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

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Contents

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A Additional tables and figures

A.1 Synthetic control: Further details

Table A.1: Variables used for the construction of the synthetic control

| Variable	Definition
Working age pop	Working age population.
Long term unemp/pop	Number of long-term unemployed (> 1 year) as a share of working age pop.
Inactive/pop	Number of inactive persons in working age as a share of working age pop.
Mean age	Mean age in years of the total population.
Share small firms	Small firms (less than 10 employees) as a share of total firms.
Share mid firms	Medium sized firms (10-249 employees) as a share of total firms.
Share low edu	Persons with low education (ISCED 1-2) as a share of total pop.
Share mid edu	Persons with medium education (ISCED 3-4) as a share of total pop.
Share men	Male persons as a share of total pop.
Share migrant	Persons with a migrant background as a share of total pop.
Share care resp	Active persons with care responsibilities as a share of total pop.
Mean wage	Mean wage level.
Mean age unemp	Mean age in years of the unemployed.
Low edu/unemp	Unemployed with low education (ISCED 1-2) as a share of total unemployed.
Mid edu/unemp	Unemployed with medium education (ISCED 3-4) as a share of total unemployed.
Poor German/unemp	Unemployed with low German skills ($<$ A2 CEFR) as a share of total unemployed.
Men/unemp	Male unemployed as a share of total unemployed.
Migrant/unemp	Unemployed with a migrant background as a share of total unemployed.
Health cond/unemp	Unemployed with a medical condition limiting employment opportunities as a share of total unemployed.
Communal tax/pop	Communal tax per working age pop.

Notes: This table describes the variables used for the construction of the synthetic control municipality; cf. Table A.2.

Figure A.1: Location of municipalities included in the synthetic control
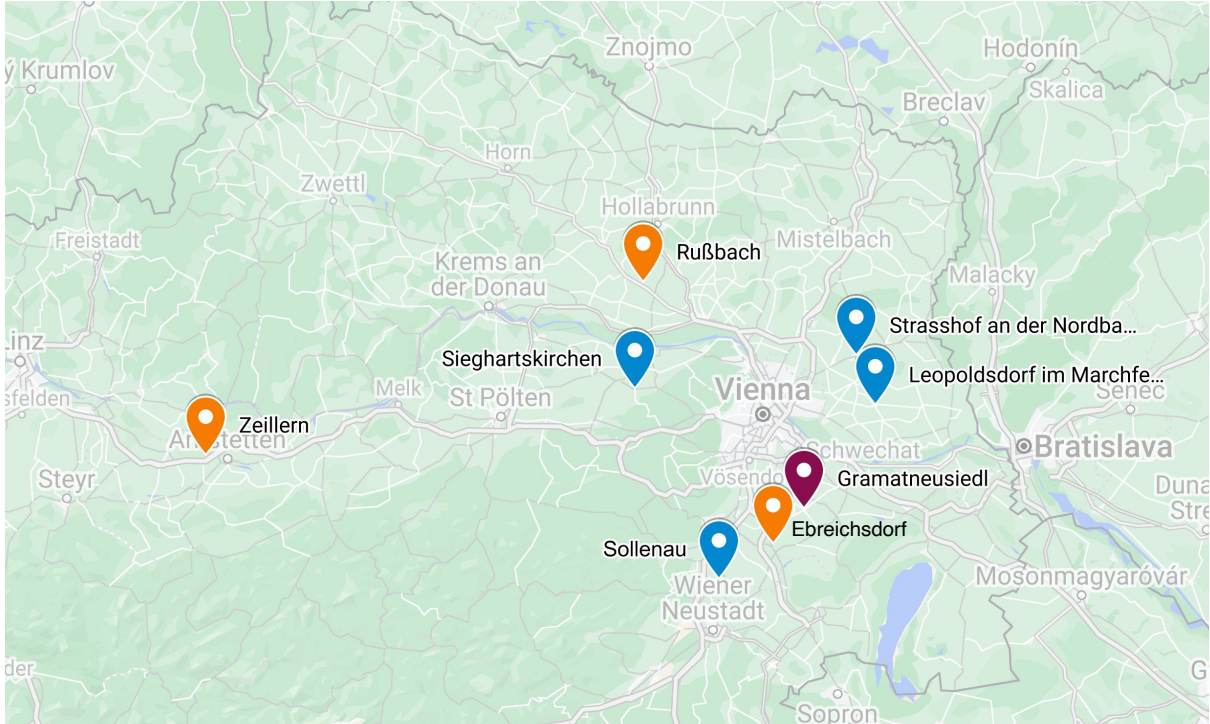
Notes: Gramatneusiedl, the treated municipality, is marked in red. The 3 municipalities with the largest weights in the synthetic control are marked in orange. Municipalities with smaller weights are marked in blue.

Figure A.2: Unemployment gap and permutation inference.
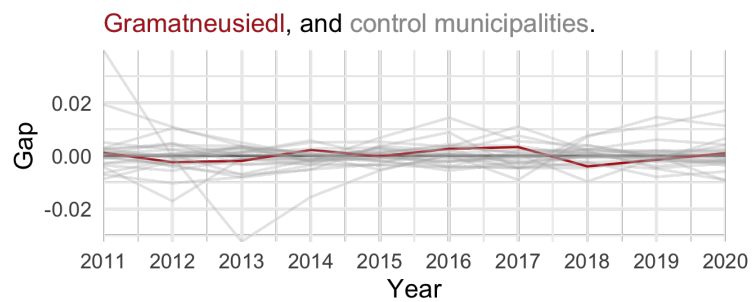
Notes: This figure shows the unemployment gap between Gramatneusiedl and its synthetic control (red), and between each of the 25 potential control municipalities and *their* synthetic control (grey). This figure parallels the second row of Figure 5, for the 10 years before the MAGMA program.

Table A.2: Gramatneusiedl and control municipality covariates

Variables observed in December 2019

Municipality	Working age pop	Long term unemp/pop	Inactive/pop	Mean age	Share small firms	Share mid firms	Share low edu
Gramatneusiedl	5013	0.007	0.220	50.775	0.115	0.339	0.208
Synthetic control	4830	0.016	0.228	51.074	0.126	0.363	0.225
Zeillern	1263	0.004	0.227	50.229	0.093	0.335	0.199
Ebreichsdorf	7655	0.020	0.228	50.810	0.139	0.381	0.235
Leopoldsdorf im Marchfelde	2035	0.022	0.247	51.304	0.135	0.348	0.242
Strasshof an der Nordbahn	6920	0.024	0.213	51.403	0.115	0.324	0.250
Rußbach	942	0.013	0.219	52.230	0.126	0.369	0.206
Sieghartskirchen	4560	0.010	0.224	52.464	0.135	0.337	0.197
Sollenau	5122	0.017	0.248	54.286	0.129	0.360	0.284

Municipality	Share mid edu	Share men	Share migrant	Share care resp	Mean age unemp	Mean wage	Low edu/unemp
Gramatneusiedl	0.642	0.511	0.242	0.257	42.694	3416	0.530
Synthetic control	0.644	0.503	0.181	0.235	43.422	3293	0.452
Zeillern	0.702	0.509	0.053	0.256	40.462	3168	0.346
Ebreichsdorf	0.620	0.498	0.234	0.235	44.344	3379	0.465
Leopoldsdorf im Marchfelde	0.619	0.498	0.260	0.216	43.627	3294	0.513
Strasshof an der Nordbahn	0.600	0.496	0.276	0.257	42.364	3393	0.465
Rußbach	0.676	0.513	0.088	0.224	45.500	3137	0.525
Sieghartskirchen	0.641	0.510	0.195	0.206	41.257	3366	0.387
Sollenau	0.608	0.496	0.229	0.193	41.819	3235	0.521

Municipality	Mid edu/unemp	Poor German/unemp	Men/unemp	Migrant/unemp	Health cond/unemp	Communal tax/pop	Lt ue/pop 2020
Gramatneusiedl	0.455	0.082	0.627	0.418	0.245	57.281	0.009
Synthetic control	0.516	0.061	0.583	0.312	0.264	217.301	0.018
Zeillern	0.654	0.000	0.692	0.115	0.303	97.822	0.004
Ebreichsdorf	0.480	0.086	0.546	0.374	0.213	282.242	0.022
Leopoldsdorf im Marchfelde	0.473	0.093	0.573	0.467	0.256	284.806	0.023
Strasshof an der Nordbahn	0.496	0.089	0.528	0.472	0.303	160.549	0.027
Rußbach	0.475	0.025	0.575	0.200	0.375	97.079	0.016
Sieghartskirchen	0.552	0.054	0.609	0.360	0.281	329.855	0.012
Sollenau	0.460	0.140	0.558	0.457	0.282	308.998	0.019

Variables observed in July 2020

Municipality	Mean wage	Mean age ue	Low edu/ue	Mid edu/ue	Poor German/ue	Health cond/ue
Gramatneusiedl	3308	42.069	0.456	0.481	0.031	0.209
Synthetic control	3181	42.625	0.389	0.577	0.059	0.212
Zeillern	3025	41.474	0.289	0.711	0.000	0.193
Ebreichsdorf	3278	43.101	0.424	0.527	0.082	0.169
Leopoldsdorf im Marchfelde	3222	44.021	0.472	0.507	0.056	0.225
Strasshof an der Nordbahn	3264	41.188	0.458	0.493	0.061	0.260
Rußbach	3022	42.314	0.343	0.629	0.057	0.349
Sieghartskirchen	3241	43.406	0.319	0.626	0.043	0.278
Sollenau	3071	41.847	0.460	0.517	0.119	0.274

Municipality	Inactive/pop
Gramatneusiedl	0.209
Synthetic control	0.219
Zeillern	0.222
Ebreichsdorf	0.217
Leopoldsdorf im Marchfelde	0.244
Strasshof an der Nordbahn	0.202
Rußbach	0.208
Sieghartskirchen	0.220
Sollenau	0.238

Table A.3: Covariate balance for the individuals in our control town sample

| Covariate	Gramatneusiedl	Control towns	Difference	T-statistic	P-value
Male	0.581	0.535	-0.045	0.523	0.602
Age	44.694	49.634	4.940	-2.496	0.014
Migration Background	0.339	0.310	-0.029	0.352	0.726
Education	0.452	0.535	0.084	-0.958	0.340
Medical condition	0.306	0.338	0.032	-0.386	0.700
Benefit level	29.839	34.535	4.697	-2.600	0.011
Days unemployed	1661.355	1638.521	-22.834	0.136	0.892

A.2 Confidence intervals

Figure A.3: Confidence intervals for contrast of Group 2 and Group 1 in February 2021
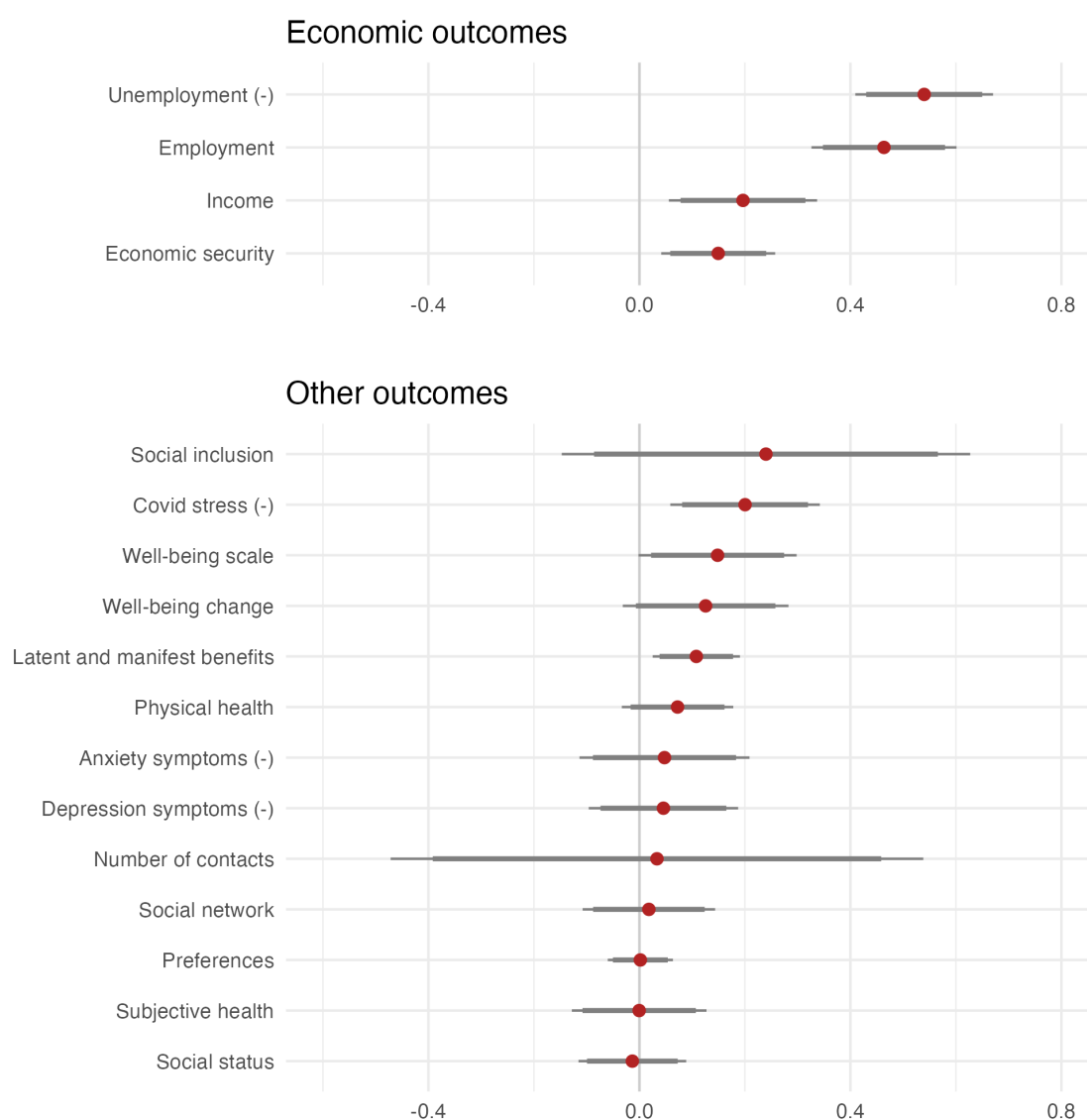

Notes: Confidence intervals for treatment effects, estimated with linear controls for baseline covariates, and with robust standard errors. The thin line shows the 95% confidence interval and the wider line shows the 90% confidence interval. These confidence intervals correspond to the estimates reported in Figure 3. These estimates are also tabulated in Table 4.

Figure A.4: Confidence intervals for contrast of Group 2 and control town individuals, February 2021
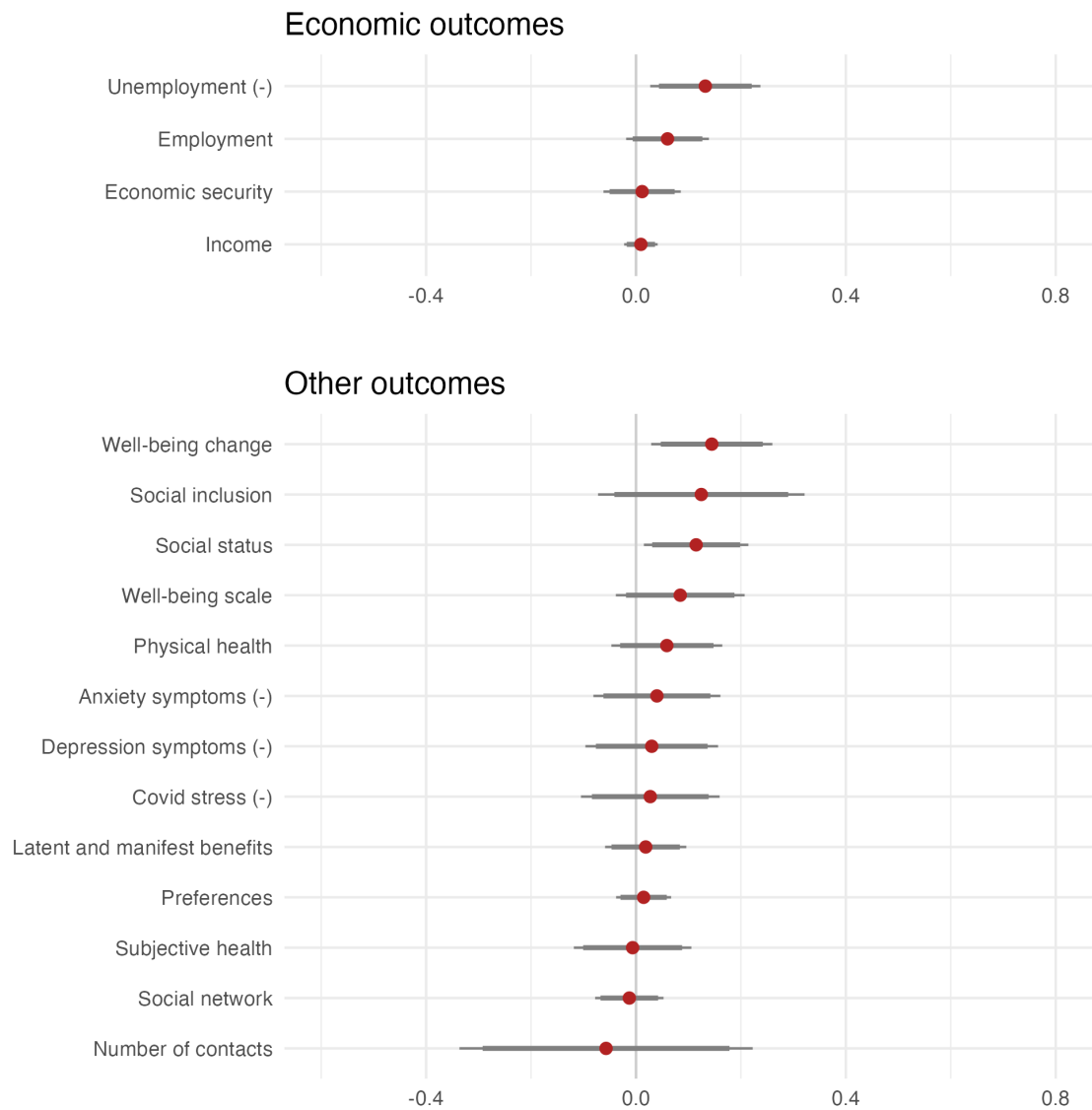
Economic outcomes

Other outcomes

Notes: These confidence intervals correspond to the estimates reported in Figure 7 and Figure 8. These estimates are also tabulated in Table 5 and Table 6.

Figure A.5: Confidence intervals for contrast of participants in both groups and control town individuals, February 2022
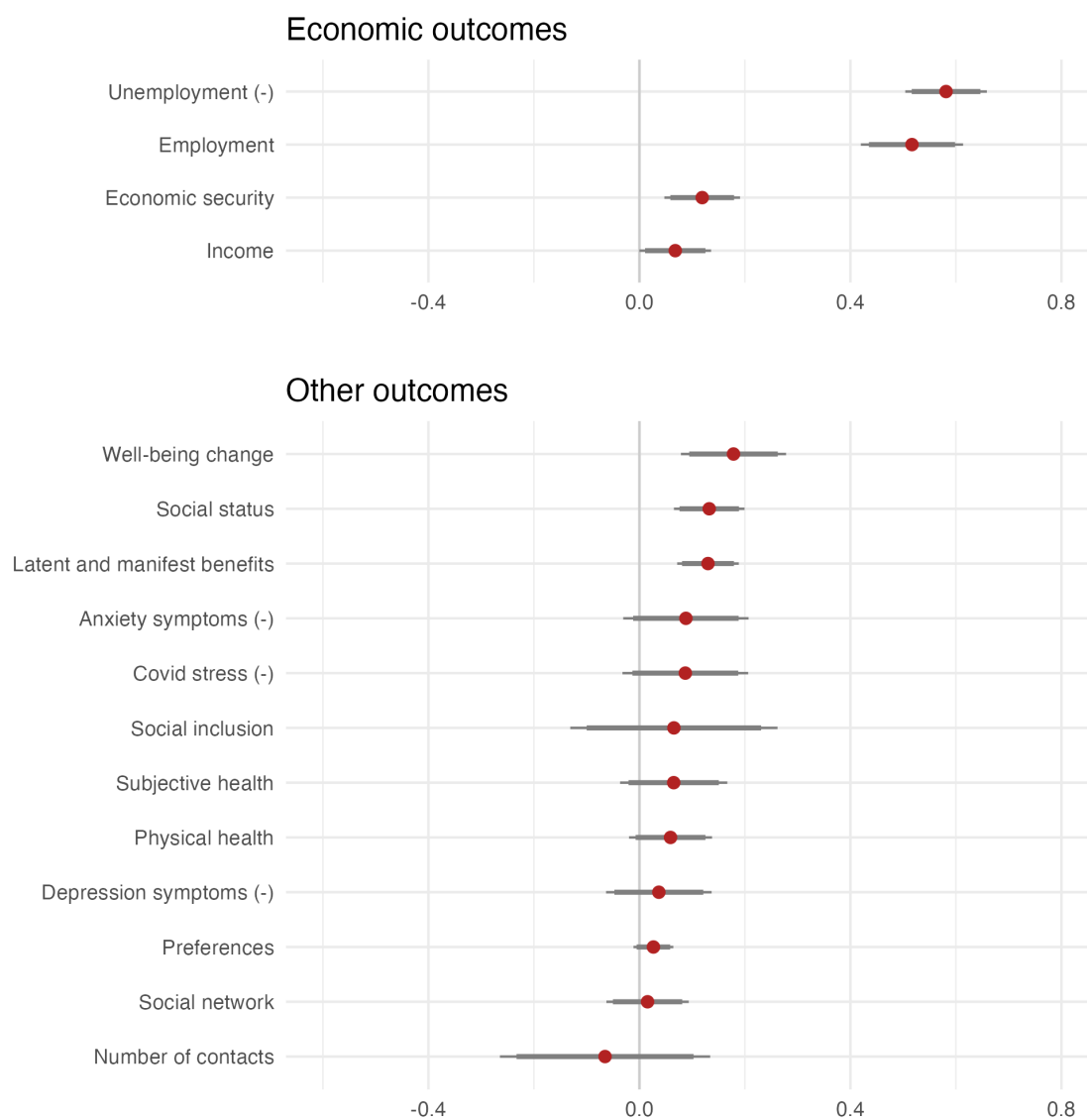
Economic outcomes

Other outcomes

Notes: These confidence intervals correspond to the estimates reported in Figure 7 and Figure 8. These estimates are also tabulated in Table 5 and Table 6.

A.3 Balance checks

Table A.4: Covariate balance for survey respondents in Gramatneusiedl, 2021

Covariate	Wave 1	Wave 2	Difference	t-statistic	p-value	n_1	n_2
Male	0.571	0.636	-0.065	-0.426	0.673	21	22
Age	42.857	47.727	-4.870	-1.394	0.171	21	22
Migration background	0.238	0.364	-0.126	-0.886	0.381	21	22
Education	0.524	0.545	-0.022	-0.139	0.890	21	22
Medical condition	0.238	0.318	-0.080	-0.575	0.568	21	22

Notes: This table shows the means of pre-determined covariates in the two treatment groups, among 2021 survey respondents, in analogy to Table 4 in the manuscript. The absence of significant differences suggests that differential attrition is not a problem.

Table A.5: Covariate balance for survey respondents in our control town sample, 2021

Covariate	Gramatneusiedl	Control towns	Difference	t-statistic	p-value	n_1	n_2
Male	0.605	0.535	0.069	0.722	0.472	43	71
Age	45.349	49.634	-4.285	-1.933	0.056	43	71
Migration background	0.302	0.310	-0.008	-0.084	0.933	43	71
Education	0.535	0.535	0.000	-0.003	0.997	43	71
Medical condition	0.279	0.338	-0.059	-0.660	0.511	43	71

Notes: This table shows the means of pre-determined covariates in Gramatneusiedl and control towns, among 2021 survey respondents, in analogy to Table 6 in the manuscript. The absence of significant differences again suggests that differential attrition is not a problem.

Table A.6: Covariate balance for survey respondents in our control town sample, 2022

Covariate	Gramatneusiedl	Control towns	Difference	t-statistic	p-value	n_1	n_2
Male	0.600	0.645	-0.045	-0.471	0.639	45	62
Age	46.044	48.726	-2.681	-1.228	0.223	45	62
Migration background	0.400	0.274	0.126	1.347	0.181	45	62
Education	0.444	0.581	-0.136	-1.390	0.168	45	62
Medical condition	0.311	0.355	-0.044	-0.471	0.639	45	62

Notes: This table shows the means of pre-determined covariates in Gramatneusiedl and control towns, among 2022 survey respondents, in analogy to Table 6 in the manuscript. The absence of significant differences again suggests that differential attrition is not a problem.

Figure A.6: Experimental estimates with pair controls

Economic outcomes
Average outcomes for Group 1 (treated), and Group 2 (control).
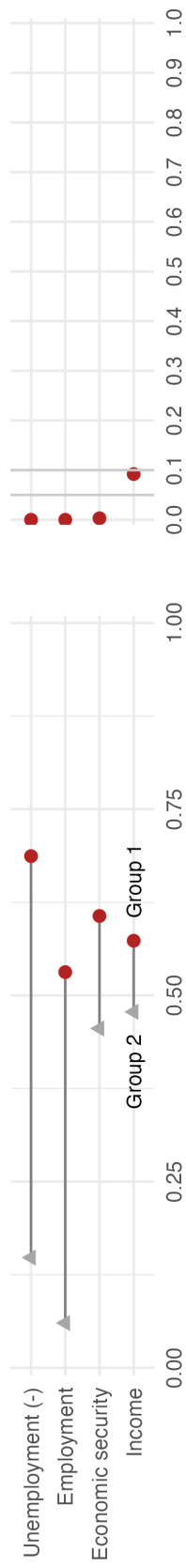
Other outcomes
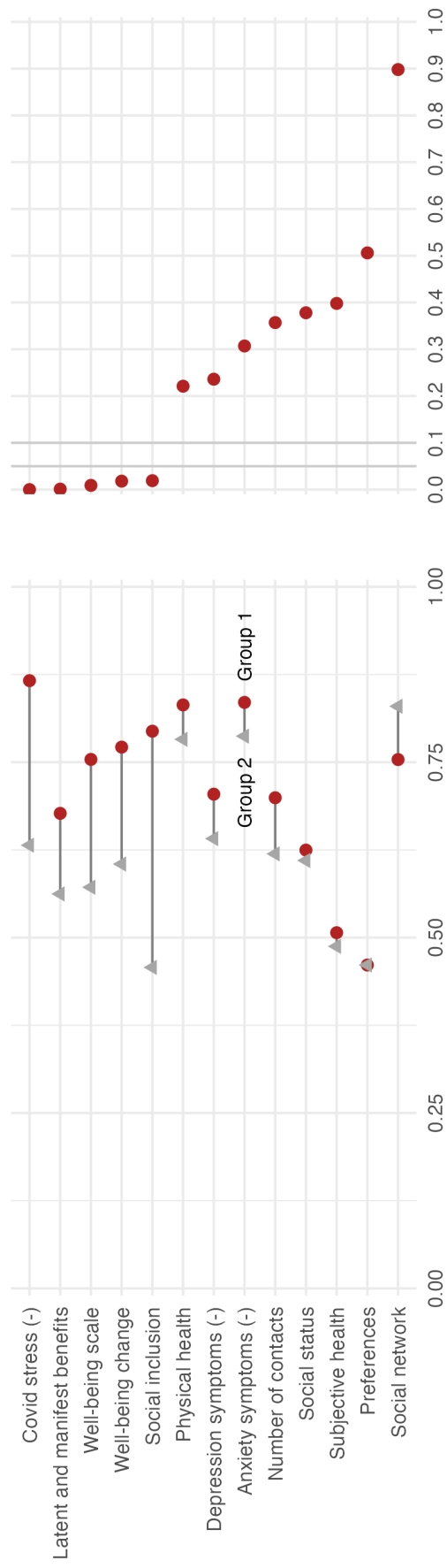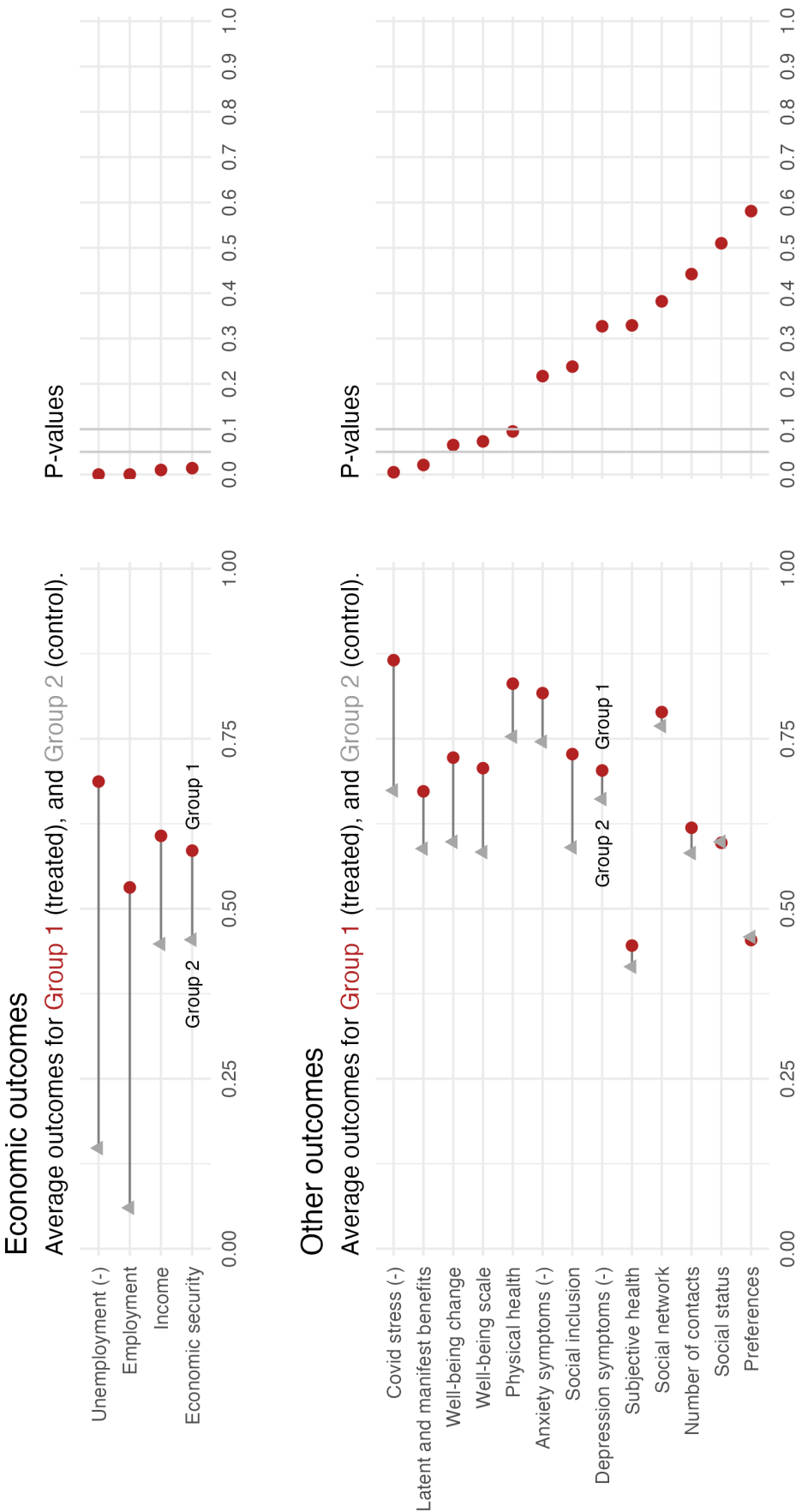Average outcomes for Group 1 (treated), and Group 2 (control).

Figure A.7: Experimental estimates with no controls

B Survey questions

This section includes the questions used to survey participants in the treatment and control groups. The questions are structured by outcomes. First-level numbered bullet points correspond to the questions that constitute the aggregate index for each outcome reported. Each question was used with equal weights for the aggregation. Second-level alphabetically listed bullet points correspond to the answer categories provided in the survey. Some questions (on income and on social networks) are repeated, to clarify that they enter the construction of different outcome measures, as listed in Table A.7. The questionnaire for the survey was registered at https://www.socialscienceregistry.org/trials/6706.

Income security

Source of questions: US-SHED (of Governors of the Federal Reserve System, 2019), EU-SILC (Eurostat, 2019), and own.

1. Overall, which one of the following best describes how well you are managing financially these days:

   (a) Living comfortably
   (b) Doing okay
   (c) Just getting by
   (d) Finding it difficult to get by

2. Compared to 6 months ago before the start of MAGMA, would you say that you are better off, the same, or worse off financially?

3. How much is your monthly income?
   Subsequent question if no response: Can you try to guess in which category your monthly income falls approximately?

   (a) less than 600 €
   (b) 600 - 1,000 €
   (c) 1,000 - 1,400 €
   (d) 1,400 - 1,800 €
   (e) 1,800 - 2,200 €
   (f) 2,200 - 2,600 €
   (g) 2,600 € or more

4. Are you in arrears with a regular payment such as rent, phone bill, loan installment or the like?

5. Are you able to make an unexpected expense such as X for a repair?

Income

Source of questions: US-SHED (of Governors of the Federal Reserve System, 2019), EU-SILC (Eurostat, 2019), and own.

Table A.7: Variable definitions

Variable	Definition	Source
Individual level, economic		
Unemployment (-)	Share of days not employed since Oct 1, 2020.	Admin
Employment	Share of days employed since Oct 1, 2020.	Admin
Income	Current monthly income, divided by 2000.	Survey
Economic security	Normalized index of five item scales of income, financial situation and material deprivation.	Survey
Individual level, other	**Normalized index of:**	
Depression symptoms (-)	A five item depression scale.	Survey
Covid stress (-)	A seven item scale on the impact of the Covid-19 pandemic on stress, mental health, employment and income.	Survey
Social inclusion	Two item social inclusion scale, including the number of new people met in the past month, divided by 10, and the current relationship status.	Survey
Preferences	Twenty-two items for economic preferences, including time preferences, risk preferences, reciprocity, altruism and trust.	Survey
Latent and manifest benefits	A twelve item scale on the latent and manifest benefits of employment that include activity, social interaction, collective purpose, time structure, social recognition, and financial strain.	Survey
Physical health	A fifteen item physical health scale.	Survey
Anxiety symptoms (-)	A seven item anxiety scale.	Survey
Social network	A six item social network scale.	Survey
Well-being scale	A five item mental well-being scale.	Survey
Well-being change	Subjective well-being compared to six months ago.	Survey
Social status	Three item scale on current social status, status compared to the past, and expected future status.	Survey
Number of contacts	The number of meaningful social contacts with respect to work-related and job-search issues in the six past month, divided by 5.	Survey
Subjective health	Two questions on overall health situation and recent changes.	Survey
Municipality level		
Unemployment	Number of unemployed as a share of working age population.	Admin
Long-term unemployment	Number of long-term unemployed (> 1 year) as a share of working age pop.	Admin
Short-term unemployment	Number of short-term unemployed (≤ 1 year) as a share of working age pop.	Admin
Employment	Number of employed as a share of working age pop.	Admin
Inactivity rate	Number of inactive persons of working age as a share of working age pop.	Admin

1. How much is your monthly income?
   Subsequent question if no response: Can you try to guess in which category your monthly income falls approximately?

   (a) less than 600 €
   (b) 600 - 1,000 €
   (c) 1,000 - 1,400 €
   (d) 1,400 - 1,800 €
   (e) 1,800 - 2,200 €
   (f) 2,200 - 2,600 €
   (g) 2,600 € or more

Depression symptoms

Source of questions: Fragile Families Survey (Bendheim-Thoman Center for Research on Child Wellbeing and Center, 2020).

Over the last 2 weeks, how much does the statement describe your feelings?

1. I feel I cannot shake off the blues, even with help from my family and my friends.

2. I feel sad.

3. I feel happy.

4. I feel life is not worth living.

5. I feel depressed.

Covid stress

Source of questions: Conway et al. (2020)

Please tell us whether the following statements apply to you:

1. Thinking about the coronavirus (COVID-19) makes me feel threatened.

2. I am afraid of the coronavirus (COVID-19).

3. I am stressed around other people because I worry I'll catch the coronavirus (COVID-19).

4. The Coronavirus (COVID-19) has impacted me negatively from a financial point of view.

5. I have lost job-related income due to the Coronavirus (COVID-19).

6. I have become depressed because of the Coronavirus (COVID-19).

7. The Coronavirus (COVID-19) outbreak has impacted my psychological health negatively.

Social inclusion

1. How many new people have you met in the past month? Please type the approximate number.

2. Which of the following statements best describes your current relationship status?

    (a) I am romantically involved on a steady basis. We live together.
    (b) I am romantically involved on a steady basis. We live separately.
    (c) I am involved in an on-again and off-again relationship.
    (d) I am not involved in a romantic relationship.

Preferences

Time preferences

1. Would you prefer to receive 100 € today, or 300 € in 1 month?

2. Would you prefer to receive 100 € today, or 300 € in 6 months?

3. Would you prefer to receive 100 € today, or 300 € in 12 months?

4. Suppose you have some money to do business, and you have a choice between 2 options. Which option would you choose?

    (a) A business that can give you a lot of profit every month, but there is a chance you could lose money.
    (b) A business with less profit every month, but you can't lose your money.

5. Imagine you have saved 10,000 € from working at a job. You receive the following offer from a good bank: If you invest with them there is a chance that you will double the money you invested immediately, or lose half of the money you invested. How much do you want to invest? You only have 10,000 €.

Personality traits

6. In general terms, most people can be trusted.

7. You are willing to give up something that is beneficial for you today in order to benefit more from it in the future.

8. When someone does me a favor I am willing to return it.

9. If I am treated very unjustly, I will take revenge at the first occasion, even if there is a cost to do so.

10. I am willing to punish someone who treats me unfairly, even if there may be costs for me.

11. Imagine the following situation: Today you unexpectedly received 1,000 €. How much of this amount would you donate to a good cause?

12. Generally, I am willing to give to a good cause without expecting anything in return.

Risk preferences
We are interested in your risk-taking behavior. Please select how risky you find the respective behavior.

13. Admitting that your tastes are different from those of a friend.

14. Drinking heavily at a social function.

15. Disagreeing with an authority figure on a major issue.

16. Having an affair with a married man/woman.

17. Passing off somebody else's work as your own.

18. Betting a day's income on the outcome of a sporting event.

19. Engaging in unprotected sex.

20. Revealing a friend's secret to someone else.

21. Speaking your mind about an unpopular issue in a meeting at work.

22. Not returning a wallet you found that contains 200 €.

Latent and manifest benefits

Source of questions: Kovacs et al. (2017)

Please select whether you agree or disagree with the following statements:

Activity

1. There is usually not enough spare time in my day.

2. I often have nothing to do.

Social interaction

3. I usually have a lot of opportunities to mix with people.

4. I seldom meet new people.

Collective purpose

5. I rarely feel that I make a meaningful contribution to society.

6. I often feel a valuable part of society.

Time structure

7. My days are usually well organized.

8. I rarely catch up with the things I need to do.

Social recognition

9. I am usually important to my friends.

10. My friends rarely value my company.

Financial strain

11. My income usually allows me to do the things I want.

12. My income usually does not allow me to socialise as often as I like.

Physical health

Source of questions: PHQ-15 somatic symptom scale (Kroenke et al., 1998).

During the past month, how much have you been bothered by any of the following problems?

1. belly

2. back

3. limbs

4. menstruation (asked for women only)

5. sexual intercourse

6. head

7. chest

8. dizziness

9. passed out

10. heart

11. breath

12. intestine

13. digestion

14. sleep

15. energy

Anxiety symptoms

Source of questions: GAD-7 general anxiety disorder (Spitzer et al., 2006).

Over the last 2 weeks, how often have you been bothered by the following problems?

1. Feeling nervous, anxious or on edge.

2. Not being able to stop or control worrying.

3. Worrying too much about different things.

4. Trouble relaxing.

5. Being so restless that it is hard to sit still.

6. Becoming easily annoyed or irritable.

7. Feeling afraid as if something awful might happen.

Social network

Source of questions: Social Network Accuracy Test ("SNAT") from Mobasseri et al. (2022), and own.

1. From time to time, most people discuss work-related and job-search issues with other people. Looking back over the last 6 months, who are the people with whom you discussed work-related and job-search issues with? In the boxes below, please list the FIRST NAME and LAST NAME INITIAL of the people with whom you discuss important matters. E.g., Maria Maier would be recorded as "Maria M." Please list only one name per box. If two people on your list share the same first name and last initial, use numbers to distinguish them (e.g., "Maria M" and "Maria M2"). If you don't discuss important matters with anyone, just leave the fields blank.

2. Below is a list of the names you provided on the prior page. Please answer the questions below about each person you named. How frequently are you in contact with each person?

3. Please select whether you agree or disagree with the following statement. This person is close to you.

4. Please select whether you agree or disagree with the following statement. Compared to other people you know, this person is very valuable to you.

5. Which of the following best describes your relationship to each person?
   (a) Spouse/Significant Other
   (b) Other Family Member
   (c) Friend/Social Contact
   (d) Work/Professional Contact
   (e) Other

6. Please select whether you agree or disagree with the following statements. This contact is someone who looks up to me.

Well-being scale

Source of questions: WHO-5 Well-being Index (WHO, 1998; Topp et al., 2015).

The following statements relate to your well-being in the past two weeks. For each statement, please mark the number that you think best describes how you have felt over the past two weeks. In the last two weeks . . .

1. I was happy and in a good mood.

2. I felt calm and relaxed.

3. I felt energetic and active.

4. I felt fresh and rested when I woke up.

5. My everyday life was full of things that interest me.

Well-being change

Source of questions: Own questionnaire.

1. Compared to 6 months ago before the start of MAGMA, would you say that you are doing better, the same, or worse?

Social status

Source of questions: US-SHED (of Governors of the Federal Reserve System, 2019), and own.

1. Imagine a ladder showing where people stand in society. At the top are the people who are the best off — those who have the most money, the most education, and the most respected jobs. At the bottom are the people who are the worst off — those who have the least money, the least education, and the least respected jobs or no job. Where would you place yourself on this ladder? *(The questionnaire includes an annotated image of a ladder).*

2. Over the past half year did your status in society...

   (a) improve a lot
   (b) improve
   (c) improve a little
   (d) remain as it was
   (e) worsen a little
   (f) worsen
   (g) worsen a lot

3. Thinking of the future, do you expect your status to...

   (a) improve a lot
   (b) improve
   (c) improve a little
   (d) remain as it was
   (e) worsen a little
   (f) worsen
   (g) worsen a lot

Number of contacts

Source of questions: Social Network Accuracy Test ("SNAT") from Mobasseri et al. (2022), and own.

1. From time to time, most people discuss work-related and job-search issues with other people. Looking back over the last 6 months, who are the people with whom you discussed work-related and job-search issues with? In the boxes below, please list the FIRST NAME and LAST NAME INITIAL of the people with whom you discuss important matters. E.g., Maria Maier would be recorded as "Maria M." Please list only one name per box. If two people on your list share the same first name and last initial, use numbers to distinguish them (e.g., "Maria M" and "Maria M2"). If you don't discuss important matters with anyone, just leave the fields blank.

Subjective health

Source of questions: Fragile Families Survey (Bendheim-Thoman Center for Research on Child Wellbeing and Center, 2020), and own.

1. Would you say your health generally is...

    (a) excellent
    (b) very good
    (c) good
    (d) fair
    (e) poor

2. Over the past 6 months, would you say your health generally has...

    (a) improved a lot
    (b) improved
    (c) improved a little
    (d) remained stable
    (e) worsened a little
    (f) worsened
    (g) worsened a lot

C   Program implementation details

C.1   Jobs created

A specific effort was made in the MAGMA project to create productive and meaningful employment that is adequate to the participants' previous jobs and interests. The jobs created were furthermore tailored to the needs of the recipients: Participants who were only available to work part-time, given their other obligations, received a corresponding part-time offer. Participants who could carry out only a limited number of tasks for health reasons similarly received a corresponding offer. Social workers and instructors continued to provide support to employees of the social enterprise as needed. Participants had access to occupational physicians. Those participants that felt ready to work for third-party employers received targeted support and additional counseling to apply and find employment outside of the program.

This section documents the type and number of jobs created by the Marienthal job guarantee scheme between its start in 2020 until November 2022 both in the market and non-market sectors. This includes jobs for individuals who joined the scheme after treatment was assigned. Jobs of eligible individuals who found a job outside of the program are not included in this section. Figure A.8 shows some of the program participants at work.

Jobs created in the non-market sector

- 13 Carpenters

- 7 Tailors

- 6 Gardeners

- 5 Renovation workers

- 3 Registrars

- 3 Cleaners

- 1 Driver

- 1 Assistant counselor

Jobs created in the market sector

- 6 Office clerks

- 2 Warehouse workers

- 2 Assistant electricians

- 1 Care home assistant

- 1 Technical sales assistant

- 1 Facility manager

- 1 Construction worker

- 1 Salesperson

- 1 Construction foreman

- 1 Taxi driver

- 1 Hospitality assistant

- 1 Carpenter

- 1 Marketing assistant

- 1 Municipal building yard worker

- 1 Farm worker

- 1 Nursery worker

- 1 Call centre agent

- 1 Lift technician

- 1 Assistant cook

- 1 Forklift driver

- 1 Accounting clerk

- 1 HR consultant

C.2   Participant views

Werner V., aged 60:   "After more than 600 job applications over three years, my wish for employment proved hopeless. Too old, too expensive, over-qualified, without long-term prospects due to my age, with multiple university degrees seemingly over-qualified for service jobs. . .   many obstacles seemed to exist. The job guarantee proved extremely valuable and useful for me. In cooperation with the municipality and the local museum, I am archiving and documenting the cultural, scientific and economic value of the historical site of Marienthal."

Mohamad A., aged 44:   "I am from Syria and live here in the village with my family–my wife and my 4 children, some of whom are already at school. I recently had a job offer, the company wanted to hire me full time but due to the current Covid situation they changed their minds and offered only a marginal employment contract. By contrast, the job guarantee scheme provides an opportunity to work [full-time], which suits me because we can work every day and learn something new. I'd also like to use the time to improve my German language skills so that I can later catch up on my general qualification for university entrance and perhaps study at a university of applied sciences. I'm grateful for the help the job guarantee offers; it is important for me."

Johann G., aged 65: "I live in Gramatneusiedl and worked for 38 years at a company in the chemical industry that was located in Gramatneusiedl and closed down some years ago. I am now taking part in the job guarantee since 2020, which makes me feel comfortable. Under the scheme, I have worked in renovation and have been able to apply my skills in many ways. With the help of the job guarantee, I can start as a warehouse worker in a recycling company in October 2022."

C.3   Case studies

Public vegetable garden: The local mayor provided $250m^2$ of land which participants cultivate as a sustainable food garden. Herbs and vegetables can be picked free of charge and the garden is open year-round. The first harvest was in summer 2022.

Animal therapy: Two participants are employed with an association providing animal-assisted therapy for children with various conditions (e.g., autism, ADHD, disabilities, learning difficulties). By looking after the association's animals, house, and garden, they have enabled the centre to improve its services and care for more young people.

Funeral urns: During participant Michaela P.'s (paid) internship doing office work at a funeral parlour, her employer noticed her talent for painting. Her internship turned into permanent employment in spring 2022 and, in addition to office work, she now paints urns – a new business venture for the parlour. Before Michaela became unemployed, she worked in a canteen and never thought she would be able to include her hobby in her job.

C.4   Policy impact

MAGMA has received considerable attention. The program has served as the basis for a resolution by the European Parliament (2023) and 23 Million Euros funding for further job guarantee pilots provided by the European Commission. It has received considerable attention from international organizations (ILO, 2021; OECD, 2021, 2023; "UN Special Rapporteur", 2023) and news media; see for instance Romeo (2022); Henderson (2021); Horowitz (2020); ZDF (2022) among others. The latter were published in The New Yorker, Forbes, CNN, ZDF, respectively.

C.5   Parallel qualitative evaluation

A complementary study (Quinz and Flecker, 2022), conducted by researchers at the Department of Sociology at the University of Vienna, is based on a mixed-methods design and qualitative in-depth interviews. Based on their interviews, they classify program participants into three groups or "ideal-types." Group A consists of long-term unemployed participants with underlying health conditions or discontinuous employment trajectories, who had given up the hope to find stable employment outside the program before they participated. Members of Group A are grateful for the opportunity to participate. Group B is eager to find re-employment outside of the program and therefore focused on enhancing their skills. By contrast, Group C had already given up any hope to find re-employment as a consequence of a negative shock in their life, and views the guaranteed job as a form of individual fulfillment before retirement.

Figure A.8: Program participants at work

Moreover, their study identifies the 8 week preparatory training program as essential to prepare job seekers for their jobs under the guaranteed jobs scheme. They conclude that positive consequences of the program are contingent on offering purposeful work to participants that takes their individual health and life situation into account.

C.6 Impact of the Covid-19 pandemic

The implementation and timeline of the job guarantee pilot were not affected by the Covid-19 pandemic, and the pilot continued as planned. The Covid pandemic did not affect the internal validity of any of our three estimation approaches. It might affect the external validity of our findings, however, for extrapolation to contexts with tighter labor markets.

Due to the pandemic, labor market conditions worsened in Lower Austria, including Gramatneusiedl. The trajectory of economic conditions in Gramatneusiedl during the pandemic was similar to that of control municipalities. All individuals included in our treatment and control groups, for the experimental approach, had become unemployed before the pandemic, but their opportunities to find employment might have been impacted by the pandemic. The

same is true for the individuals surveyed in control municipalities.

Entrants into the job guarantee scheme at a later stage included those who became unemployed during the pandemic. These late entrants are not part of our experimental comparison, or the individual-level comparison across municipalities. They do figure in municipality level comparisons using the synthetic control approach, however.

We took precautionary measures during the fieldwork and data collection to guarantee the safety of both the participants and the researchers involved. We have detailed those in the ethics application for our study that was approved by the Departmental Research Ethics Committee at the Department of Economics, University of Oxford.

C.7 Job guarantee versus unconditional income support

The direct individual-level treatment effects that we estimate compare program participants to non-participants who remain in the regular unemployment benefit system. It would be interesting to also compare participants to recipients of the same level of income in the form of an unconditional transfer, without the employment guarantee, in order to separate the effects of the employment guarantee from the effects of the income support. We were not able to directly make such a comparison, but we can provide some indirect evidence.

First, note that non-participants continue to receive unemployment benefits. For our experimental control group, these are on average equal to EUR 890 per month, compared to the average monthly income of program participants of EUR 1280. The monthly income of the control group is thus lower by EUR 390, or 30%, relative to participants. This is not negligible, but unlikely to explain the large effects that we find.

Second, a number of existing studies consider the effect of unconditional cash transfers in rich countries. cf. the review by Marinescu (2018). Most of the studies that they review find no or very little impact of unconditional cash transfers on labor supply. There is some evidence that an unconditional cash transfer can improve health and educational outcomes and decrease criminality, and drug and alcohol use among the most disadvantaged youths. Relatedly, McGuire et al. (2022) review the impact of cash transfers on subjective well-being and mental health in low- and middle-income countries. They find that cash transfers have a small but statistically significant positive effect on both subjective well-being and mental health among recipients. Jaroszewicz et al. (2022), in a recent study of unconditional cash transfers in the US, find no evidence that these transfers had positive impacts on pre-specified survey outcomes, including financial well-being, psychological well-being, cognitive capacity, and physical health.

D   From "Die Arbeitslosen von Marienthal" to our study

Ninety years ago, in 1930, a team of researchers (including Marie Jahoda, Paul Lazarsfeld, and Hans Zeisel) wrote the pathbreaking study "Die Arbeitslosen von Marienthal" (Jahoda et al., 1933). Three years ago, in 2020, a pilot of a guaranteed job program for the long-term unemployed was launched in the very same location, which we evaluate in the present paper ("Employing the unemployed of Marienthal," EUM).

In this note, we take the occasion to reflect on the methodological differences between

these studies. These two studies can be seen as examples of broader developments in social science methodology over the course of the 20th century. We would like to emphasize that this comparison is intended to be descriptive rather than taking a stance regarding the superiority of different methodological approaches.

The study of Jahoda et al. (1933), while pioneering in many ways, also reflected established approaches to empirical social science at the time. Similarly, our study EUM is fairly typical for policy evaluations in current empirical economics (and social science more generally). The methodological state of the art that we follow is reflected in standard graduate curricula in applied econometrics, and has been canonized by the economics Nobel prizes of 2019 ("for their experimental approach to alleviating global poverty") and 2021 ("for his empirical contributions to labour economics" and "for their methodological contributions to the analysis of causal relationships").

There are some commonalities between Jahoda et al. (1933) and EUM. Both are quantitative, empirical studies drawing on a variety of data sources, including self-collected surveys and administrative data.[1] Both are based on similar sample sizes (a few hundred) and geographic scope (Marienthal and Gramatneusiedl, and nearby communities).

Turning to differences between the two studies, there is first the type of question asked. Beyond its rich description, a primary contribution of Jahoda et al. (1933) is a **classification** of the unemployed of Marienthal into 4 types (ungebrochen / resigniert / verzweifelt / apathisch, which translate as unbroken / resigned / desperate / apathetic). By contrast, our focus is on the estimation of **causal effects** of a job guarantee, on both its beneficiaries and the wider community.

The focus on classification was a primary concern of 19th century empirical social science, from Adolphe Quetelet's "social physics" and its focus on types of "average man" through the "scientific" racism of the 19th century in biology and the humanities and its obsession with classifying humanity into distinct "races," to Max Weber's "ideal types." In an afterword to Jahoda et al. (1933), Hans Zeisel justifies the focus on comprehensive description and classification (or "sociography," as the authors call it) out of the need to understand a complicated and unstable capitalist society, for the purpose of rational policy, a need which he argues did not arise in pre-capitalist feudal times, where the classification of individuals was stable and known to everyone. An important role that Zeisel assigns to classification is to make qualitative data amenable to quantitative analysis.[2]

The focus in statistics on causal effects of interventions, on the other hand, traces back to the work of Neyman and Fisher in the 1920s, and has more recently first entered clinical trials in medicine, and has since the 1990s become dominant in empirical economics as well as other social sciences.

Closely related to this focus on classification versus causality is a distinction in the type of event studied. Jahoda et al. (1933) consider the consequences of a **historical macro event** (the Great Depression) – there is not even an attempt at finding a comparison group for their study sample of unemployed workers and their families. In EUM, by contrast, we focus on

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[1] Jahoda et al. (1933) also has an important qualitative component.

[2] Classification of course still plays an important role in some social sciences as well as psychology today.

the **causal effect of a (micro) policy** intervention; much of the methodological effort goes into finding valid comparisons. The notion of causality is intimately related to the ideas of **interventions** and **comparison groups.**

Another related aspect is how these studies deal with **heterogeneity**. Jahoda et al. (1933) engage in an impressive and comprehensive effort to **fully capture** and describe the variability of circumstances and psychological responses of the unemployed of Marienthal. By contrast, no such comprehensive effort is made in EUM. Instead, the methodology of causal inference – pairwise matching, randomization, synthetic controls – is used to ensure that comparison groups for causal inference are the **same on average**.

This different approach to heterogeneity is reflected in another striking difference: In Jahoda et al. (1933), no attempt is made to **quantify statistical uncertainty** – there are no standard errors, confidence intervals, or p-values. The study contains a large number of statistical tables, but there is no sense in which these reported numbers (e.g., shares in the sample belonging to a particular category) are related to an underlying **population object** (e.g., shares in the population belonging to a particular category). There is no distinction between estimate and estimand; the reported numbers are what they are. By contrast, EUM follows modern standard practice in reporting standard errors, confidence intervals, and p-values, and additionally addresses the issue of multiple hypothesis testing. The implicit notion is that there are true causal effects (either in the sample or in a larger population), and that the reported estimates are noisy approximations of these effects.

Again related, a striking feature of Jahoda et al. (1933) is its **methodological open-endedness**, contrasting with the complete **pre-registration** of EUM. Jahoda et al. (1933) use a wide variety of data-sources and personal observations, and enter Marienthal without prespecified questions that they will ask. Instead, they distill abstractions and classifications from the rich empirical material they find. By contrast, recent empirical social science has been greatly impacted by its perceived replication crisis, attributed to selective reporting of findings by authors (p-hacking) and journals (publication bias); cf. Andrews and Kasy (2019). A key remedy that has been promoted in recent years, enshrined in journal policies, and followed by EUM, is the pre-registration of experimental designs and statistical analyses. Such pre-registration prevents selective reporting of findings by publicly tying researchers' hands. The aim is to make findings replicable and independent of researcher identity.

Let us conclude by emphasizing one more arc connecting the two studies over the course of a century. A key contribution of Jahoda et al. (1933) was that they documented the devastating impact of unemployment beyond its material consequences on income – in the form of psychological outlook, attitudes to the future, time structure, social cohesion, etc. This perspective was further developed by Marie Jahoda over the course of her career, and has been operationalized by sociologists of work in the form of survey instruments for the Latent And Manifest Benefits (LAMB) of work. In EUM, these survey instruments were included in our data collection. And, indeed, these are the dimensions where our experimental findings suggest the strongest impact of a job-guarantee on the well-being of beneficiaries, besides the direct economic impacts.

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