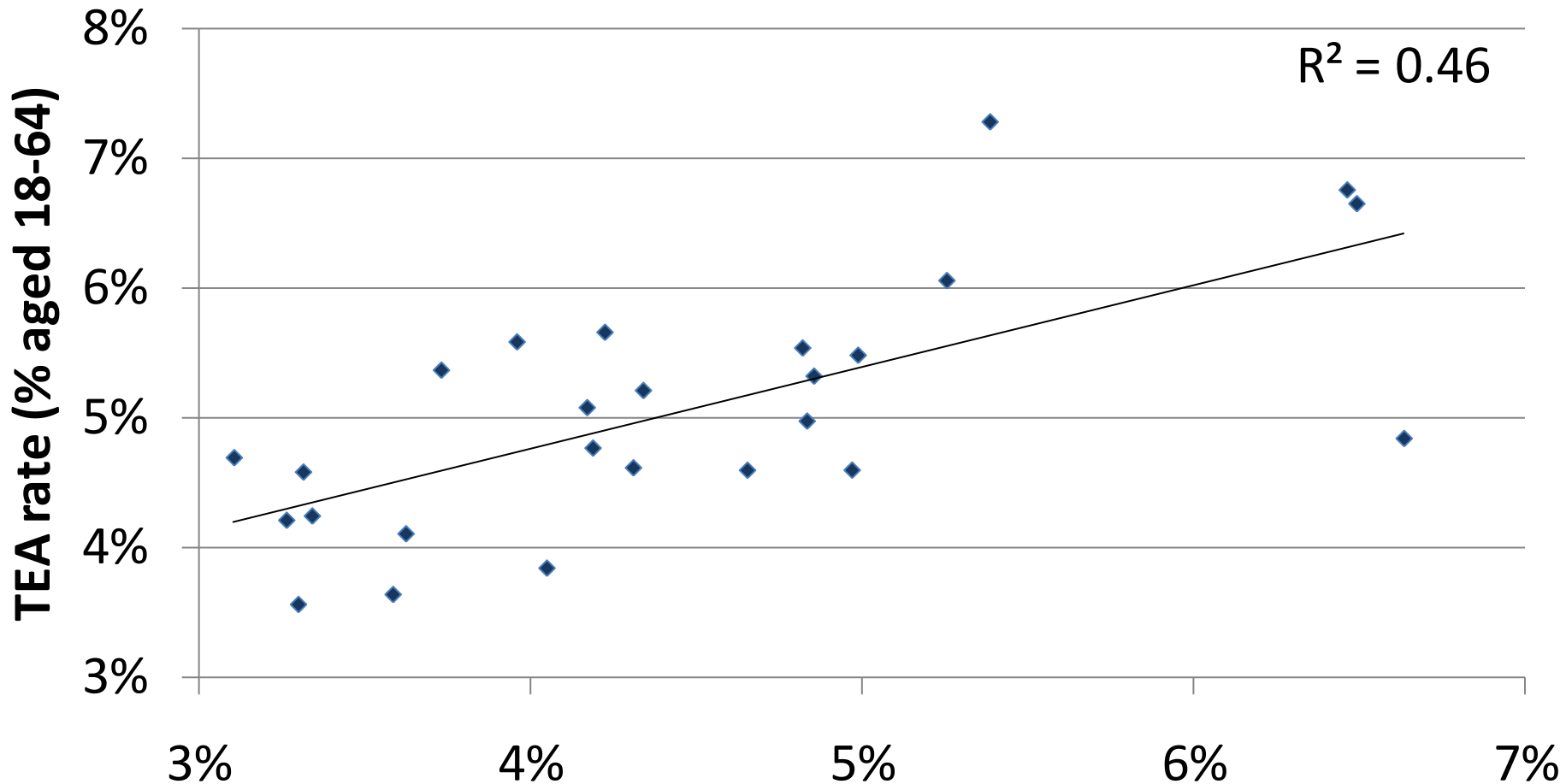


# **Learning from other entrepreneurs**

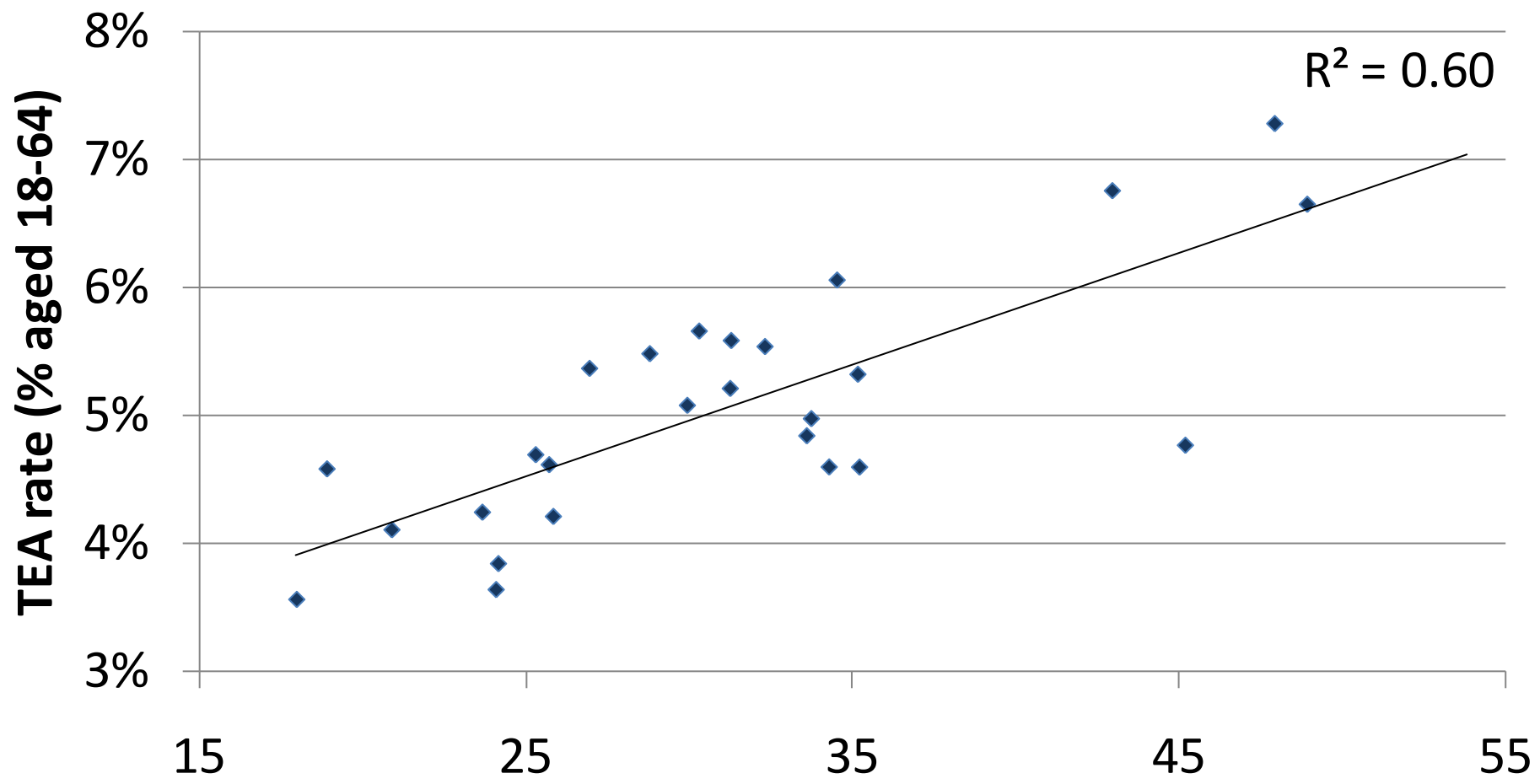
# % who know someone who started a business in the past two years GEM UK database



**% who own and manage a business  
that is at least 3½ years old  
GEM UK database**



# Average stock of VAT registered businesses, 2000 to 2008



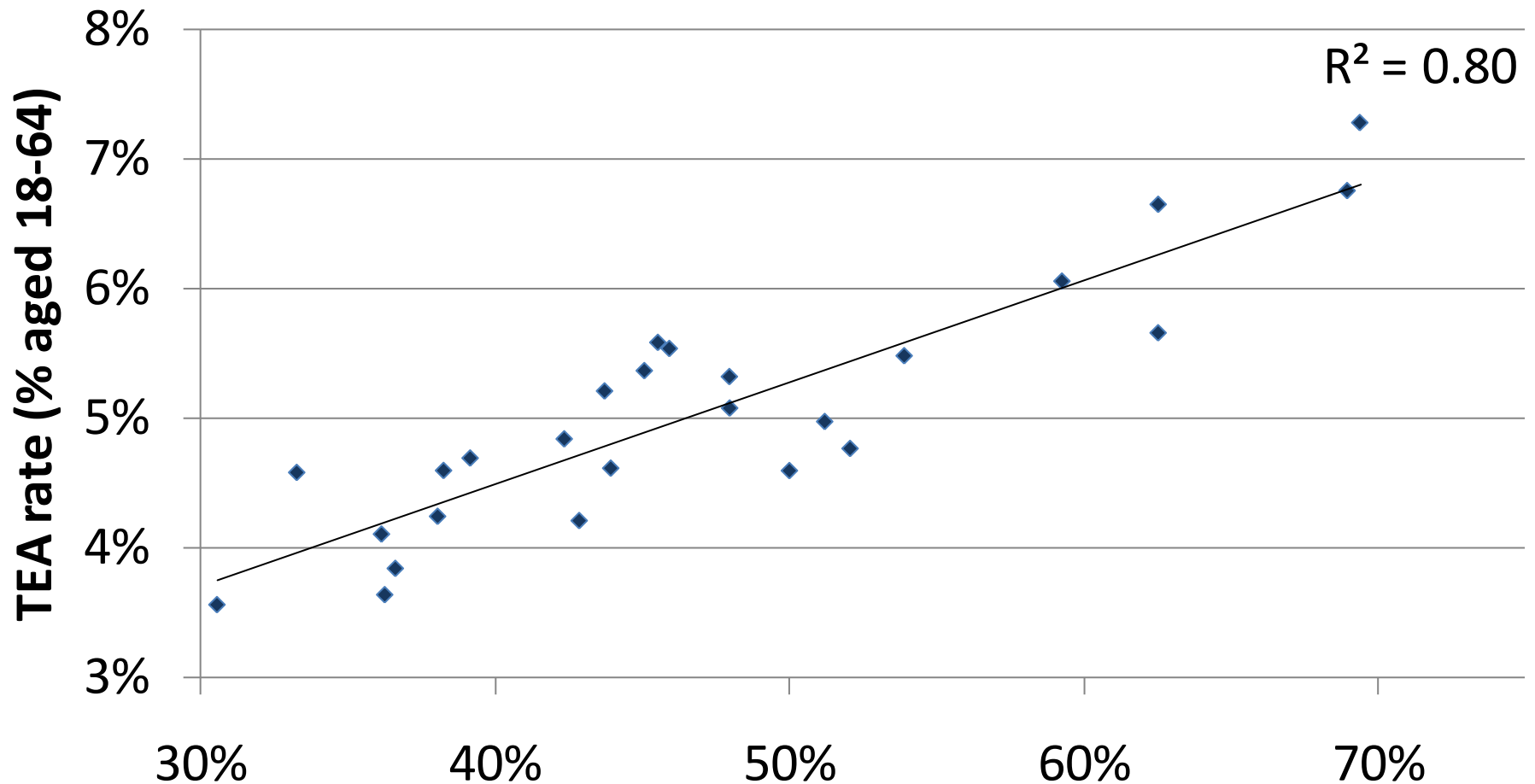
# Conclusion

- Strongest city region level effects appear to be the prevalence of
  - ☑ Higher and lower managers ( $R^2 = 0.76, 0.57$ )
  - ☑ VAT-registered business stock ( $R^2 = 0.60$ )
  - ☒ People with limiting illnesses ( $R^2 = 0.65$ )
  - ☒ People with no qualifications ( $R^2 = 0.56$ )
- These variables are highly correlated in UK city regions ( $R \geq 0.8$ )
- Early-stage entrepreneurship thrives in commercial, healthy, well educated population centres

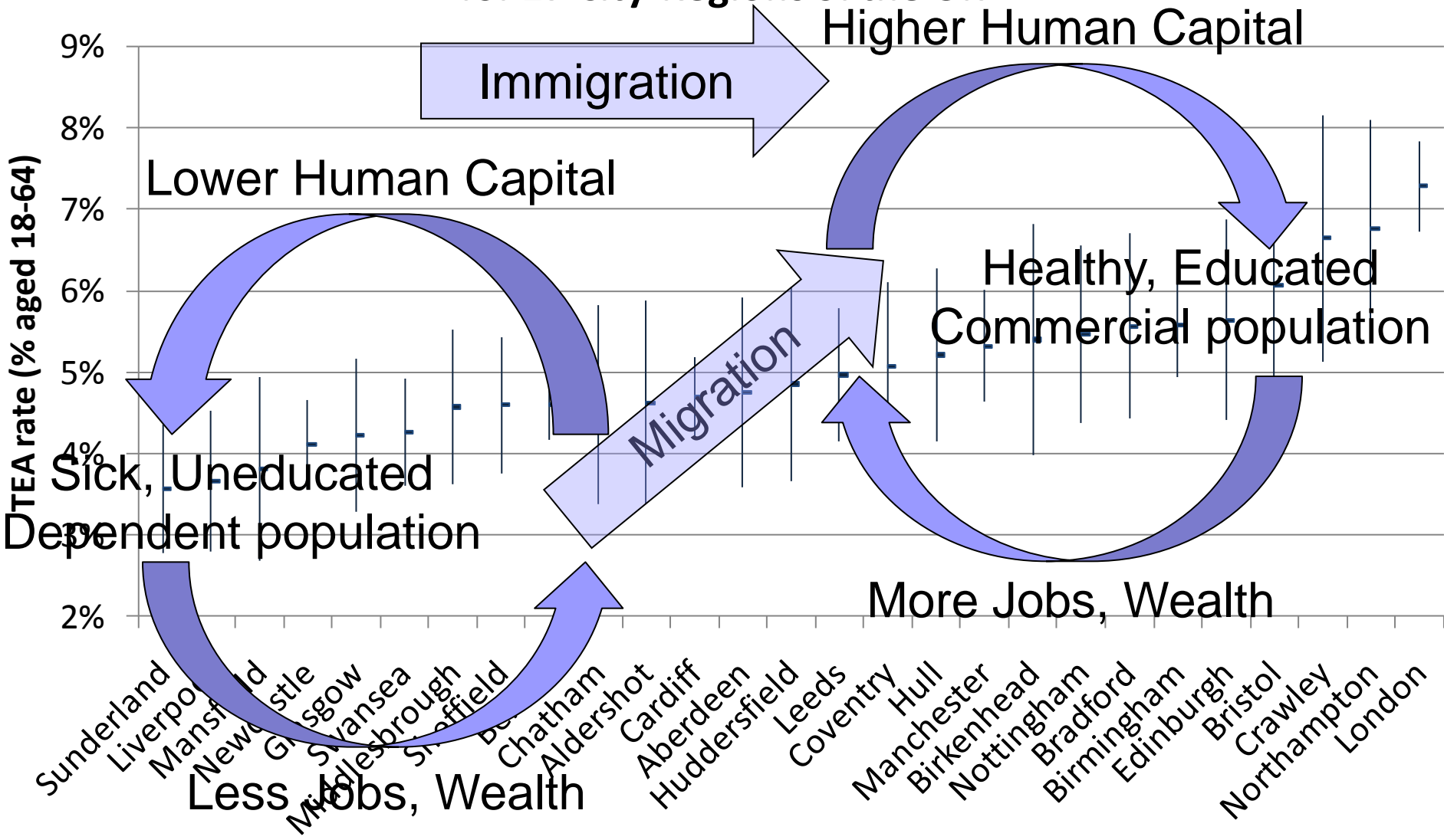
# Postscript

- What do commercial, healthy, well-educated, population centres attract?
- Migrants!
- TEA rate of all life long residents of UK city regions:  
4.2%
- TEA rate of all migrants to UK city regions:  
6.1%

# % migrants in city region (immigrants and regional in-migrants) GEM UK database



# TEA rate estimates and 95% Confidence Intervals for 27 City-Regions of the UK



# Next steps

- Increase no. of cities in sample
- Hierarchical Linear Modelling
- Three levels:
  - City region
  - Social group (attitudes, activity of “people like me”)
  - Individual (demographics, attitudes)