

Immigration and the Displacement of Incumbent Households

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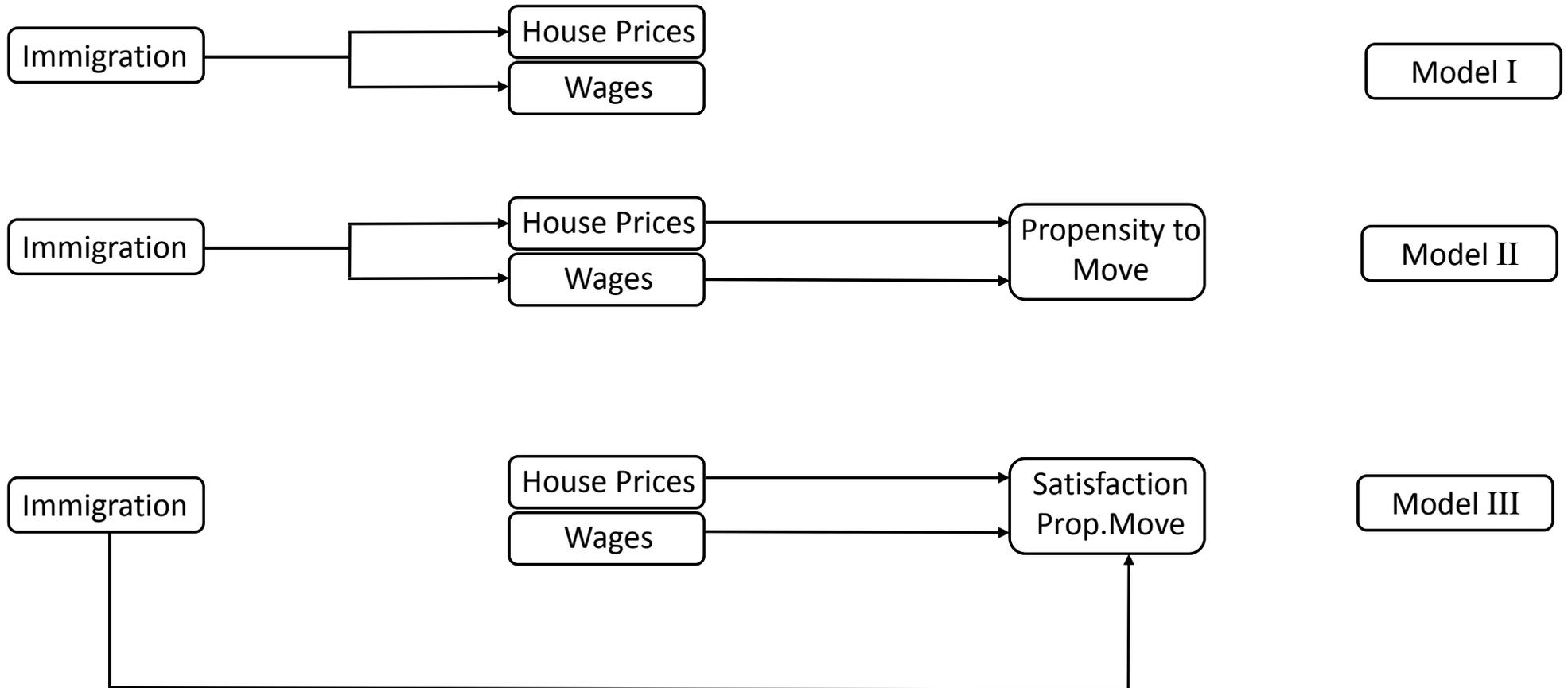
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Switzerland: small country with high immigration

- **Population:** 8,200,000 (28 % foreign)
- **Immigration:** highest rate of immigration in Europe
- **Heterogeneity:** war refugees from former Yugoslavia, doctors from Germany

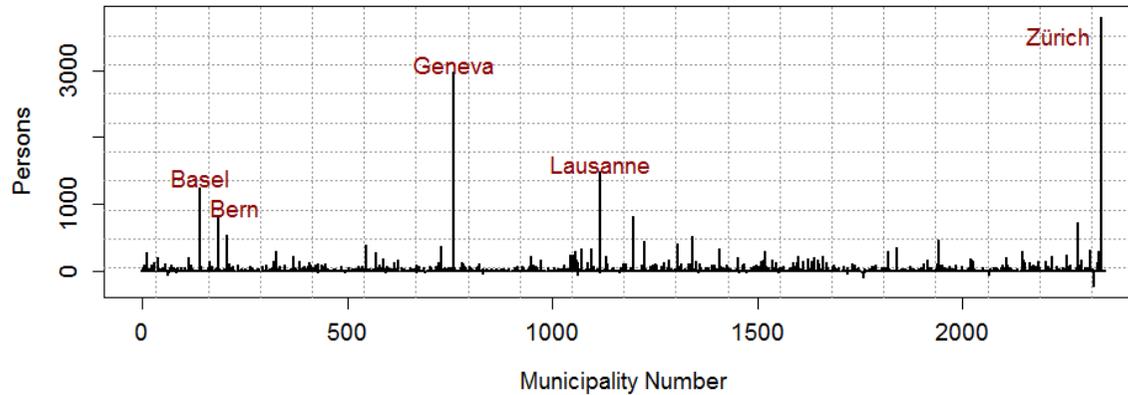
Objectives of the paper



Panel A: Immigration by Country of Origin (in '000 persons)

	Immigration	Emigration	Net Immigration	% of Swiss Population
Austria	178	166	12	0.2
Former Yugo.	772	583	189	3.1
France	405	342	63	1
Germany	1052	841	211	3.4
Italy	658	672	-14	-0.2
Portugal	877	801	76	1.2
Spain	197	238	-41	-0.7
Turkey	163	139	24	0.4
United Kingdom	169	145	24	0.4
United States	117	104	13	0.2
Rest of World	1,809	1,449	360	5.9
Total	6,397	5,480	917	14.9

Panel B: Average Net Immigration by Municipality (1992–2013)



- Exogenous "Past-Settlement" immigration (Card, 2001)
- **Our Measure of Immigration:** Exogenous Net immigration relative to local Swiss population

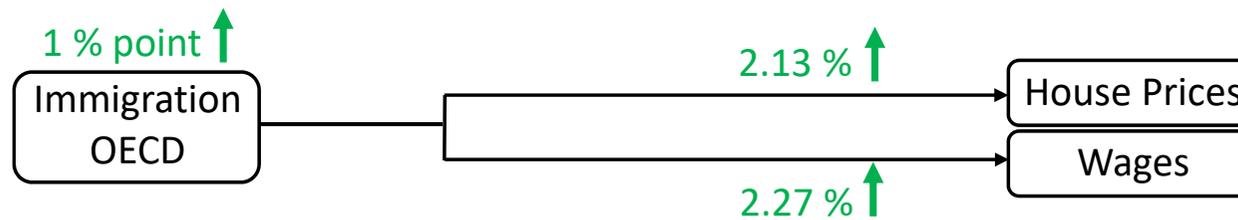


$$\log(HP_t^r) = \rho(W_N \otimes I_T)\log(HP_t^r) + \alpha_1 OECD_t^r + \alpha_2 RoW_t^r + \alpha_3' \cdot controls + \epsilon_t^r$$

Table 4: Immigration, House Prices, and Wages (Aggregate Level Effects)

Dependent Variable	Log House Prices		Log Wages	
	Panel IV	FESAR	Panel IV	FESAR
Spatial Lag	–	0.73***	–	0.86***
Net Immigration West and OECD	3.31***	2.13***	3.47***	2.27***
Net Immigration RoW	-1.27***	-0.70***	-1.49*	-0.52
Vacancy Rate	-3.07***	-1.31***	–	–
MS Region Fixed Effects	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES
Observations	2,332	2,332	2,332	2,332
Adj.R-Squared	0.92	0.96	0.97	0.99

Aggregate municipality level effects:

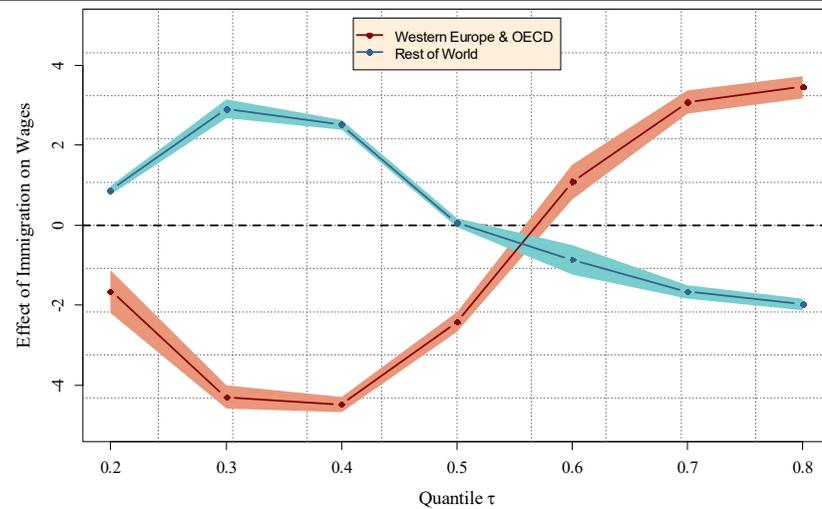


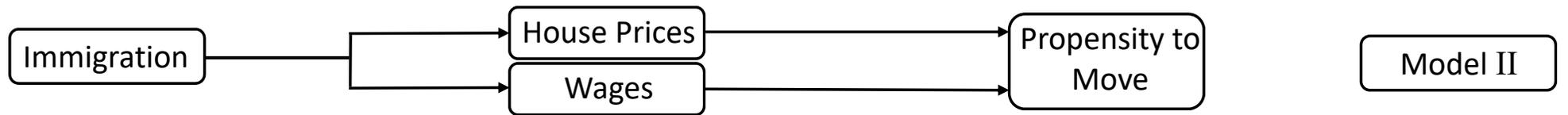
Individual household level effects:

Panel A: Individual Household Level IV Estimates

	Tenants	Owners
Net Immigration West and OECD	0.92	-1.27
Net Immigration RoW	-0.94	0.61
Household Fixed Effects	Yes	Yes
Time-Varying Household Controls	Yes	Yes
Observations	25,415	21,786
Adj.R-Squared	0.80	0.79

Panel B: Individual Household Level IV Quantile Regression Effects











House prices have a large impact on displacement...

Panel B: One Standard Deviation Increase in Rents (CHF 2,249) and House Prices (CHF 172,306)

	Tenants		Owners	
Log(Rents) or Log(Prices)	-0.53	-0.53	-0.13	-0.14
Interaction: HH. Intends to move	–	0.42	–	0.47

Wages have a large impact on displacement...

Panel B: One Standard Deviation Increase in Wages (CHF 56,861)

	Tenants		Owners	
Log(Wage)	0.60	0.35	–	–
Interaction: HH. Intends to move	–	1.68	–	0.95



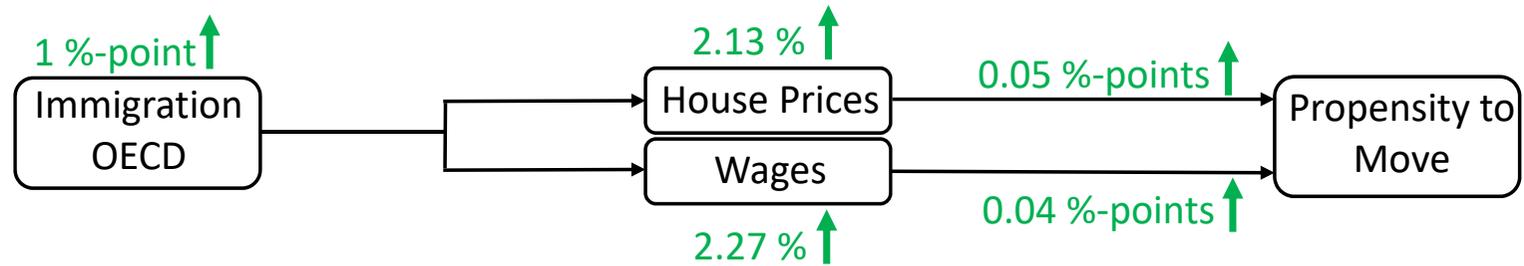
$$Move_{i,t+1}^{Owner} = \beta_1 HP_t^r + \beta_2 HP_t^r \cdot D_{it} + \beta_3 D_{it} + \beta_4' \cdot controls + \epsilon_{it} \quad \text{For Owners}$$

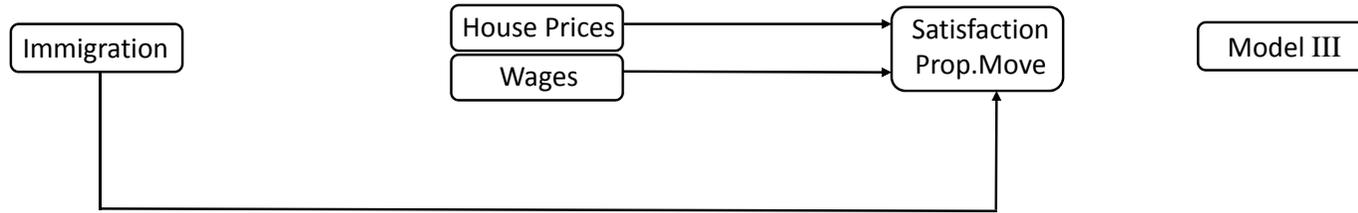
$$Move_{i,t+1}^{Tenant} = \beta_1 Rent_t^r + \beta_2 Rent_t^r \cdot D_{it} + \beta_3 D_{it} + \beta_4' \cdot controls + \epsilon_{it} \quad \text{For Tenants}$$

Table 1: The House Price Channel of Displacement

	Tenants	Owners
Log(Prices) or Log(Rents)	2.13·-0.059*	2.13·-0.021*
Interaction: Intents to Move	2.13·0.050*	2.13·0.047*
Household FE	Yes	Yes
Time-Varying Household Controls	Yes	Yes
N	20,347	17,285

Not important transmission channels





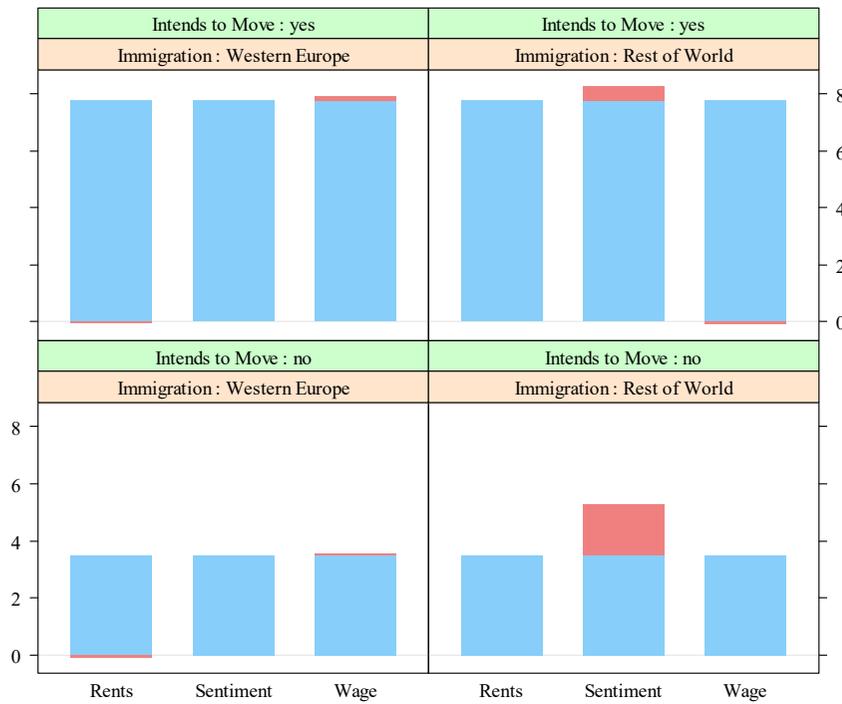
$$Move_{i,t+1}^{Owner/Tenant} = \beta_1 OECD_{3yr}^r + \beta_2 RoW_{3yr}^r + \beta_3' \cdot controls + \epsilon_{it}$$

Table 2: The Sentiment Channel of Displacement

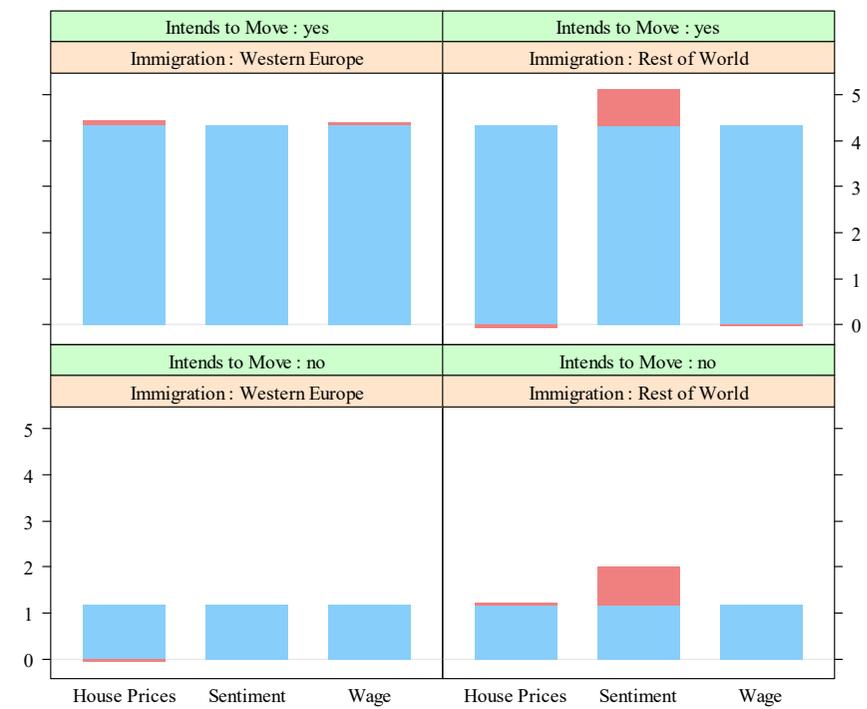
	Tenant	Owner
Immigration OECD	0.74	0.57
Immigration RoW	1.28**	0.60*
Household Fixed-Effects	YES	YES
Time-Varying Household Controls	YES	YES
N	20,101	19,309
Adj.R-Squared	0.39	0.28

Summary of Displacement Channels

Tenants



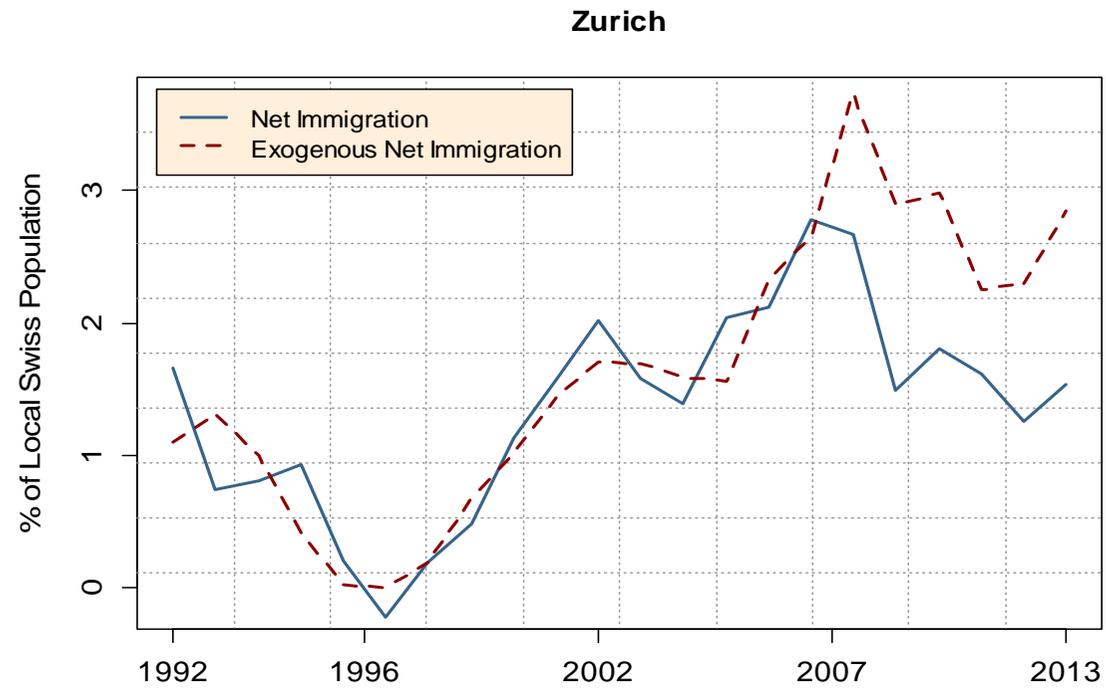
Owners



Conclusion

- Heterogeneity in Immigration affects on house prices and wages
- House prices and wages have economically large effects on relocation probability
- House prices and wages are not important transmission channels of immigration
- Instead, immigration effects displacement directly

Appendix



Appendix

The Propensity to Complain

Panel A: Immigration and Household Complaints

