

Crisis Resilience of Community Housing in First Republic 'Red Vienna'

The effect of the Great Depression on the living standard of the Viennese working-class.

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Introduction & background

Research objective

- recent debates concerning privatisation and re-communalisation
- affordable housing, rent control, tax-financed-transfers
- private and community housing
- quantitative assessment of expenditure
- Who is better of?

- demographic transition - a common challenge
- 225.000 inhabitants in 1810 - more than 2 million in 1910
- housing supply and demand mismatch *Gründerzeit*
- monarchy vs post-monarchy
 - living and housing situation tire
 - consolidation of a new state
 - high financial burdens
- moderate recovery and stabilisation
- Great Depression 1930 - 1933 (März, 1990)
- Austrofascism 1934

'Red Vienna'

- 'Vienna is different'
- social-democratic administration 1919 - 1934
- extensive social welfare programme
- social housing initiative
- cities within the city
 - central kitchens
 - laundry facilities
 - public baths
 - childcare facilities
 - grocery stores
 - educational and healthcare services
- widely discussed (Hardy and Institute of Economics (Washington, D.C.), 1934; Chaddock, 1932; Freundlich, 1930)

- times of crisis (e.g. hyperinflation or war) (Gyourko, 1990)
- January 1917 - *Mieterschutz* (tenants' protection)
- December 1922 - permanently put into law
- 1914 rent 14% of expenditure, in 1925 3% (Kammer für Arbeiter und Angestellte für Wien und Niederösterreich, 1928).
- **distortions**
 - miss-allocation of renters (Glaeser and Luttmer, 2003)
 - deteriorating housing quality (Albon and Stafford, 1990)
 - decrease in tenant mobility (Ault et al., 1994)
 - increased tenancy duration (Micheli and Schmidt, 2015)
- private and community housing

Social Housing initiative

- lack of capital and investment & rent control
 - stagnation in private building activity
 - cheap land prices
- communal building activity
- 535,000 flats in 1923, 614,000 in 1934
- taxation authority in 1922
- ideology
 - 'Licht, Luft und Sonne' (*light, fresh air and sun light*)
 - educating people
- high living standard
 - living room, kitchen, sleeping chamber (*Zimmer, Küche, Kabinett*)
 - running water, sanitary infrastructure, electricity, gas, etc.

- need-based point-scheme
 - three categories of need
 - points awarded, e.g. homelessness, overcrowding, a lack of hygiene
 - in 1923 20,000 households, in 1925 16,500, and in 1930 8,000 in the highest category (Hardy and Institute of Economics (Washington, D.C.), 1934)
- correction for miss-allocation (Glaeser and Luttmer, 2003)
- social-democratic family ideal
- conservative welfare regime (Matznetter, 2002)
- financial or ideological motivated bias

Data & descriptive statistics

- The household survey statistic of the Viennese Chamber of Labour 1925-1934
(*Die Haushaltstatistik der Wiener Arbeiterkammer 1925-1934*)
(Kautsky, 1937)
- 588 household observations over ten years
- detailed microdata of working-class households
- private and community housing
- panel mortality
- **correction**
 - minimum of 6 years
 - community housing already between 1926 and 1929
 - year of transition excluded
 - corrected for real values (1925 = 100) (Hubmann et al., 2019)

Before the Great Depression

Table 1: Summary Statistics and T-Test on the mean values per Housing Type before the Great Depression (*Year* = < 1929)

Housing Type	Before Great Depression (<i>Year</i> = < 1929)								
	Private			Community			T-Value	DF	p-Value
	N	Mean	St. Dev.	N	Mean	St. Dev.			
Household size	92	3.312	1.247	25	3.220	0.674	0.49371	72.774	0.623
Age - head of household	92	47.967	7.437	25	48.120	11.359	-0.063575	29.81	0.9497
Flat size factor	92	1.163	0.315	25	1.500	0.540	-2.9844	28.591	0.005766***
Labour income	92	1,159.742	758.174	25	1,152.661	580.102	0.05044	48.685	0.96
Nutrition	92	757.968	225.118	25	717.714	183.420	0.92433	45.652	0.3602
Rent	92	46.713	47.170	25	45.661	19.825	0.16663	95.21	0.868
Leisure	92	91.586	81.773	25	75.830	63.847	1.0262	47.667	0.31
Utilities	92	59.349	26.287	25	57.087	19.755	0.47029	49.623	0.6402
Transport	92	31.829	31.196	25	17.162	17.166	3.1016	71.27	0.002757***
Health	92	41.492	39.497	25	28.619	26.399	1.9225	56.557	0.05958*
Credit	92	47.201	76.715	25	41.348	58.898	0.41102	48.51	0.6829
Total non-nutrition	92	768.850	479.806	25	678.221	391.407	0.97556	45.597	0.3344
Total expenditure	92	1,526.818	667.585	25	1,395.935	552.502	1.0022	44.955	0.3216

†p<0.1; *p<0.05; **p<0.01; ***p<0.001

After the Great Depression

Table 2: Summary Statistics and T-Test on the mean values per Housing Type after the Great Depression (*Year > 1929*)

Housing Type	After Great Depression (<i>Year > 1929</i>)								
	Private			Community			T-Value	DF	p-Value
	N	Mean	St. Dev.	N	Mean	St. Dev.			
Household size	98	2.962	1.107	58	3.168	0.873	-1.2887	141.73	0.1996
Age - head of household	98	53.327	7.244	58	51.397	11.385	1.1596	84.727	0.2495
Flat size factor	98	1.255	0.375	58	1.474	0.490	-2.9321	96.43	0.004205***
Labour income	98	1,144.340	764.755	58	1,087.370	671.161	0.48612	132.34	0.6277
Nutrition	98	694.684	216.528	58	633.206	200.498	1.7962	127.23	0.07484*
Rent	98	65.361	39.563	58	54.939	25.998	1.9828	152.25	0.04919**
Leisure	98	107.324	126.327	58	80.974	73.133	1.6499	153.95	0.101
Utilities	98	74.334	29.337	58	62.453	20.674	2.9562	149.25	0.003622***
Transport	98	38.249	41.953	58	20.184	25.863	3.3264	153.71	0.001101***
Health	98	48.694	45.066	58	31.549	20.862	3.2271	147.13	0.001542***
Credit	98	49.043	107.262	58	15.543	33.372	2.8663	125.61	0.004871***
Total non-nutrition	98	907.872	592.947	58	693.766	430.284	2.6003	147.58	0.01026**
Total expenditure	98	1,602.557	763.761	58	1,326.972	575.486	2.5519	145.11	0.01175**

+p<0.1; *p<0.05; **p<0.01; ***p<0.001

Methodology

Difference-in-Difference (DiD)

- Comparability
- Allocation bias
- Common trend
- No mean-reversion
- Treatment - Great Depression
 - external shock orthogonal to housing policies
 - both groups are treated
 - crisis resilience or susceptibility

Transition to Community Housing

	<i>Dependent variable:</i>	
	<i>probit</i>	<i>logistic</i>
	(1)	(2)
Household size _{t-1}	0.119 (0.114)	0.278 (0.304)
Subrenting _{t-1}	0.145 (2.746)	0.285 (6.211)
Labour income _{t-1}	0.0001 (0.0001)	0.0002 (0.0002)
Gas connection _{t-1}	-0.496 (0.561)	-1.090 (1.508)
Electrical connection _{t-1}	0.663 (0.749)	1.246 (1.925)
Kitchen _{t-1}	-0.049 (0.851)	-0.119 (2.148)
Age - head of household _{t-1}	-0.016 (0.020)	-0.038 (0.055)
Gender - head of household _{t-1}	-1.030 (1.531)	-2.197 (4.039)
Marital status _{t-1}	1.051 (1.158)	2.146 (3.211)
Household size _{t-2}	-0.121 (0.128)	-0.258 (0.324)
Subrenting _{t-2}	2.024 (2.804)	3.637 (6.216)
Labour income _{t-2}	-0.0001 ⁺ (0.0001)	-0.0003 ⁺ (0.0002)
Gas connection _{t-2}	-0.549 (0.513)	-1.167 (1.378)
Electrical connection _{t-2}	0.122 (0.706)	0.335 (1.676)
Kitchen _{t-2}	-0.507 (0.877)	-1.118 (2.208)
Age - head of household _{t-2}	0.020 (0.022)	0.044 (0.058)
Gender - head of household _{t-2}	1.312 (1.471)	2.596 (3.920)
Marital status _{t-2}	-0.259 (1.139)	-0.674 (2.911)
Disability	-4.657 (1, 114.639)	-15.315* (6.010)
Constant	-2.310 (1.966)	-3.772 (5.031)
Observations	586	586

⁺p<0.1; *p<0.05; **p<0.01; ***p<0.001

Difference-in-Difference (DiD)

$$rent_{h,t} = \alpha + \beta H_n + \lambda Post_{GD,t} + \delta H_n * Post_{GD,t} + h_n + \mu_{h,t}$$

Variables

H_n ... Housing Type

$Post_{GD,t}$... Treatment - Great Depression

h_n ... Household fixed effects

Difference-in-Difference (DiD) - Control Variables

$$\text{rent}_{h,t} = \alpha + \beta H_n + \lambda \text{Post}_{GD,t} + \delta H_n * \text{Post}_{GD,t} + \iota \text{Ct}_{h,t} + \gamma \text{Hs}_{h,t} + \delta \text{Age}_{h,t} + \epsilon \text{Inc}_{h,t} + \zeta \text{SubR}_{h,t} + \eta \text{LSubR}_{h,t} + \theta \text{Year1934} + h_n + \mu_{h,t}$$

Control Variables

$\text{Ct}_{h,t}$... Cartaker position (*Hausbesorger*)

$\text{Hs}_{h,t}$... Household size

$\text{Age}_{h,t}$... Age of the head of household

$\text{Inc}_{h,t}$... Household labour income

$\text{SubR}_{h,t}$... Subrenting housing

$\text{LSubR}_{h,t}$... Living for subrent

Year1934 ... Dummy variable for the year 1934

Common trend - Utilities

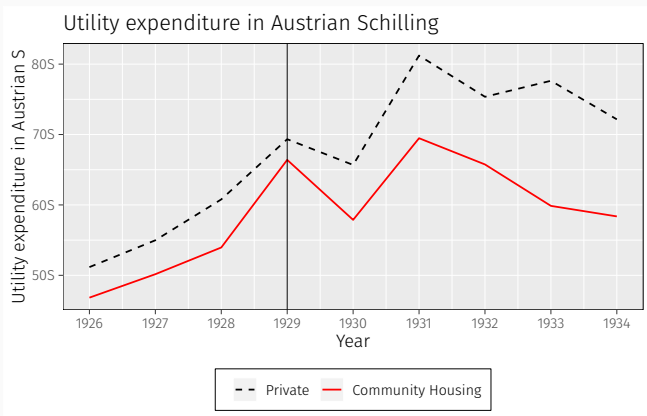


Figure 1: Expenditure for Utilities

Common trend - Leisure

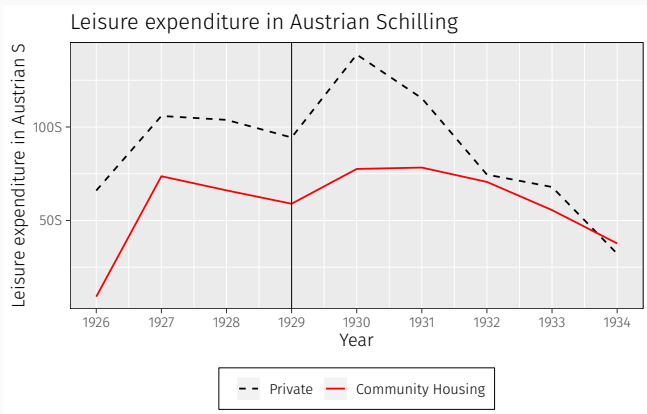


Figure 2: Expenditure for Leisure

Common trend - Nutrition

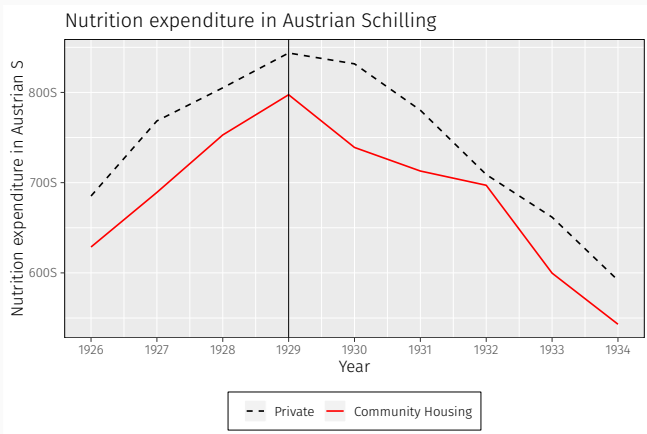


Figure 3: Expenditure for Nutrition

Common trend - Rent

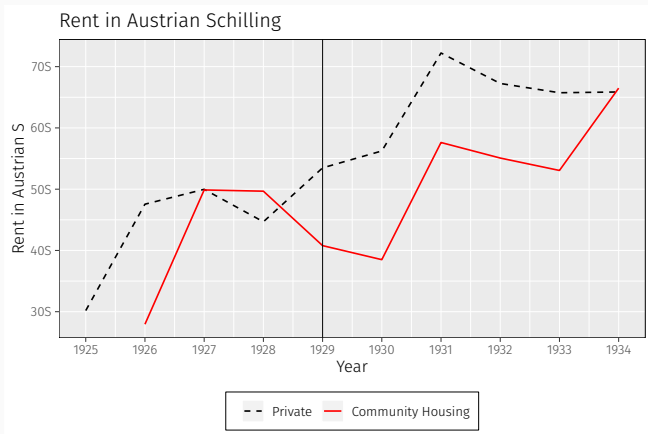


Figure 4: Expenditure for Rent

Common trend - Non-nutrition

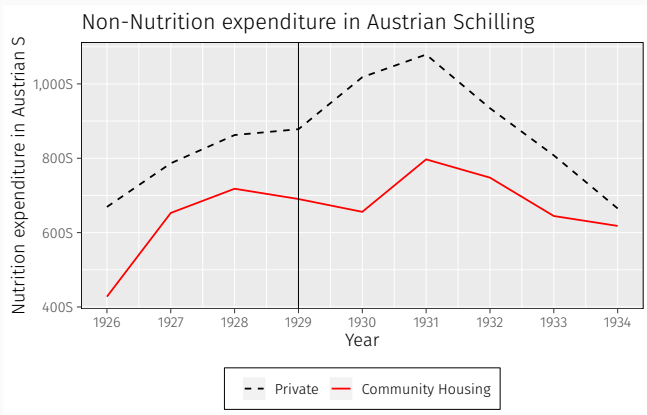


Figure 5: Expenditure for Non-nutrition

Results

Difference-in-Difference estimations (1)

	Dependent variable:		
	Rent	Leisure	Utilities
	(1)	(2)	(3)
Community housing	149.329*** (43.264)	6.824 (37.733)	65.440* (26.300)
Post _{GD}	28.320* (11.281)	145.928** (55.035)	-16.418* (7.446)
Community housing * Post _{GD}	-43.549** (16.098)	-20.095 (27.665)	-10.356 (10.167)
Caretaker (<i>Hausbesorger</i>)	-105.411*** (19.256)	37.582 (58.107)	111.218*** (24.674)
Household size	-12.642 (12.156)	-20.909 (23.433)	15.274** (5.880)
Age - head of household	6.667** (2.433)	-22.888 ⁺ (13.315)	9.830*** (1.712)
Labour income	0.008 (0.007)	0.041*** (0.010)	0.009*** (0.002)
Subrenting	-5.374 (18.574)	-3.966 (20.069)	9.344** (3.489)
Living for subrent	-110.590*** (24.595)	90.043* (43.890)	-21.597 (14.655)
Year 1934	18.331 (15.986)	-77.894*** (23.423)	-24.202** (8.387)
Observations	273	273	273
R ²	0.390	0.168	0.429
Adjusted R ²	0.279	0.016	0.324
F Statistic (df = 10; 230)	14.712***	4.652***	17.260***

⁺p<0.1; *p<0.05; **p<0.01; ***p<0.001

Difference-in-Difference estimations (2)

	Dependent variable:		
	Transport (4)	Credit (5)	Health (6)
Community housing	91.231 ⁺ (47.406)	40.822 (65.021)	50.281 (32.879)
Post _{GD}	3.917 (16.785)	114.431 (121.060)	29.488 (20.482)
Community housing * Post _{GD}	-16.700 (17.532)	-69.782 (63.639)	-24.439 (20.089)
Caretaker (<i>Hausbesorger</i>)	-57.206 (38.215)	29.641 (48.616)	0.502 (23.048)
Household size	-18.569 (12.964)	-65.436* (32.108)	-12.720 (14.256)
Age - head of household	0.765 (4.979)	-28.881 (18.610)	-2.107 (3.355)
Labour income	0.025* (0.010)	0.020 ⁺ (0.011)	0.009* (0.004)
Subrenting	16.905* (8.549)	-19.019 (71.229)	26.325 (31.080)
Living for subrent	104.110* (40.638)	-128.273* (57.432)	23.663 (25.410)
Year 1934	-6.334 (16.040)	-12.147 (19.548)	-4.654 (14.559)
Observations	273	273	273
R ²	0.265	0.071	0.057
Adjusted R ²	0.130	-0.098	-0.115
F Statistic (df = 10; 230)	8.282***	1.771 ⁺	1.393

⁺p<0.1; *p<0.05; **p<0.01; ***p<0.001

Difference-in-Difference estimations (3)

	Dependent variable:		
	Nutrition (7)	Non-Nutrition (8)	Expenditure (9)
Community housing	75.330 (190.489)	431.686 (286.000)	507.016 (458.095)
Post _{GD}	-84.057 ⁺ (49.374)	172.447 (165.453)	88.389 (181.449)
Community housing * Post _{GD}	-27.639 (86.298)	-205.854 ⁺ (115.988)	-233.493 (158.076)
Caretaker (<i>Hausbesorger</i>)	94.441* (38.628)	163.140 ⁺ (90.666)	257.581** (81.658)
Household size	252.991*** (42.420)	-262.703* (116.131)	-9.712 (116.739)
Age - head of household	-19.919* (7.833)	35.928 (33.621)	16.009 (33.685)
Labour income	0.215*** (0.027)	0.408*** (0.048)	0.623*** (0.067)
Subrenting	135.240 (121.019)	44.697 (148.395)	179.937 ⁺ (107.905)
Living for subrent	230.939* (107.351)	-362.969 ⁺ (194.714)	-132.030 (286.537)
Year 1934	-110.815* (51.468)	-300.072* (140.970)	-410.887** (147.249)
Observations	273	273	273
R ²	0.745	0.559	0.697
Adjusted R ²	0.698	0.479	0.642
F Statistic (df = 10; 230)	67.096***	29.185***	52.974***

⁺p<0.1; *p<0.05; **p<0.01; ***p<0.001

Difference-in-Difference estimations (4)

	<i>Dependent variable:</i>			
	Share Rent (1)	Share Leisure (2)	Share Utilities (3)	Share Nutrition (4)
Community housing	0.616 (0.594)	0.616 (0.594)	0.243 (0.254)	2.705 (2.465)
Post _{GD}	-0.096 (0.147)	-0.096 (0.147)	-0.098 (0.065)	-1.330 (0.838)
Community housing * Post _{GD}	-0.039 (0.127)	-0.039 (0.127)	-0.093 (0.072)	0.109 (0.509)
Caretaker (<i>Hausbesorger</i>)	0.094 (0.105)	0.094 (0.105)	-0.015 (0.109)	0.503 (1.484)
Household size	0.057 (0.078)	0.057 (0.078)	0.104 (0.071)	0.551 (0.665)
Age - head of household	0.036 (0.024)	0.036 (0.024)	0.041* (0.018)	0.153 (0.152)
Labour income	-0.0002 ⁺ (0.0001)	-0.0002 ⁺ (0.0001)	-0.0001** (0.0001)	-0.002** (0.001)
Subrenting	-0.064 (0.102)	-0.064 (0.102)	0.030 (0.043)	0.032 (0.531)
Living for subrent	0.337 (0.279)	0.337 (0.279)	0.206 (0.138)	0.900 (1.294)
Year 1934	-0.382 ⁺ (0.204)	-0.382 ⁺ (0.204)	0.010 (0.124)	-0.564 (0.967)
Observations	273	273	273	273
R ²	0.125	0.125	0.202	0.181
Adjusted R ²	-0.035	-0.035	0.056	0.032
F Statistic (df = 10; 230)	3.289***	3.289***	5.818***	5.093***

⁺p<0.1; *p<0.05; **p<0.01; ***p<0.001

Conclusion

- crisis resilient effect
 - cities within the city
 - incomes do not differ
 - less expenditure
- new standards for housing and living
- path dependency of historical precedence (Lawson, 2010)
- housing in Vienna *de-commodified* (Kadi, 2015)
- issue of housing affordability has shifted (Linneman and Megbolugbe, 1992)

Questions?

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