Employing the unemployed of Marienthal: Evaluation of a guaranteed job program

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Introduction

- Ideas for new social safety nets are generating much debate.
- Two leading contenders:
  - Job guarantee programs.
  - (Universal) basic income programs.
- Much variation in
  1. policy details, and
  2. motivating arguments.
- This talk: Evaluation of a job guarantee pilot program in Austria.

Disclaimer: We receive no payment for any of our evaluations,
and will publish our findings independently from the implementation partners.

Possible advantages and disadvantages

- **Unconditional outside options**.
  - Improving the bargaining position of those worst off, in employment, bureaucracies, and (romantic) relationships.
- **Non-economic benefits** of employment:
  - Work as a source of meaning.
  - Social interactions in the workplace and beyond.
  - Social respect.
- Possible **disadvantages**:
  - Spillovers, crowding out of market employment.
  - Forced work – if participation is not voluntary.
  - Meaningless activities.

Some literature

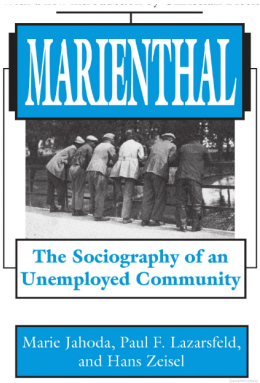
1. Public employment programs are not effective in improving future **employment prospects**.
   - Literature mostly considers (market) employment and earnings.
   - By contrast, we are interested in **participant welfare**.

   Heckman et al. (1999); Kluve (2010); Crépon and van den Berg (2016); Card et al. (2010, 2018).

2. **Correlation** between **employment** and **wellbeing** is widely documented.
   - Health and wellbeing:
     Avendano and Berkman (2014); Clark and Oswald (1994); Korpi (1997); Young (2012); Haushofer and Fehr (2014).
   - Positive link extends to public employment programs.
     Andersen (2008); Breidahl and Clement (2010); Fervers (2018); Wang et al. (2021).
   - The **causal link** between employment and wellbeing remains contested.

3. Little evidence on impact of **job guarantee programs**, esp. for rich countries.

Die Arbeitslosen von Marienthal



Jahoda et al. (1933):

Employment, with appropriate pay and working conditions, can have numerous benefits:

1. **Collective purpose:** Work as a source of meaning.
2. **Social inclusion:** Social interaction at work.
3. **Status:** Respect instead of social stigma.
4. **Activity:** Energy and involvement in life.
5. **Time structure:** Balance between work and spare time.
6. **Financial strain**: Income that allows for participation.

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The Marienthal job guarantee pilot

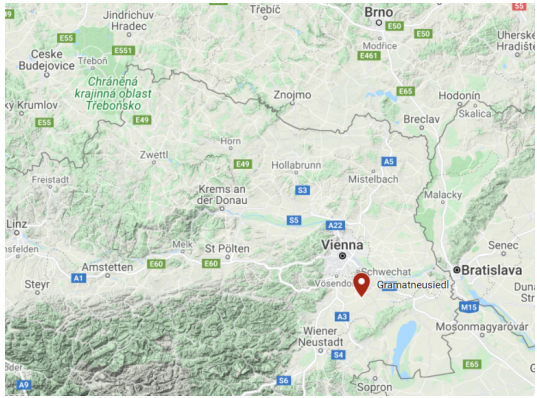
- Started October 2020, Gramatneusiedl.
- All longterm unemployed ($>$ 9 months at baseline) are eligible.
- Preparatory training for up to 8 weeks.
- Jobs are individually tailored. Options include:
  - Jobs in a newly founded social enterprise (childcare, gardening, renovation, carpentry).
  - Some of these: Projects created by participants themselves.
  - Subsidized jobs in the regular labor market.

The Marienthal job guarantee pilot

1. **Voluntary participation.**
   No sanctions for declining a job offer.

2. **Collectively bargained wage**
   1.500 Euro/month
   for full-time.

3. **Meaningful employment**
   Taking into account personal constraints.



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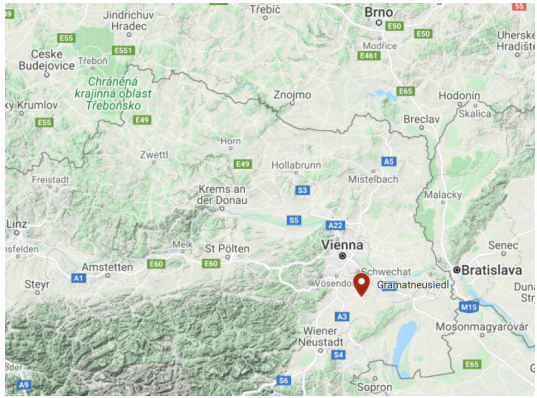

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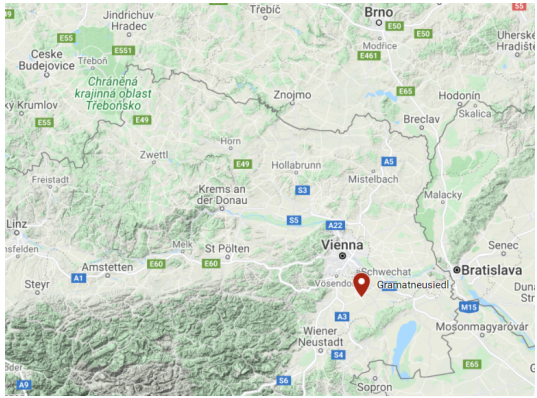
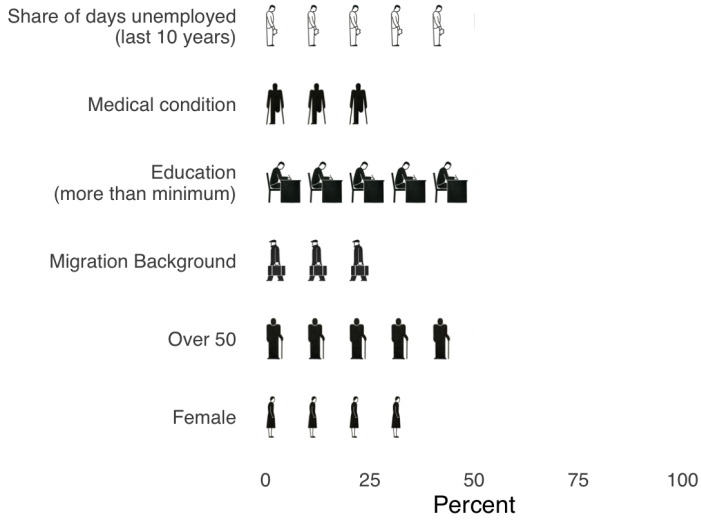


Participant characteristics



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Three evaluation challenges and possible solutions

1. **Small sample size**:
   Pairwise randomization.
   Matching on a rich set of baseline characteristics.

2. **Anticipation effects**:
   Staggered rollout.
   Contrasting earlier to later participants, and to control town individuals.

3. **Equilibrium effects**:
   Cross-location comparisons.
   Pre-registered synthetic control municipalities.

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Study design: Three approaches

1. Pairwise matching and staggered roll-out.
2. Synthetic control comparison.
3. Individual-level comparison to control municipalities.

Study design, Approach I

Pairwise matching and staggered roll-out:

- Baseline covariates (as of September 2020):
  Gender, age, "migration background", education, disability, level of benefits, days unemployed in the last 10 years.

$\Rightarrow$ Pairwise Mahalanobis distance.

- Pairwise matching minimizing sum of distances within pairs.
- Random assignment to one of two waves within pairs.
- Start of employment for the two waves:
  1. December 2020.
  2. April 2021.

Pairwise randomization: Covariate balance

Covariate	Mean wave 1	Mean wave 2	Difference	T-statistic	P-value
Male	0.581	0.581	0.000	0.000	1.000
Age	44.452	44.935	-0.484	-0.165	0.869
Migration Background	0.323	0.355	-0.032	-0.264	0.793
Education	0.452	0.452	0.000	0.000	1.000
Health condition	0.290	0.323	-0.032	-0.271	0.787
Benefit level	29.839	29.839	0.000	0.000	1.000
Days unemployed	1721.871	1600.839	121.032	0.483	0.631

Study design, Approach II

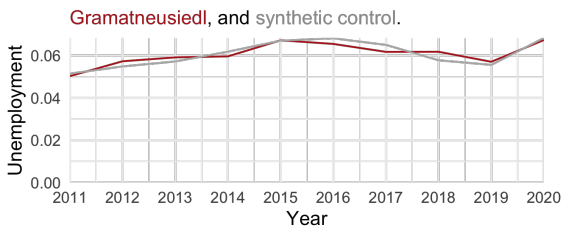
Synthetic control comparison:

- Multiple municipal-level data sources (as of December 2019):
  AMS Data Warehouse, AMS occupational-career monitoring,
  and the national statistical agency.
- Pick the 26 (5%) of municipalities in Lower Austria
  closest to Gramatneusiedl in terms of Mahalanobis distance.
- Find the synthetic control (convex combination) of these municipalities
  closest to Gramatneusiedl in terms of baseline covariates
  and in terms of the trajectory of unemployment 2011-2020.

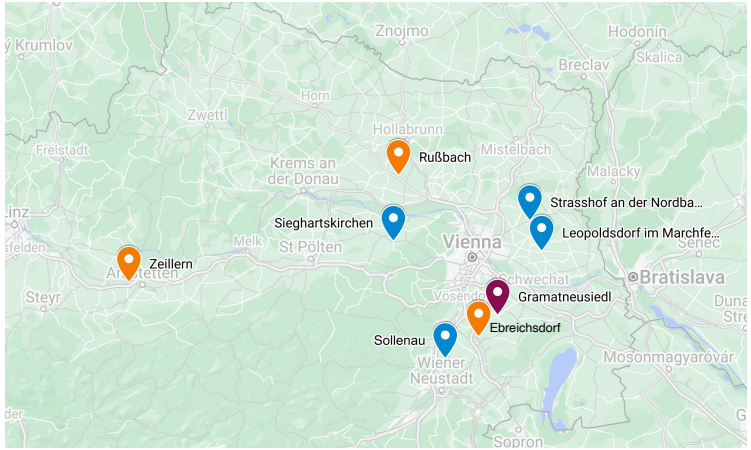
Both pairwise randomization and synthetic control were pre-registered!

Synthetic control weights and unemployment trajectory

Weight	Municipality
0.487	Ebreichsdorf
0.203	Zeillern
0.134	Rußbach
0.079	Leopoldsdorf im Marchfelde
0.046	Strasshof an der Nordbahn
0.024	Sieghartskirchen
0.023	Sollenau



Synthetic control locations



Red: Treated.
Orange: Control with larger weight.
Blue: Control with smaller weight.

Study design, Approach III

Individual-level comparison to control municipalities.

- Individuals in the three control municipalities with the largest weight: Ebreichsdorf, Zeillern, Rußbach.
- Selected based on eligibility criterion of MAGMA: 9 months of unemployment as of September 2020.
- Comparisons adjust for baseline covariates.

Causal interpretation of various contrasts

1. Direct treatment effects.
2. Anticipation effects.
3. Spillover effects.

$$Y_i = g(D_i, D_i^{+1}, \overline{D}, \epsilon_i).$$

- Y_i: Outcome for individual i.
- D_i: Current eligibility for the job guarantee.
  D_i^{+1} : Future eligibility.
  $\overline{D}$: Share of long-term unemployed in the municipality currently eligible.
- ϵ_i: Unobserved individual characteristics.
- L_i: Indicator for unemployment $>$ 9 months as of September 2020

Identified effects and roadmap

Contrast	Identified effect	Interpretation
	February 2021	
Group 1 vs. Group 2	$E[g(1,1,\frac{1}{2},\epsilon_i) - g(0,1,\frac{1}{2},\epsilon_i)\|L_i = 1]$	Average direct effect on the treated
Group 2 vs. control town	$E[g(0,1,\frac{1}{2},\epsilon_i) - g(0,0,0,\epsilon_i)\|L_i = 1]$	Average anticipation effect on the treated
	After April 2021	
Group 1 & 2 vs. control town	$E[g(1,1,1,\epsilon_i) - g(0,0,0,\epsilon_i)\|L_i = 1]$	Average total effect on the treated
Gramatneusiedl vs. synth (short-term unemp)	$E[g(0,0,1,\epsilon_i) - g(0,0,0,\epsilon_i)\|L_i = 0]$	Average spillover effect on the untreated
Gramatneusiedl vs. synth (total unemp)	$E[g(L_i,L_i,1,\epsilon_i) - g(0,0,0,\epsilon_i)]$	Average total effect

Randomization / permutation inference

- Consider the null hypothesis that $Y_i^1 = Y_i^0$ for all i in the sample.
- Under this null, we can calculate test-statistics
  for any counterfactual treatment assignment.
- Randomization inference: Randomly reassign treatment.
  Re-calculate test-statistics.
- Fisher p-value: Share of times the re-calculated test-statistic
  is bigger than the actually realized one.
- Permutation inference: Similar idea for synthetic control.
  For each of our control municipalities, pretend it is the treated one.
  Re-calculate synthetic control estimates for this municipality.

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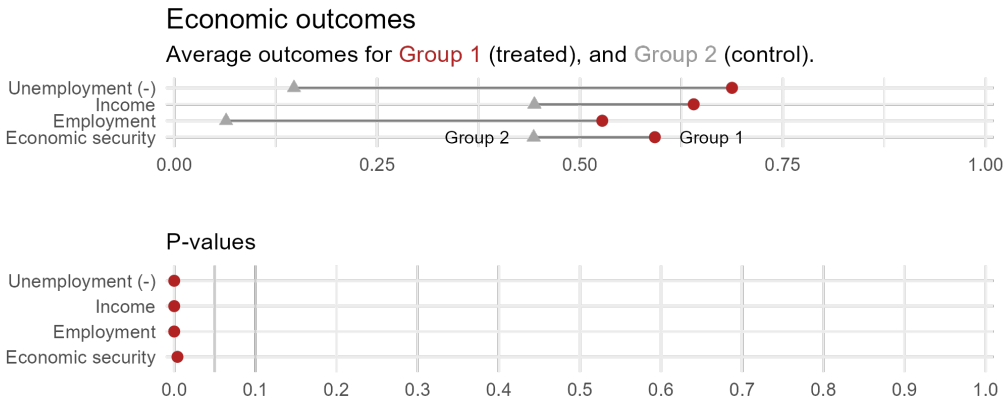
Summary of findings

1. Individual level, experimental:
   - Positive impacts of program participation on participants' economic wellbeing (employment, income, security),
   - and work-related benefits (status, time structure, social interactions).
   - No effects on physical health, or risk- and time-preferences.
2. Municipality level:
   - Large reduction of long-term unemployment.
   - A small increase of short-term unemployment.
   - On net, a clear reduction of unemployment.
3. Individual level, across towns:
   - Similar estimates to experimental comparison.
   - Some positive anticipation effects for status and social inclusion.

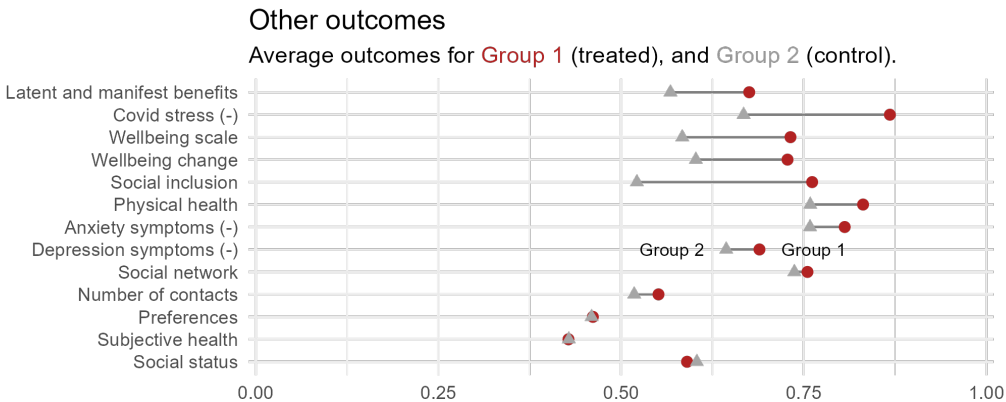
Experimental comparison, economic outcomes

Variables are scaled so that

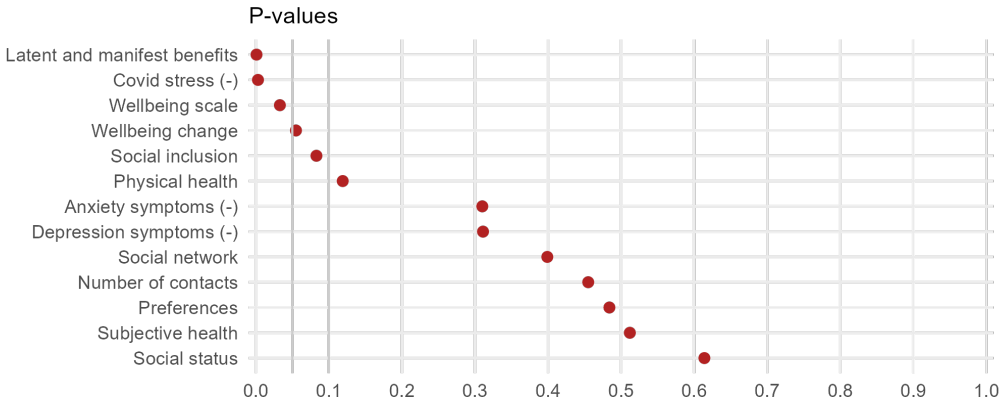
1. More is better, and
2. outcomes range from 0 to 1.



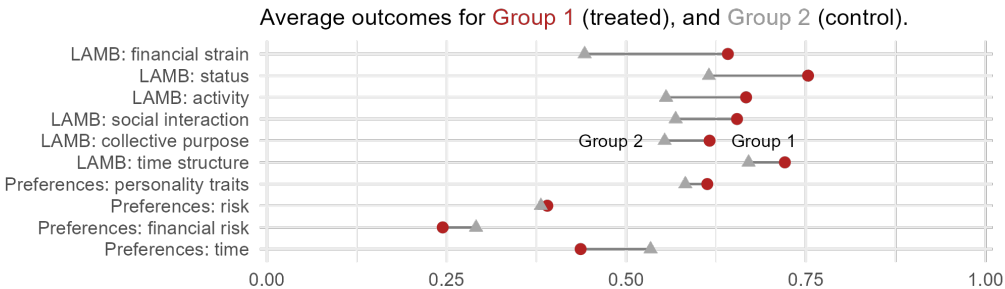
Experimental comparison, other outcomes



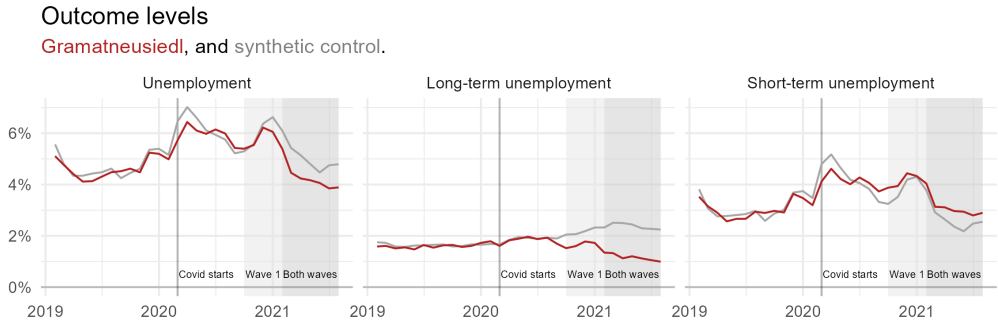
Experimental comparison, p-values



Experimental comparison, disaggregated outcomes



Municipality comparison

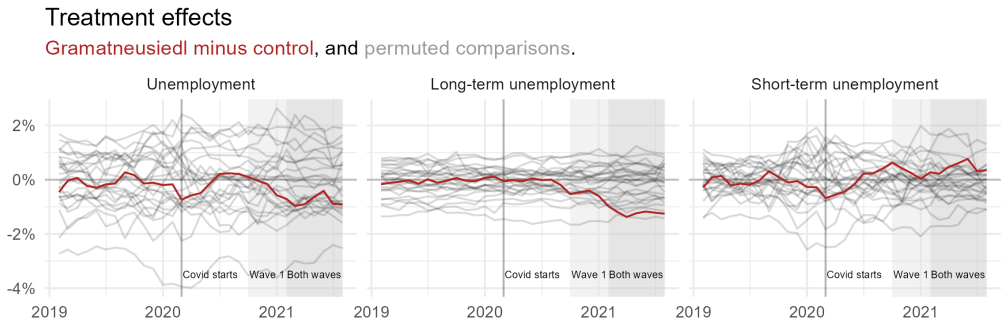


Note:

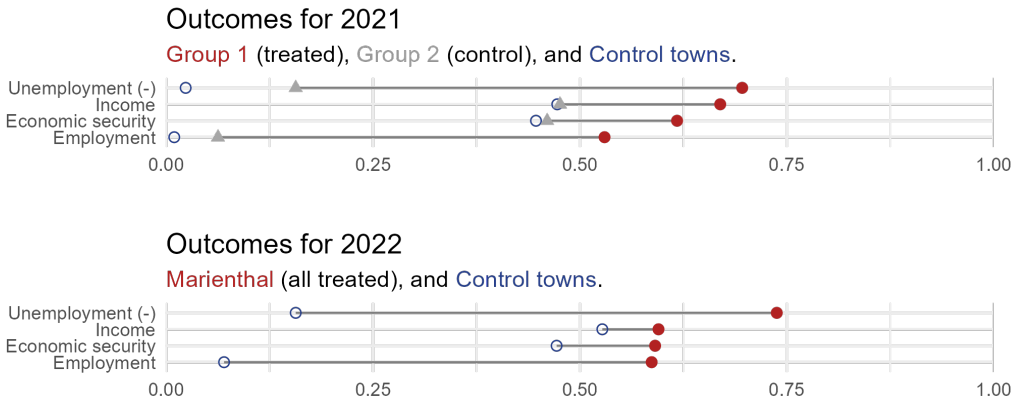
- Outcomes are measured at the zip code level.
  Eligibility is at the municipality level, which is a subset.

- That is why long-term unemployment is not reduced to 0,
  even though all long-term unemployed are eligible, and (almost) all accept.

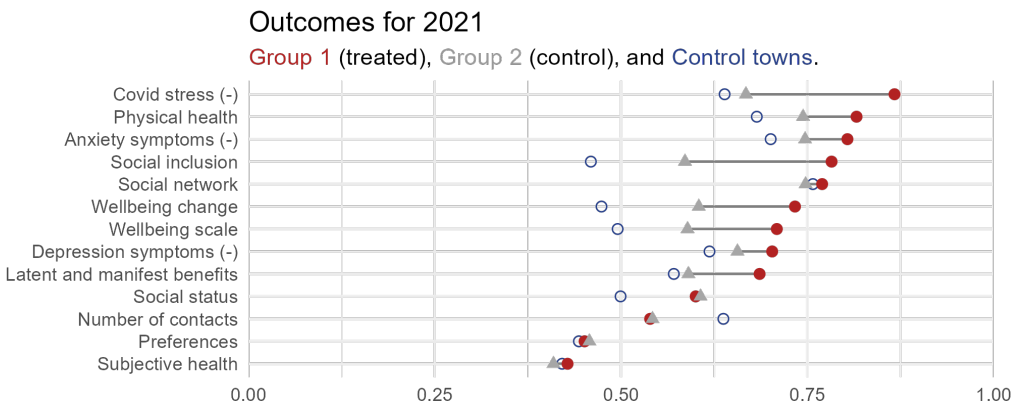
Municipality comparison, inference



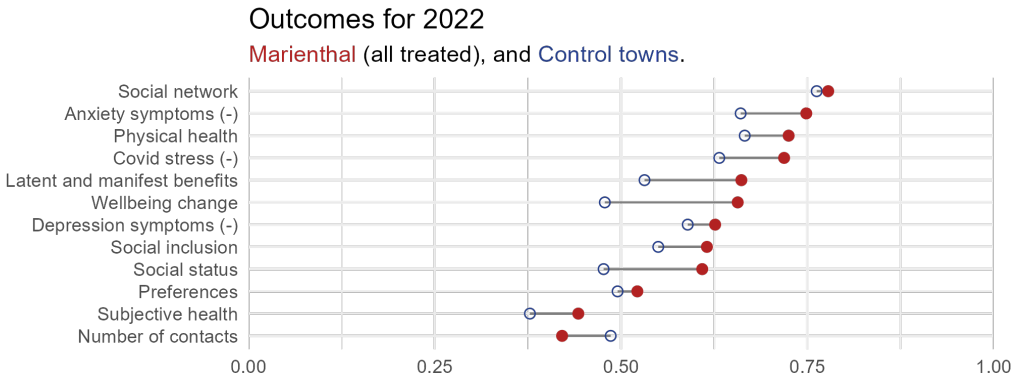
Individual control town comparisons, economic outcomes



Individual control town comparisons, other outcomes



Individual control town comparisons, other outcomes



Summary and conclusion I

Study design

1. Matched random assignment
   to increase precision.
2. Staggered roll-out
   to separate out anticipation effects.
3. Synthetic controls
   to estimate spillovers / equilibrium effects.
4. Control-town individuals
   to estimate long-term effects.
5. Pre-registered design
   to tie our hands.
6. Randomization inference
   for finite sample validity.

Summary and conclusion II

Findings

1. Positive effects on economic and social wellbeing.
   - Income, income security, employment.
   - Time structure, activity, social contacts, collective purpose, social status.
2. No effect on physical health and economic preferences.
   (time, risk, reciprocity, altruism, trust)
3. Similar effects when comparing to individuals in control towns.
   Some anticipation effects.
4. Effects persist over time.
5. Large reduction of municipality-level unemployment.
   - Near-elimination of long-term unemployment.
   - Small increase of short-term unemployment.

Quantitative methods across a century

Die Arbeitslosen vom Marienthal	**Employing the unemployed of Marienthal**
Classification	Causality
No control group	Several contrasts for causal inference
Historical macro event	Micro policy intervention
Capture heterogeneity	Balance out heterogeneity
Estimate $=$ estimand	Sample $\neq$ population
No uncertainty quantification	Standard errors, confidence intervals
Methodologically open-ended	Fully pre-registered

A historical arc:

- Jahoda elaborated the non-monetary benefits of employment.
- In our study, we find the most significant effects on the LAMB index, which builds on her work.

Thank you!