Migration Behaviour of Displaced Individuals in Austria: Does it pay off?

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Introduction

- Involuntary job loss → negative impacts on earnings (see Eliason & Storrie, 2006) & unexpected movements (see De Groot et al., 2011)
- Earning losses due to e.g. human capital losses (see Fallick, 1996)
- Migration to another region can mitigate negative effects on earnings in the longer run
  - ▷ Drops in earnings in the short-run possible

- **Studies on displacement-income-migration nexus:** Boman (2011), Røed & Schøne (2015), Pekkala & Tervo (2002), Huttunen et al. (2018)

In this paper ...

... we want to explore the impact of (involuntary) job loss on individuals' mobility and related income effects in Austria $\rightarrow$ we follow the approach of Huttunen et al. (2018)

Research Question I

What is the impact of displacement on the propensity to migrate of individuals?

Research Question II

What is the impact of displacement-induced migration on the income of individuals?

Data

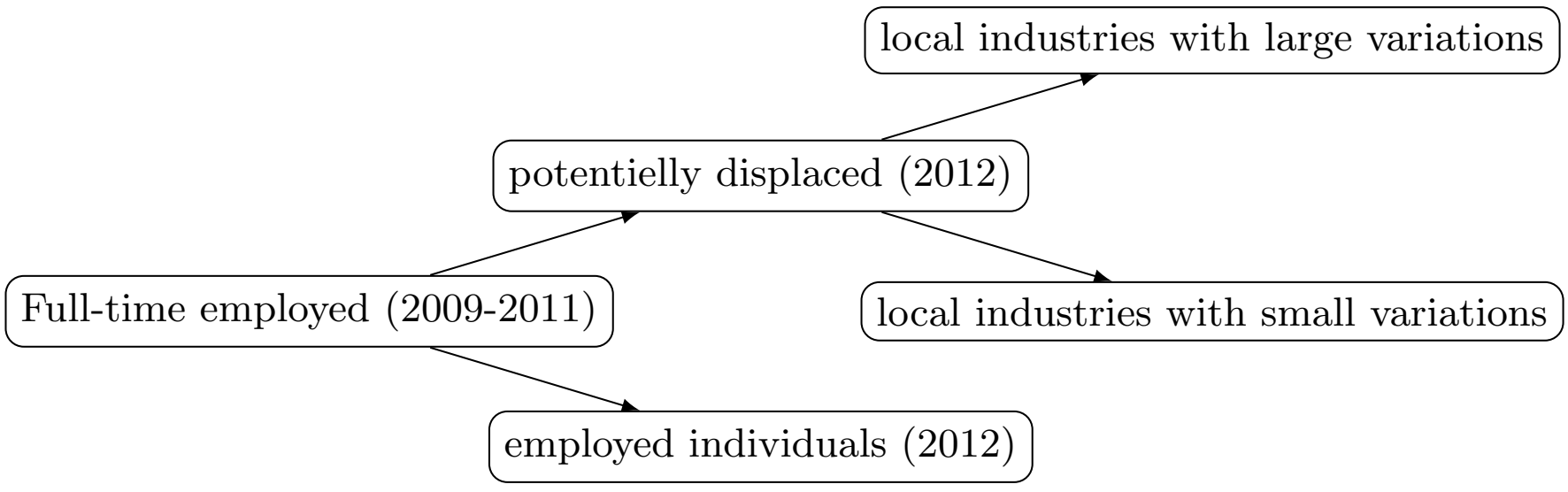
- Data on total resident population of Austrian municipalities (16 years and older) for 2009-2014
  - Austrian register-based census data
  - Income & wage tax statistics
- Available information:
  - Main residence, age, gender, education, country of birth, labour status, type of employment & industry of employer (3-digit ÖNACE) $\rightarrow$ no information on duration of unemployment
  - Household and family structure $\rightarrow$ number of children, family status, employment status of partner $\rightarrow$ only available for 2011-2014
  - Income variable: yearly gross earnings
- Migration based on changes in the main residence within Austria from t to $t+1$

Sample Construction

- Examine the effect of job loss → compare the displaced individuals (*treatment group*) with similar non-displaced individuals (*control group*)
- Approximation of displacement waves between 2011 and 2012
- **Restrictions:**
  - Individuals with a full-time employment between 2009 and 2011 in the same municipality → strong local employment attachment
  - *Potentially* displaced individuals: unemployed individuals in 2012 & employed individuals in 2012 with a registered change in employment between 2011 and 2012
  - Identification of displacement waves in industries in Austrian municipalities
    - 20% of potentially displaced individuals in percentage of total full-time employees
  - Control group: continuously full-time employed between 2009-2012
  - Focus on individuals between 25 and 50 years

Composition of Sample

Sample Construction



Empirical Strategy

- Impact of job loss on individuals' mobility
- Probit-estimation in a *diff-diff* regression framework

$$M_{i,b+2} = \delta D_{i,b} + \boldsymbol{X}'_{\boldsymbol{i,b}}\boldsymbol{\beta} + \mu_r + \eta_s + \epsilon_{i,b} \tag{1}$$

$M_{i,b+2}$	dummy for internal migration between 2011 and 2013
$D_{i,b}$	dummy for displaced individuals
$\boldsymbol{X_{i,b}}$	vector of additional explanatory variables $(k \times 1)$
μ_r	municipality fixed effect
η_s	industry fixed effect
$\epsilon_{i,b}$	error term
$i = 1, \ldots, N$	individuals
b	start of displacement (i.e. 2011)

Empirical Strategy II

- Impact of job loss on individuals' income related to internal migration
- Individual fixed effect ordinary least squares estimation based on panel data (2011-2014)

$$y_{i,t} = \sum_{b=2011}^{2014} D_{i,b}^{M} \delta_b^{M} + \sum_{b=2011}^{2014} D_{i,b}^{S} \delta_b^{S} + \boldsymbol{X}_{\boldsymbol{i,t}}^{\prime} \boldsymbol{\beta} + \gamma_t + \xi_i + \epsilon_{i,t} \tag{2}$$

$y_{i,t}$	yearly gross earnings
$D_{i,b,t}$	set of displacement dummies from 2011 to 2014
$\boldsymbol{X_{i,b}}$	vector of (time-variant) additional explanatory variables $(z \times 1)$
γ_t	year fixed effect
ξ_i	individual fixed effect
$\epsilon_{i,t}$	error term
$i = 1, \ldots, N$	individuals
$t = t, \ldots, T$	years

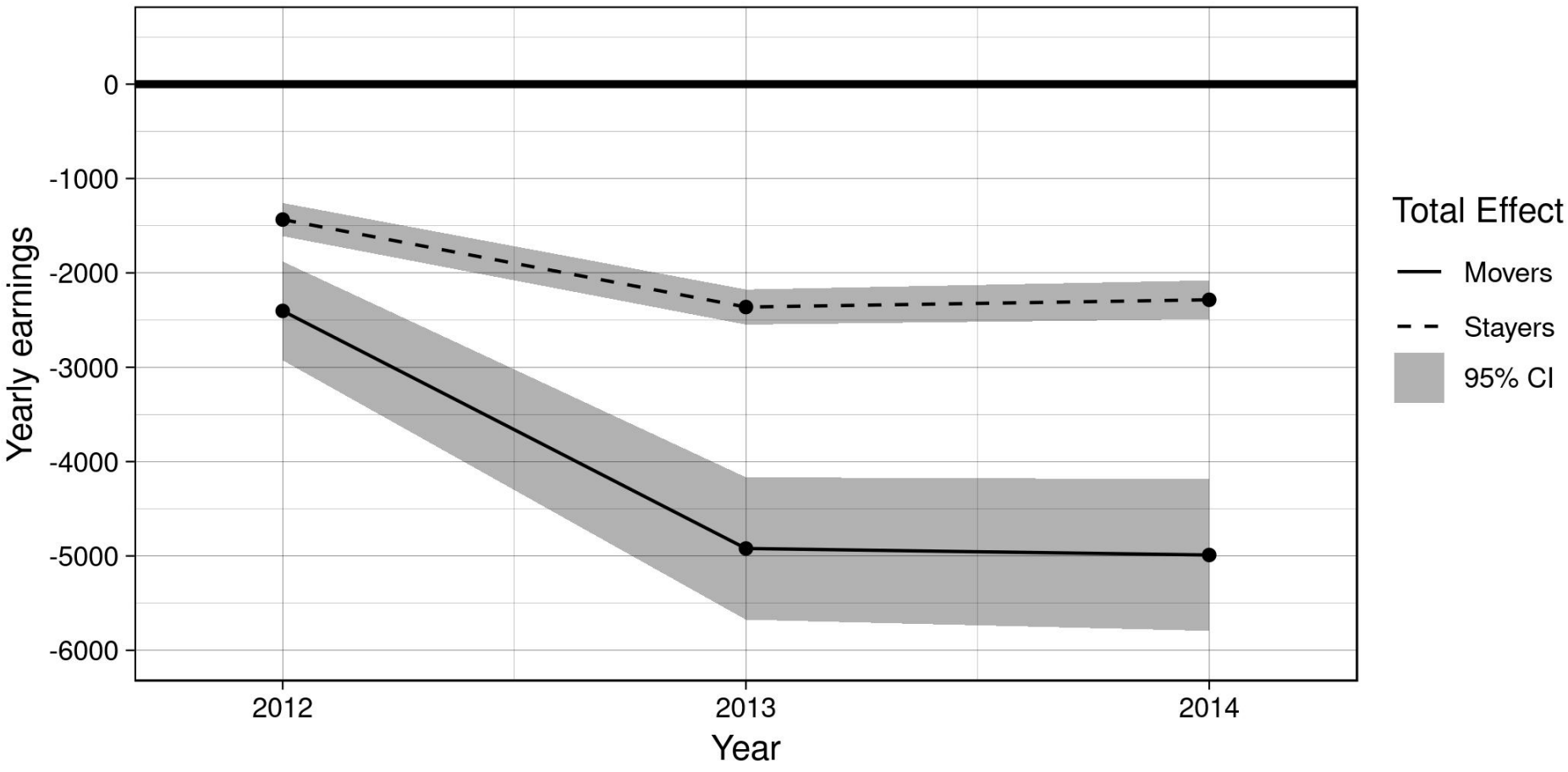
Displacement and Mobility

Variables	**Impact**
Age	younger individuals more likely to migrate
Education	higher educated individuals more likely to migrate
Women	women reveal a higher mobility
Foreign-born	foreign-born individuals show a higher mobility
Family status	family constitutes social tie
# of kids	family constitutes social tie
Employed partner	employed partner acts as local tie

Displacement and Mobility

Average Marginal Effects of Displacement on Mobility		
Total		0.0067***
		(0.0017)
Education	L	0.0063***
		(0.0016)
	ML	0.0060***
		(0.0015)
	MH	0.0070***
		(0.0017)
	H	0.0083***
		(0.0021)
Sex	*female*	0.0076***
		(0.0019)
	male	0.0063***
		(0.0016)
Country of birth	*natives*	0.0066***
		(0.0017)
	foreign-born	0.0072***
		(0.0018)
Family	*employed partner*	0.0051***
		(0.0013)
	unemployed partner	0.0062***
		(0.0016)
	single	0.0092***
		(0.0023)
	married	0.0047***
		(0.0012)
Region	*rural*	0.0058***
		(0.0015)
	non-rural	0.0073***
		(0.0018)

Earnings after the Displacement – Total

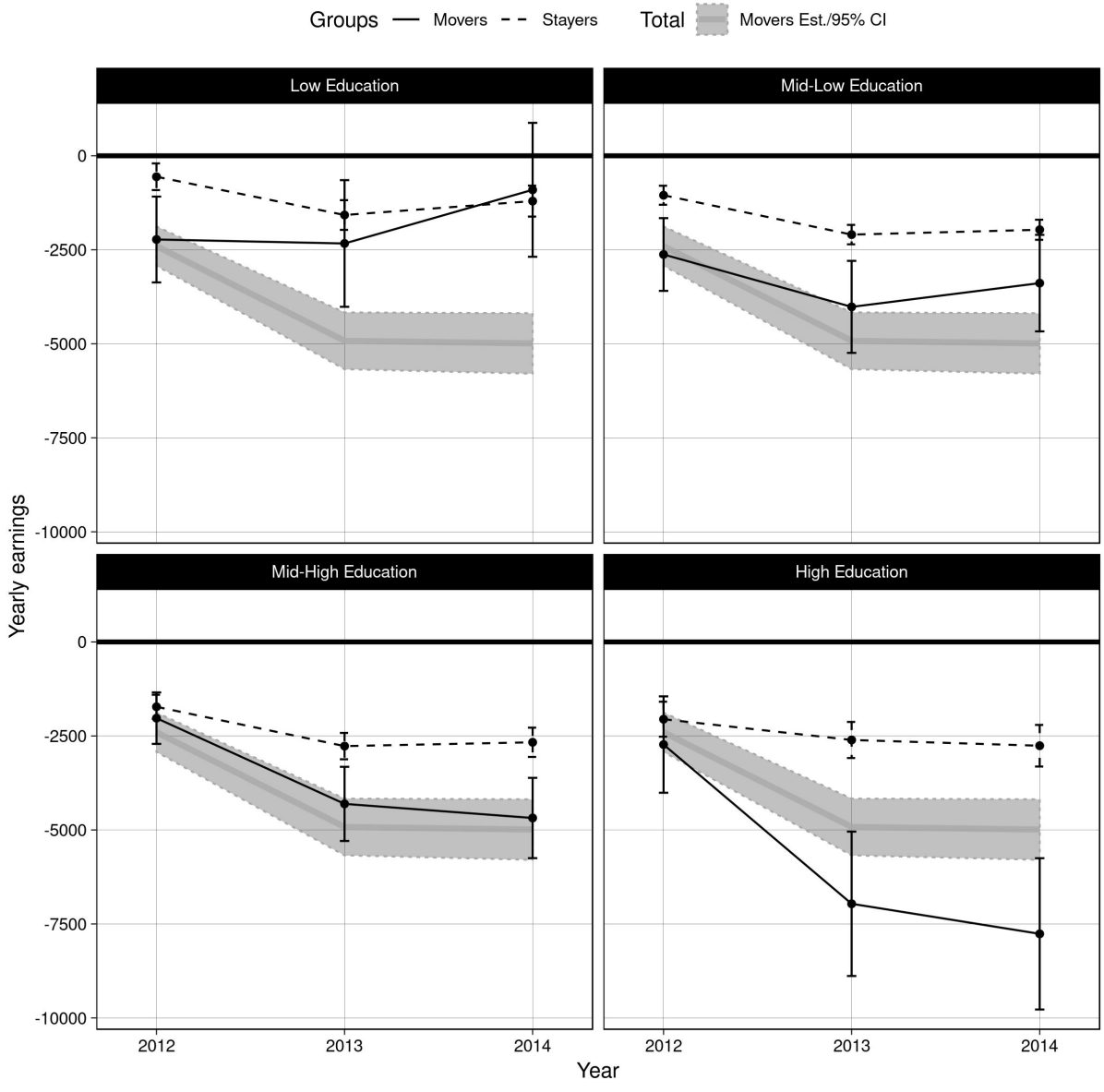


Earnings after the Displacement – Heterogeneous Paths

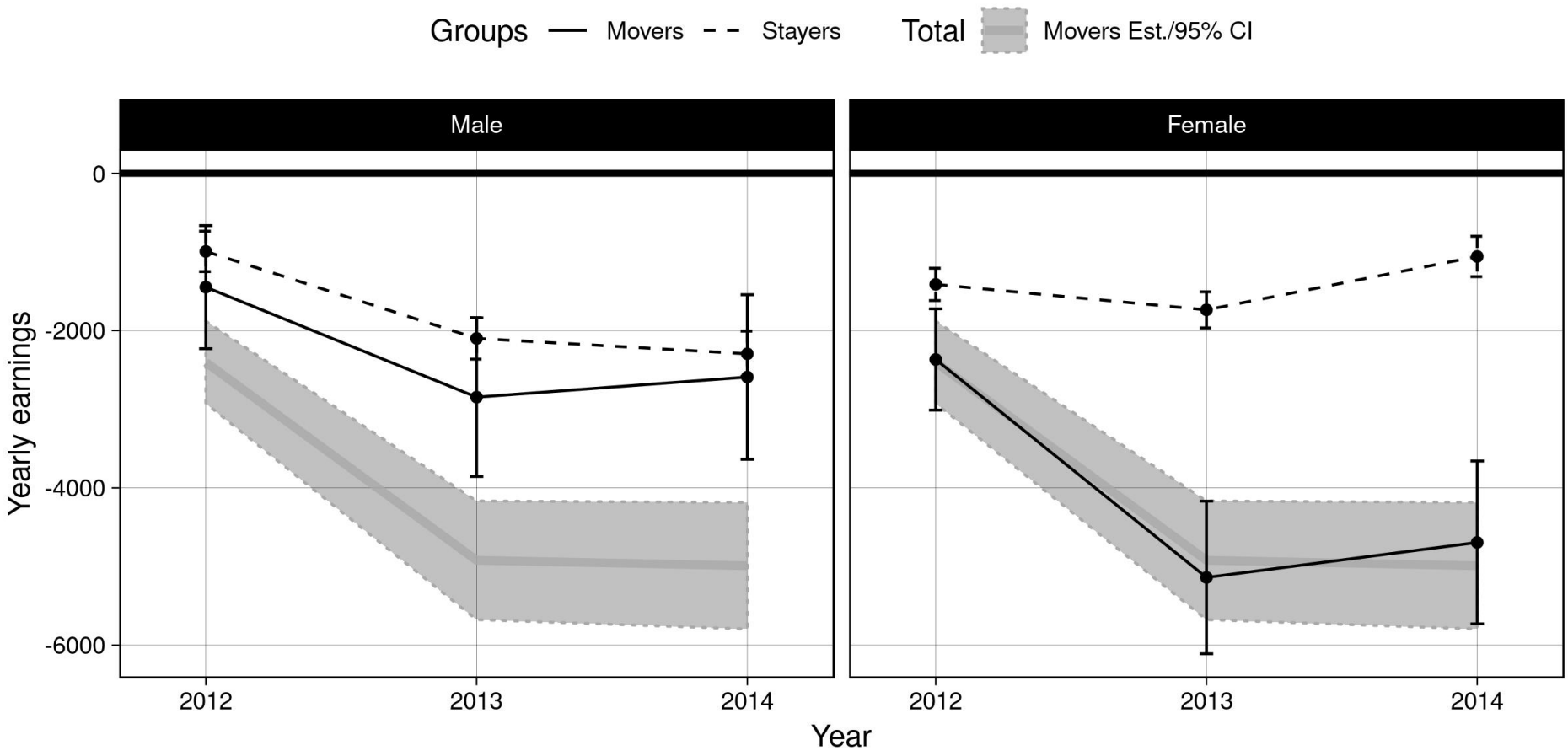
Regressions by using sub-samples:

- Educational attainment group – L, ML, MH, H
- Gender – men, women
- Country of birth – foreign-born, natives
- Area – rural, non-rural
- Family – married, non-married
- Children – singles, individuals with kids

Earnings after the Displacement – Education



Earnings after the Displacement – Gender



Concluding Remarks

- Displacement affects individuals' mobility positively
- Displacement has a negative impact on the earnings of individuals (in the short-run)
  - ▷ Displaced movers are more affected than displaced stayers
  - ▷ Similar re-employment rates among displaced individuals
  - ▷ Higher shares of part-time employees in the post-displacement period among displaced movers than displaced stayers → *matching* problems in the short-run
  - ▷ Another potential explanation → non-economic factors determine migration decisions → migration to less prosperous regions due to family reasons → in-depth analysis of destination characteristics

- **Caveats**
  - ▷ Approximation of larger lay-offs → similar results as Huttunen et al. (2018)
  - ▷ Selection into the group of movers → individual fixed-effects, sub-group perspective, controlling for social ties

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Composition of Sample

		Non Displaced	Displaced
Sex	*Male*	69.6	56.2
	Female	30.4	43.8
Age	*25-39*	49.1	43.8
	40-49	50.9	56.2
Education	*L*	11.1	9.6
	ML	43.1	34.8
	MH	32.0	32.0
	H	13.8	23.7
Country of birth	*Natives*	86.1	88.0
	Foreign-born	13.9	12.0
Family status	*Singles*	40.6	38.8
	Married	50.1	50.3
	Others	9.3	10.9
Internal migration	*Stayers*	92.7	92.6
	Movers	7.3	7.4

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