

# Long Commutes and Marital Stability

## Evidence from GSOEP

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### Abstract

Predictors and causes of high divorce and separation rates are important in studying how marital status influences economic decisions. Long commutes could plausibly contribute to higher separation rates. However, commuting decisions and marital separation may be influenced by unobserved and time variant marital quality. To solve this problem, I propose two identification strategies in connection with SOEP data. One strategy uses employer-induced changes in commuting distance. A second strategy uses timing of introduction of high speed rail in different counties. My preliminary results show that employer-induced commuting distance may increase the probability of separation in the short run and decrease it in the long run. The increase in separation is manifest in the rural regions and the decrease in separation in the urban regions.

## Introduction

Divorce is an important social phenomenon with economic implications.

- There were 4.2 marriages and 2.0 divorces per 1000 inhabitants of the EU in 2011. (Eurostat 2018)

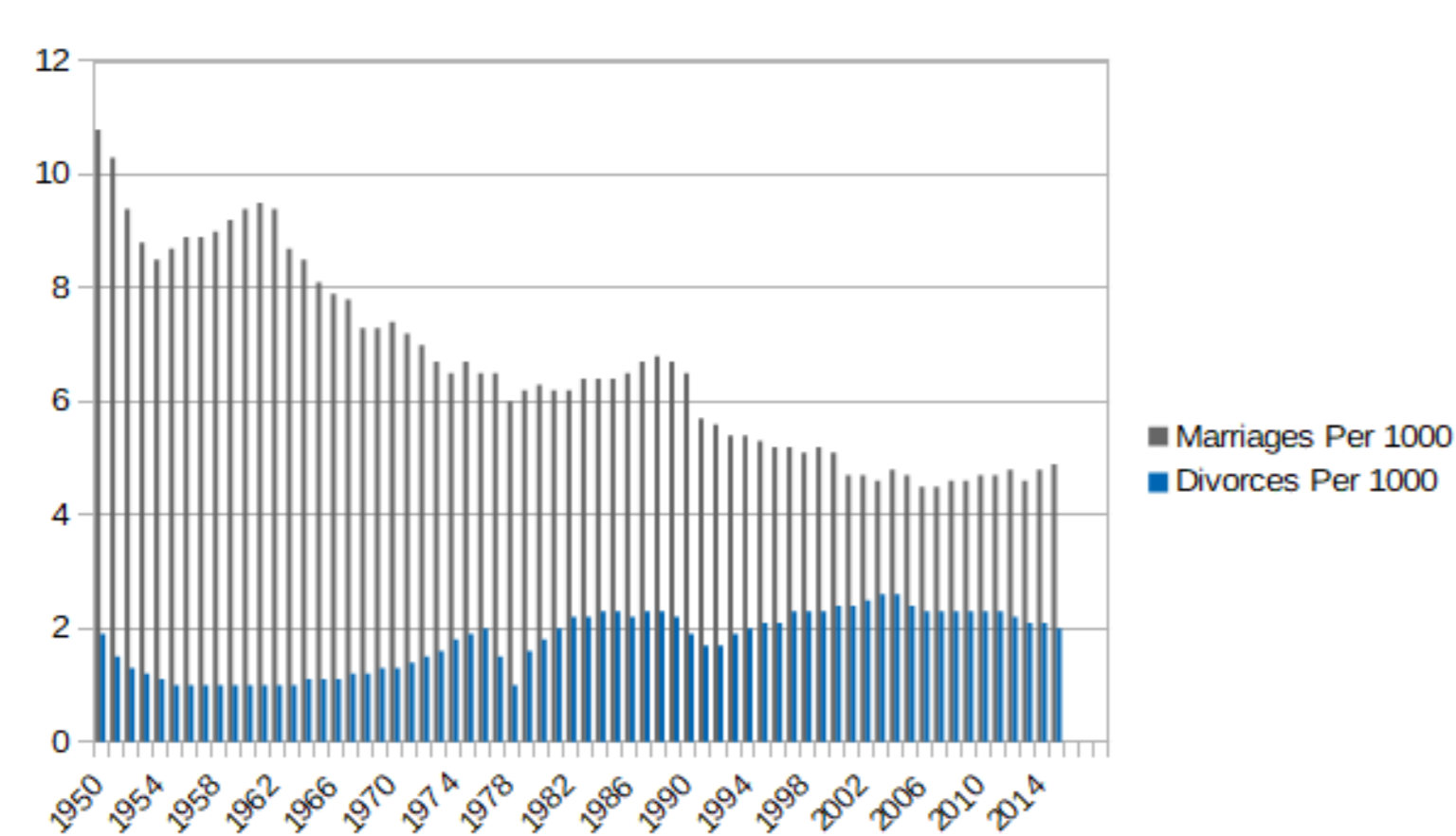


Figure 1: Declining marriage rates and increasing divorce rates in Germany per 1000 inhabitants  
Source: German Statistical Office, own calculations

- Divorce lowers welfare of women and children. (Le Bourdais et al. 2016)

Long commutes may influence family stability.

### Negative effects of long commutes

- less time for household production
- less time to enjoy the family public goods

### Positive effects of long commutes

- compensation by higher wage (Mulalic, Van Ommeren, and Pilegaard 2014)
- higher likelihood of employment
- scarcer time together could be valued higher

### Challenges for the research on the effects of commuting

- the commuting decision may consider marital stability expectations
- spouses with more stable marriages may be more in control of their jobs and commutes

### My main contribution

- I use sources of variation which are plausibly exogeneous to marital quality, extending the observational study of Kley and Feldhaus 2017.

1. "employer-induced variation" in commuting distance.
  - by removing variation from moving residence or changing employer, what is left is variation from relocations within the same company.
2. the introduction of the high-speed passenger rail (HSR) in Germany

### Materials and Methods

- The employer-induced variation is identified using employer and residence fixed effects using SOEP data.
  - the remaining change in commuting distance should come from relocations which are considered employer-induced.
  - commuting time would also be interesting variable to focus on. However, the commuting distance is available annually in SOEP while commuting time was collected only in 5 survey years.
- The introduction of HSR caused shorter travel times between cities with HSR stations.
  - The shorter travel times induced more residents to use the rail network and to commute longer distances.
  - I match novel county data from (Heuermann and Schmieder 2018) with SOEP using county codes.



### Alternative empirical specifications

#### 1. Employer-induced changes in commuting distance

$$p_{it} = \alpha_0 CD_{it} + \beta x_{it} + \gamma E_{it} + \delta R_{it}$$

- P denotes probability of separation. the indices  $i$  and  $t$  denote individual and time,  $CD$  is commuting distance,  $E$  is year began current employment and  $R$  is year moved in the dwelling.
- $E$  is used to approximate the employer fixed effect and  $R$  to approximate the residence fixed effect.

#### 2. High-Speed Rail extension

$$p_{it} = \alpha_0 HSR_{mt} + \beta x_{it}$$

- HSR as a natural experiment treatment
- using second wave (1999-2010) when the ICE stations were added in smaller cities
- the decisions about HSR station location were not based on expected demand for commuting

### Results of the first specification

Effect of employer-induced variation  
in commuting distance on separation

VARIABLES	Baseline	Urban	Rural
L1.longDist	<b>0.0041**</b> (0.0017)	0.0032 (0.0022)	<b>0.0062**</b> (0.0028)
L2.longDist	-0.0002 (0.0018)	0.0000 (0.0024)	-0.0008 (0.0029)
L3.longDist	<b>-0.0047***</b> (0.0017)	<b>-0.0051**</b> (0.0022)	-0.0032 (0.0028)
Constant	-0.0065 (0.143)	-0.0012 (0.199)	0.0008 (2.253)
$N \times T$	131,320	87,350	43,970
$N$	23,876	16,142	8,213

Standard errors in parentheses

\*\*\* p val. <0.01, \*\* p val. <0.05, \* p val. <0.1

Table 1: Source: Schupp et al. 2017, own calculations

P val. denotes a p value. longDist: 1 if a commute was longer than 30 km, 0 otherwise. L1-L3 denote annual lags. Baseline specification includes all regions. Urban and Rural use only the individual data with corresponding value of the variable regtyp. N is the total number of individuals and T is the total number of survey years.

I used panel regressions, applying Stata command xtreg with variables Year began current employment and Year moved in the dwelling included in the regression. Their coefficients are not interpretable and therefore not shown.

In the first year following a firm relocation, the average separation rate increases, subsequently it returns to zero and then decreases below the baseline level. These changes can be decomposed into the effects in urban and rural regions of residence. The increase in separations in the first year shows only in rural regions, while the decrease in separations in the third year is apparent only in urban regions.

### Conclusions

- The use of employer-induced variation in commuting distance allowed estimation of the effect of long distance commuting on separation from partner.
- I found a small increase in separations in the short run. It impacts mostly the rural regions.
- In the long run, there is either no effect of long distance commuting on separation or a small decrease in the urban regions. One of the possible explanations is that a wage increase in compensation for the relocation may take a few years.

### Forthcoming Research

I am currently working on the second part of the project, studying the influence of variation in commuting time from the introduction of high-speed rail in counties of Germany on the marital stability. I am considering several specifications of the instrument representing the HSR introduction and studying the possible heterogeneity of the effects.

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