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Speaking to those who know it best: Does participation in an experiment explain citizens' attitudes to basic income?

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Abstract

In this study, we analyse the relationship of participation in the Finnish basic income (BI) experiment and people's attitudes towards a BI. The experiment, implemented in 2017–2018, aimed to improve citizens' employment and well-being by reducing the eligibility conditions of basic social benefits and by increasing monetary incentives to find employment. The data on attitudes come from responses to a survey carried out during the experiment. Identical questions were posed to the treatment (receiving the BI) and the control group of the experiment. The contributions of this paper are (1) an estimation of the relationship between participation and opinions on BI, (2) an analysis of the heterogeneity of the relationship and (3) an estimation of the relationship between participation and people's ability to express their opinions on BI. Our findings indicate that participation in the experiment significantly explains people's support for a BI and their ability to express opinions.

Introduction

The concept of basic income (BI) has been widely discussed around the world during the recent years. Generally, BI can be defined as a periodic cash transfer program from the government to all individuals within the political community to secure a minimum standard of living. Compared to existing benefits programs, BI is mostly free from eligibility conditions and from requirements to work or actively search for jobs.

Some proponents of BI believe that a BI would be an efficient way to improve the living conditions of different population groups. Others think that a BI would be an efficient way to ensure a fair income distribution. BI has also been endorsed as a policy that would make working always beneficial for individuals. Other arguments for BI exist, and the critics are just as many and diverse. (For more on the public debate, see De Wispelaere, 2015; Widerquist, 2019.)

In democratic societies, policies are at least partly driven by public opinion, and decision-makers' choices are at least to some extent constrained by the opinions of their constituencies (Burstein, 2003; Majone, 1989; Svallfors, 2012). In this context, the popular opinions on policies are of great interest (eg. Purdy, 1988; De Wispelaere & Noguera, 2012). As Lee puts it, studying the popular support for BI is "… a serious avenue of research into the political feasibility of UBI [*universal basic income*]" (Lee, 2018). Previous studies have been able to provide a more detailed picture of the factors that explain citizens' attitudes towards BI – whether they are related to demographics, socioeconomic factors, people's attitudes, discourses, media frames or political rhetoric (eg. Andersson & Kangas, 2005; Halmetoja et al. 2019; Lee, 2018; Roosma & Van Oorschot, 2020; Stadelmann-Steffen & Dermont, 2019). These studies have increased our understanding of the origins of the support for BI, and of the ability of this support to lead to collective decisions.

Some countries, like Finland, have even gone beyond the public discussions and initiated social experiments with BI. These experiments aim to produce a better understanding of the workings and the effects of BI. However, they also provide the participating citizens with unique opportunities to learn about the policy idea via personal experience. In addition to looking at the public opinion from the perspective of "from opinions to democratic politics," we can now also explore whether BI experiment influenced the opinions of the public. This opposite relation is an important feedback mechanism of a democratic political system where decisions are supposed to reflect collective learning and changes of popular opinion over time (cp. Easton, 1965). A policy idea that enjoys popular support might become more or less desirable when people have experienced it personally. Additionally, personal experiences with BI also serve as another possible explaining factor for the formation of opinions.

Although several BI trials have been conducted, there is still a big gap in the literature on how public opinion would develop after introducing a BI. Earlier opinion surveys on the support for BI have asked about hypothetical policy proposals, with which the respondents have had no experience. Our study aims to shed light on the potential effects of personal experience by utilising data from the Finnish BI experiment that was conducted in 2017–2018.

The Finnish experiment aimed to improve citizens' employment and well-being with a specific BI policy. The tested model of BI aimed to make it easier to find employment by removing the eligibility conditions of basic social benefits and by increasing the monetary incentives to participate in the labour market. The target population of the experiment was unemployed beneficiaries (for the experimental design, see Kangas et al., 2017; Kangas & Pulkka, 2016; for preliminary results on employment, see Hämäläinen et al., 2019 and on well-being, see Blomberg et al., 2019).

The Finnish experiment provides us with a unique opportunity to study the relationship between people having personal experiences with BI and their attitudes towards BI. Utilising the randomised design of the Finnish experiment, this study (1) *examines whether the individuals in the experiment changed their opinions on the desirability of BI (legitimacy) and on BI's ability to make it easier to find employment.* Moreover, we also take a more general point of view and try to (2) *evaluate the relationship between people's participation in a policy experiment and their ability to express their opinions on the tested policy.*

Previous studies on the popularity of BI

Support for BI in Finland

Public opinion is an elusive concept. It is very much affected by contextual factors. Therefore, it can change very rapidly. For example, while after the Chernobyl (1986) and Fukushima Daiichi (2011) nuclear disasters public support for nuclear power suddenly evaporated, the present-day climate discussion has re-established nuclear power as a serious policy option to achieve carbon neutrality. In a similar way, debates about and support for BI go in cycles. While the idea of BI fades away during periods of prosperity and full employment, it returns as an idea for providing a source of security during hard times, rising unemployment, poverty and insecurity of income and livelihood (Halmetoja et al., 2019).

Opinions on BI are also nested in national contexts. For example, Andersson and Kangas (2005) found that in Finland the most critical party (the Conservative Party) had more positive opinions on BI than the most positive party (the Greens) in Sweden. In fact, Finland is the only Nordic country where BI has been discussed as a policy option more seriously. BI has only vaguely been on the political agenda in Denmark, Norway and Sweden.

There are some comparative databases and analyses of cross-national differences in opinions on BI. In 2016, a question on BI was fielded in the European Social Survey. The results show large variations in Europe: the lowest support 34 per cent is found in Norway and the highest 81 per cent in Lithuania. Finland, with its 56 per cent%, is in the middle of these two extremes and close to the European mean of 54 per cent (ESS, 2018). The YouGov Survey (2019) produced rather similar results for Finland: 51 per cent of the Finns regarded BI as a very good or good idea.

Before the start of the Finnish BI experiment, two opinion surveys with different wordings and with different framings were conducted. In the first survey in 2015, the question on BI was posed at a general level: *Is BI a good or a bad idea?* The share of respondents who regarded BI as a very good or a good idea was as high as 69 per cent. The problem with such general questions is that they do not tell people about the possible costs. Therefore, a new survey which listed the necessary increases in the income tax rates was carried out. When the respondents were told what the level of flat-rate tax needed for financing different levels of BI would be, the support radically diminished. A lower BI of €500 with a flat rate tax of 40 per cent got 40 per cent support. A higher €800 BI with a 55 per cent tax rate was supported by only 29 per cent of the respondents (Airio et al., 2016).

In 2017, yet another survey was carried out to estimate the support for BI. In the questionnaire, the level of BI and the most significant non-replaceable benefits were defined. According to the results, support for a BI model with €560 was at 51 per cent, while a full BI model guaranteeing €1,000 a month got only a very modest support of 20 per cent (Pulkka, 2019; see also Crisp, Pulkka, & Rincon on this issue).

What explains the support for BI?

Previous studies have shown that there are several potential explanatory factors for the support for BI. These factors include macro-level variables like the extent of existing welfare policies and safety nets, and the level and coverage of existing social protection schemes (Roosma & Van Oorschot, 2020). Other potential macro-level factors include those that have successfully explained opinions on other social policy alternatives. These might include the industry structure, the developmental stage of the economy, labour market conditions, immigration, income inequality, political culture and ideology and political structures such as parties (cp. Lee, 2018). Other factors to consider are the social policy preferences of the political elites and how these are mediated by the media and political publicity (eg. Campbell, 2002; Kangas et al., 2014). Political frames and the prevailing political discourses could also be possible explaining factors (cp. Chong & Druckman, 2007).

Within a country, socioeconomic and demographic micro-level variables, such as gender, income, socioeconomic status, ideology/party attachment and age, have been identified as important determinants. Low-income earners, unemployed people and those who view unemployment as a societal rather than an individual problem are more positive about BI (Andersson & Kangas, 2002; Airio et al., 2016; Pulkka, 2019; Vlandas, 2019). Other potential explaining factors include the economic insecurity of households and their problems in coping with their current income (see, eg., Lee, 2018).

People's receptivity towards BI is likely also determined by how the BI is designed in relation to the current welfare system (cp. Lee, 2018). For Finland, this factor became visible in the studies by Airio et al. (2016) and Pulkka (2019). In these studies, different definitions and model specifications seemed to result in different levels of popular support. We find this a fruitful line of research when trying to analyse the actual support for and political feasibility of BI. However, it is perhaps not too surprising that policies tend to gather broad support when presented at an abstract level, but when the actual policy design is given and, eg., the costs of introducing the policy take shape, the attitudes towards it become more polarised (cp. Hiilamo & Kangas, 2009). Providing the respondents with more information on the hypothetical policy proposal is one way to approach this problem – exposing them to a real-life experience is another.

Studied outcomes and hypotheses

Opinions on BI

In this paper, our purpose is to explore and estimate the relationship between people's participation in a real-life experiment and (O1) *their support for BI.* We will also investigate (O2) *their opinions on BI's ability to make it easier to find employment.* People's participation in an experiment should provide them with an opportunity to learn about the policy through their own experience and to develop their opinions on it further.

The relationship between this participation and popular support is, however, ambiguous. If the participants experience the policy positively, we can expect that they are more likely to support the policy than their peers who have not experienced it, and vice versa. Based on the design of the Finnish experiment, we know that for many participants the experiment should have provided them with a regular and foreseeable minimum income, reduced the necessity to transact with the employment and benefit officials, increased their work incentives and, if they found employment, even increased their income. Our hypothesis is that because of these design-based features (H1) *participation in a BI experiment should increase the level of support within the target population.* Similarly, (H2) *participation should make participants more convinced that BI makes it easier to find employment.*

There are several reasons for why the relationship between participation and popular support might be different in different subgroups. The main motivation for studying the heterogeneity of this relationship is that previous studies show that a number of different background factors are linked to political attitudes and opinions on policy options (eg. Ervasti et al., 2012; Larsen, 2006; Taylor-Gooby & Leruth, 2018; Vlandas, 2019; Van Oorschot et al., 2017). We will explore to what extent – if any – these factors explain the tendency to switch opinions based on daily-life experiences. This will give us a more detailed picture of how different population groups might react to personal experience with a BI.

Ability to express opinion

It is frequently difficult for respondents to express their opinions on abstract policy choices. Therefore, the share of people who say that they do not know is high in many survey studies. In the ESS, the share of "I do not know" answers was 4 per cent for Finland and 9 per cent for all countries in the sample (ESS, 2018). The YouGov Survey (2019) displayed surprisingly high levels of ignorance in Finland and elsewhere: 18 per cent in Finland, 23 per cent in the United Kingdom, 22 per cent in Sweden and 14 per cent in Germany.

Moreover, the quantity and level of background information and the framing of the question matter (Kangas et al., 2014). Whereas in some cases adding information will diminish the level of ignorance, in other cases more information increases insecurity and leads to cognitive dissonance, a psychological stress that is triggered by new and contradictory information (Festinger, 1957). For example, in a previous survey where the respondents were asked whether BI is a good or a bad idea, 4 per cent of the respondents could not express their opinion. When additional information about taxes was given, this share increased to 6 per cent (Airio et al., 2016).

In this paper, we are interested in the (O3) *ability of individuals to express their opinion.* Participation in the experiment provides much more personal and concrete background information for the respondents to evaluate the BI than any information given in an opinion survey, regardless of how accurate it is. Therefore, our hypothesis is that (H3) *those who have received a BI are better able to express their opinion on BI than those in the control group.*

Design of the Finnish BI experiment

The Finnish BI experiment aimed to improve citizens' employment and well-being by reducing the eligibility conditions of basic social benefits and by increasing the monetary incentives of employment. The experiment was targeted at 25–58-year-old people who had received basic unemployment benefits in November 2016. This means that at the start of the experiment, the participants were basically still unemployed, working part time and receiving adjusted unemployment benefits, fully employed or receiving other social benefits. From the target population of 175,222 people, 2,000 individuals were randomly assigned to the treatment group. The rest of the people formed the control group.

People in the treatment group were paid €560 per month during 2017–2018 by the Social Insurance Institution. This monthly lump-sum was paid unconditionally, without any requirements to work or actively search for a job. The participants were paid the full BI even if they got a job. If a participant applied for unemployment, sickness or parental benefits during the experiment, the amount of the BI was

deducted from these benefits. BI was also taken into account in housing allowance and social assistance calculations. This means that in most cases the monthly income of the beneficiaries did not change compared to their previous situation. However, because no changes were made to the tax system, the monthly income of employed people increased. This created significantly higher monetary incentives for finding employment than the current tax-benefits system.

Data and methods

Utilising the randomised design of the Finnish experiment, this study analyses the relationship between people's participation in the Finnish BI experiment and their opinions on the idea of BI. The data on people's attitudes comprise responses to a one-time survey questionnaire targeted at the treatment group and at the control group of the experiment about 2 months before the experiment was set to finish. This questionnaire included several questions on respondents' labour market status, experiences with BI, societal trust, satisfaction with life, health, cognitive capabilities, personal financial situation and attitudes towards the BI. In this study, we will utilise questions related to respondents' attitudes towards the BI.

Design of the survey study: sampling and data collection methodology

The sample of the study consisted of all 2,000 participants of the experiment and 5,000 randomly chosen people from the original control group. The sampling for the survey study was conducted in September 2018. In October 2018, an additional 600 people were randomly sampled from the control group to compensate for the attrition caused by incomplete register data in the sampling framework. Those who had died during the experiment, those who had a special security status and those who had no telephone number in the customer registry of the Social Insurance Institution were dropped from the sample (551 people). The rest of the chosen people (7,049) were first informed about the study via a paper letter. The research data were collected via computer-assisted telephone interviews. The interviews were conducted in October to December 2018, in four calling rounds.

Attrition

Of the people who were contacted with a letter (7,049 persons), around 23.2 per cent (1,633) were successfully interviewed (see Table 1). The attrition in the study was a result of three different sources: dropping out of the sample (see the above section), refusal to respond or being unreachable after sending the information letter (66) and refusal to respond (2,337) or being unreachable (3,013) when calling by telephone.

The reasons for refusals at the phase of telephone interviews were the following: not able to find a suitable time for the interview (268), not interested (58), not able to participate or too long an interview (19), not participating because of a general principle (18), problem with the language (187), interrupted (23) and no registered reason or other reason (1,764).

Weighing the data to correct for bias caused by attrition

The attrition, and especially the unit non-response, in the experiment might lead to an unrepresentative sample and more importantly to an imbalance between the treatment and the control groups. To analyse this possible bias, we use register data from the sampling framework (benefits register from the year before the experiment) combined with unit-level information on responding to the telephone survey.

Compared to the target population, the respondents differ statistically significantly in the amount of their earnings and unemployment benefits, their age, their mother tongue and in their number of dependent children. In Table 2, we see that, on average, the respondents earned more and received less

Table 1. Attrition and unit non-response in the treatment and control groups.

	All	Treated	Controls
Randomisation of the treatment and control groups	175,222	2,000	173,222
Original random sample for the survey study	7,000	2,000	5,000
Attrition from the original sample	454	–	–
Additional random sample	600	0	600
Attrition from the additional sample	97	0	97
Number of individuals contacted	7,049	1,874	5,175
Number of successful interviews	1,633	586	1,047
Response rate: interviews/contacted (%)	23.2	31.3	20.2

Table 2. Background factors of the respondents in the treatment and control groups and in the target population before the experiment (register data).

Year 2016	Treated	Controls	Difference	p value	Target population
Earnings (€)	2,169 (4,351)	2,057 (4,427)	112	0.62	1,843 (4,185)
Basic unemployment benefits (€)	7,742 (2,870)	7,894 (2,838)	−152	0.30	8,065 (2,906)
Benefit type (%): labour market subsidy	85.2	83.2	2.0	0.30	84.7
Gender (%): female	47.6	48.2	−0.6	0.81	47.5
Age (%):				0.22	
25–34	31.6	28.6	3.0		35.1
34–44	25.4	23.8	1.6		27.1
45–59	43.0	47.5	−4.5		37.8
Spouse (%)	45.2	43.9	1.3	0.62	45.1
Number of dependent children (%):				0.16	
0	61.4	62.5	−1.1		57.4
1	13.5	15.9	−2.4		18.1
2	16.7	13.0	3.7		14.1
3 or more	8.4	8.7	−0.3		10.5
Foreign language (%)	13.3	9.6	3.7	<0.05	25.4
N	586	1,047			175,222

Note: Standard deviations shown in parentheses.

unemployment benefits than the target population. They are also older and more commonly speak Finnish or Swedish as their mother tongue (which are the official languages in Finland). Those who have only one dependent child are under-represented in the respondents.

The imbalance between the treatment and the control groups reduces the credibility of drawing causal conclusions about the relationship between the tested policy and the outcomes. Between the groups, only

Table 3. Background factors of the target population and respondents before and after weighing (register data), %.

Year 2016	Target population		Respondents		Respondents (weighted)	
	Treated	Controls	Treated	Controls	Treated	Controls
Benefit type: labour market subsidy	87.2	84.6	85.2	83.2	86.9	83.6
Gender: female	47.8	47.5	47.6	48.2	48.1	45.6
Age:						
25–34	33.5	35.1	31.6	28.7	33.4	35.8
35–44	27.5	27.1	25.4	23.8	27.3	27.0
45–59	39.1	37.7	43.0	47.5	39.3	37.2
Spouse	35.0	34.1	31.6	33.4	33.7	33.6
Foreign language	24.6	25.4	13.3	9.6	23.1	24.6
N	2,000	173,222	586	1,047	586	1,047
Sum of weights					586	1,047

the mother tongue of the respondents differs statistically (see *p* values in Table 2). The proportion of those who speak languages other than Finnish or Swedish is greater in the treatment group than in the control group. However, there might also be other unobserved characteristics that are not balanced between the groups.

We try to correct the bias caused by attrition in the sample by weighing the data. We calculate the weights by fitting a model that predicts the probability of responding to the survey to the sampling framework. We model the weights separately for the treatment group and for the control group. The covariates in the model are gender, age, spouse, foreign language, type of unemployment benefits and region. The variables represent the situation before the experiment started, and they come from administrative registers. Table 3 shows that weighing the data corrects the distribution of the selected background factors in the right direction.

Methods for analysing the impact of the experiment

In our analysis of the potential impact of the experiment, we utilise weighted distributions of the outcome variables for both the treatment and the control groups, and logistic regressions of the outcome variables. The main outcome of the Finnish experiment was set to be employment. Attitudes towards BI are considered a secondary outcome, and thus the analysis here is more exploratory in its nature.

The logistic regression model that we use in the statistical analysis is

$$ln \frac{\pi}{(1-\pi)} = \alpha + \delta t + \beta_1 x_1 + \ldots + \beta_p x_p,$$

where t is the treatment indicator, $x_1 \ldots x_p$ are the controlling (dummy) variables and π is the probability of the event that we want to investigate (the outcome variable having the value 1).

The controlling factors have been derived from the previous literature. They include gender, age, education, socioeconomic status before entering unemployment, family type and type of municipality. These factors have been successfully used in explaining people's attitudes towards BI in previous studies (see the "Previous studies on the popularity of BI" section). All the covariates are coded as dummy variables in the model.

The covariates are based on self-reported data from the survey. We assume that they are not dependent on the treatment. The regression estimates for covariates are shown in the appendix (Table A1).

Operationalisation of the studied outcomes

The support for BI and the opinions on its ability to make it easier to find employment are measured with the following operationalisation:

> What do you think about the following statements? (Q1) A basic income should be introduced as a permanent part of the social security system in Finland; (Q2) a basic income would reduce the bureaucracy involved in accepting a job offer; (Q3) with a basic income it would make more sense financially to accept a job offer; (Q4) with a basic income it would be easier to start your own business.

The available alternatives for answering each statement are *strongly agree*, *strongly disagree*, *neither agree nor disagree*, *somewhat disagree*, *strongly disagree* and *cannot say*.

In the regressions, strong and modest agreement are coded as 1, and indifference, strong and modest disagreement are coded as 0. "Cannot say" answers are not included. However, we regress the "Cannot say" answers separately in an index that counts the occurrence of "Cannot say" answers for all four statements. In this regression, the value 1 represents one or more "Cannot say" answers, and 0 represents no "Cannot say" answers.

While the meaning of the questions Q1, Q3 and Q4 seem to be pretty clear and straightforward, Q2 may contain some ambiguity. We think that it is not entirely evident which *bureaucracy* is being referred to here. However, in the Finnish public discussions, the system of benefits is often described as too complex, intransparent, unforeseeable and discouraging (*bureaucratic*) for those beneficiaries who would have the option to accept gig-like, part-time or temporary job offers. It is assumed that the level of bureaucracy discourages beneficiaries from accepting those jobs that are available. Thus, we believe that although the meaning of the statement is not entirely clear, we are still able to represent the respondents' opinions on this potential deficit of the system of benefits.

Results

Opinions on BI

The frequency tables (Table 4) indicate that a large majority of the people in the control group were supportive of the idea of introducing a BI as a permanent part of the social security system in Finland (Q1): around 73.7 per cent of these respondents agreed strongly or somewhat. However, in the treatment group the support was even higher, 83.9 per cent. When looking at the regression results (Table 5), we conclude that participation in the experiment increased the odds of agreeing strongly or somewhat by 70 per cent.

The analysis of the relationship in the subgroups (Table 6) gives some indication that for women, older people, those with lower education, those who were working before unemployment, those living with children and those who live in urban or rural areas, BI was a stronger explaining factor than for those in the reference groups.[1] However, the confidence intervals of the odds ratio estimates for the subgroups overlap with the confidence interval of the estimate for all (1.25, 2.34), leading to the interpretation that the differences between the groups are not statistically significant. The low number

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[1]The model parameters have been estimated for each subgroup separately using the same model specification as when estimating for all.

Table 4. Frequencies: attitudes to BI and "Cannot say" index (weighted).

	Treated	Controls
Q1: A basic income should be introduced as a permanent part of the social security system in Finland, %		
Strongly agree	65.2	48.5
Somewhat agree	18.7	25.2
Neither agree nor disagree	4.5	6.2
Somewhat disagree	3.3	5.9
Strongly disagree	3.2	4.1
Cannot say	5.1	10.2
Total	100.0	100.0
Q2: A basic income would reduce the bureaucracy involved in accepting a job offer, %		
Strongly agree	58.2	36.5
Somewhat agree	23.0	32.8
Neither agree nor disagree	5.3	6.8
Somewhat disagree	5.2	7.3
Strongly disagree	3.5	4.2
Cannot say	4.9	12.3
Total	100.0	100.0
Q3: With a basic income, it would make more sense financially to accept a job offer, %		
Strongly agree	69.1	42.0
Somewhat agree	19.8	31.7
Neither agree nor disagree	2.8	6.0
Somewhat disagree	2.1	5.2
Strongly disagree	2.7	3.4
Cannot say	3.5	11.6
Total	100.0	100.0
Q4: With a basic income, it would be easier to start your own business, %		
Strongly agree	51.9	40.0
Somewhat agree	19.9	21.7
Neither agree nor disagree	5.4	6.6
Somewhat disagree	5.0	5.2
Strongly disagree	4.3	9.2
Cannot say	13.6	17.2
Total	100.0	100.0

Table 4. *Continued*

	Treated	Controls
I1: Number of "Cannot say" answers in opinion statements, %		
0	82.5	75.6
1	11.3	11.5
2	4.0	4.8
3	1.1	2.4
4	1.1	5.8
Total	100.0	100.0
N	586	1,047

Table 5. Regression coefficients for participation: attitudes to BI and "Cannot say" index (weighted).

	Estimate	SE	*p* value	Odds ratio	Lower 95% CI	Upper 95% CI	*N* (treated)
Q1 (agree strongly or somewhat)	0.53	0.16	<0.001	1.70	1.25	2.34	562
Q2 (agree strongly or somewhat)	0.41	0.15	<0.01	1.51	1.13	2.02	563
Q3 (agree strongly or somewhat)	0.40	0.15	<0.01	1.50	1.13	2.00	569
Q4 (agree strongly or somewhat)	0.52	0.16	<0.001	1.68	1.24	2.30	512
I1 (one or more "Cannot say" answers)	−0.45	0.13	<0.001	0.64	0.49	0.82	586

Note: In the models, gender, age, education, socioeconomic status, family type and group of municipality are controlled.
Abbreviations: CI, confidence interval; SE, standard error.

of observations in the subgroups results in inaccurate estimates and in a reduced ability to identify possible differences between the groups.

The story is more or less the same when we look at people's opinions on the ability of BI to make it easier to find employment (Table 4). A majority of the people in the control group agreed strongly or somewhat that (Q2) a BI would reduce the bureaucracy involved in accepting a job offer (69.3 per cent), (Q3) with a BI it would make more sense financially to accept a job offer (73.7 per cent) and (Q4) with a BI it would be easier to start your own business (61.7 per cent). In the control group, the agreement rate is lowest for the question that concerns starting one's own businesses. Here, the proportion of "Cannot say" answers is also the greatest.

The regression results (Table 5) show that the difference in the odds of agreeing strongly or somewhat between the treatment and control groups is statistically significant for all three questions. So, participation in the experiment seems to have increased people's positive perceptions about the BI's ability to make it easier to find employment. This is in line with our hypotheses and the fact that, by design, the tested model increased the monetary incentives for work, provided income security at times of uncertain and irregular income and reduced the conditions and requirements of basic social security.

Interestingly, the relationship between participation and people's opinions on the ability of a BI to facilitate starting one's own businesses is the strongest. The logical interpretation is that the participants changed or learned to express their opinions most strongly in this dimension because of the experiment, once again bearing in mind the inaccuracy of our estimates. Here we should remember, however, that we were not able to control for the original attitudes and other unobserved characteristics of the respondents when correcting the possible bias caused by the unit non-response. It is possible that those with a better

Table 6. Analysis of heterogeneity: legitimacy of BI (Q1, weighted).

	Estimate	SE	*p* value	Odds ratio	Lower 95% CI	Upper 95% CI	*N* (treated)
All	0.53	0.16	<0.001	1.70	1.25	2.34	562
Gender							
Male	0.30	0.22	0.16	1.35	0.89	2.09	297
Female	0.79	0.24	<0.01	2.20	1.38	3.60	265
Age							
25–34	0.31	0.27	0.24	1.36	0.82	2.33	179
35–44	0.71	0.31	<0.05	2.04	1.13	3.85	141
45–59	0.69	0.27	<0.05	2.00	1.19	3.47	242
Education							
Basic	1.51	0.65	<0.05	4.53	1.46	19.96	93
Secondary	0.42	0.23	0.07	1.52	0.98	2.39	266
Tertiary	0.43	0.25	0.09	1.53	0.95	2.54	203
Socioeconomic status							
Working	1.03	0.36	<0.01	2.79	1.41	5.96	121
Studying	0.21	0.39	0.59	1.24	0.59	2.76	76
Unemployed	0.63	0.26	<0.05	1.88	1.15	3.18	254
Other	0.24	0.35	0.49	1.27	0.65	2.55	111
Family type							
Only adults	0.46	0.20	<0.05	1.59	1.08	2.37	375
With children	0.60	0.27	<0.05	1.82	1.08	3.14	187
Municipality group							
Urban	0.54	0.19	<0.01	1.71	1.19	2.49	425
Middle	0.34	0.39	0.38	1.41	0.67	3.12	74
Rural	0.55	0.61	0.37	1.73	0.55	6.37	56

Note: In the models, gender, age, education, socioeconomic status, family type and group of municipalities are controlled. The models have been estimated for each variable separately.
Abbreviations: CI, confidence interval; SE, standard error.

understanding or more optimistic perceptions on entrepreneurship were over-represented in the treatment group, causing a selection bias.

Ability to express one's opinion

In addition to people's opinions on BI, our interests concern the learning process of the participants in the experiment. Are individuals more able to state their opinions on BI if they have had a personal real-life experience with it? In looking at the individual questions on BI (Table 4), we observe that the participants have less difficulty forming and expressing their opinions than those in the control group. In the control group, the proportion of "Cannot say" answers is over 10 per cent in all four questions.

The question related to starting one's own businesses has the highest proportion of "Cannot say" responses (17.2 per cent). However, this is not surprising because the proportion of individuals with any experience in entrepreneurship is rather low in the target population.

Our "Cannot say" index is a simple sum of individual "Cannot say" answers. From the frequencies, we find out that the proportion of those who have zero "Cannot say" answers is significantly higher in the treatment group than in the control group. There is also a large drop in the proportion of those who cannot say anything on all four questions. Based on our regression estimates (Table 5), the odds of not being able to provide an opinion on any of the four statements is 45 per cent lower in the treatment group than in the control group.

Finally, it is also worth looking at the frequency tables for each question and to note that in addition to increasing the proportion of those who agree on the desirability of BI and the ability of BI to make it easier to find employment, the experiment seems to have strengthened people's opinions in general. For each of the questions, when looking only at the proportions of those who agree strongly or somewhat, the experiment seems to have shifted the imbalance in favour of agreeing strongly.

Conclusions

The findings of the study indicate that participation in the Finnish BI experiment has a relatively significant role in explaining participants' support for a BI. The magnitude of the association is as strong as it is for other known determinants of BI's popular support. Participation also explains the probability to agree that a BI would make it easier to find employment by reducing bureaucracy, increasing work incentives and making it easier to start up one's own business. While the results should be understood as being context specific and related to the BI model that was tested in the Finnish experiment, they indicate that the participants had developed a perception of the BI in accordance with what was actually tested. In the experiment, the BI by design increased the monetary incentives for work, provided income security at times of uncertain and irregular income and reduced the conditions and requirements of basic social security.

The study also shows that participation in the experiment explains the ability of individuals to form and express their opinions on the policy. The proportion of those who could not state their opinion on different statements about the BI was significantly lower in the treatment group than in the control group.

It would be tempting to try to generalise the results to a scenario where a BI was introduced for the whole population. However, when thinking about the external validity of the results, we should keep in mind that the experiment was targeted at people who were originally in a difficult labour market position (eg. long-term unemployed). Other population groups would not necessarily experience it as such a big improvement compared to the current situation, eg., because those in the middle-income groups would likely have to pay back their BI in taxes and they might even face an additional tax burden to fund the policy.

Regarding causal inference, additional caution should be kept in mind. The original attitudes of the respondents could not be controlled when correcting the possible bias caused by the unit non-response. As discussed in the data section, the response rate of the study was relatively low and imbalanced between the research groups. The treatment and the control groups might have been imbalanced in their attitudes and other unobserved characteristics that might explain their opinions on BI, limiting our ability to make causal conclusions about the effects of BI.

It is also worth asking whether the study measured the same things for the treatment and the control groups. Those who were treated might have been evaluating a different model of BI than those who were not treated. Whereas the people in the control group may have had their own BI model in their minds, the treatment group had a specific model, ie., the experimental model, on which to base their judgements. However, this is not necessarily a problem in the analysis, if we define the studied outcome to include both the support for a BI and the level of awareness of what the individuals are evaluating.

As a further study, different rationales for why individuals in the treatment group are more favourable to the BI than the controls could be explored. The participants opinions on BI could be related to other experiences about employment, health, possibility to cope on the current income and encounters with bureaucracy. Experiences and perceptions of autonomy and self-determination might also be related to people's opinions on BI. Finally, the register data on people's income could also be used to analyse the potential latent factors behind the relationship between this experimental policy and the participants' opinions.

The popular support for a BI is likely determined by how the BI is designed in relation to the current welfare system (Lee, 2018; Pulkka, 2019). One central question is which existing income transfer programs the BI would replace. Another less explored question is the funding model of the BI, and especially the system of income taxation that comes with it. Instead of making experiments, one alternative way to get a more accurate picture of the popular support would be to try to increase the respondents' understanding of the design of BI, eg., by providing the respondents with additional information, case stories, vignettes or visualisations that illustrate the BI's effects on income distribution, before asking about their attitudes.

In order to ensure a well-functioning democracy, citizens should be able to express their opinions on the issues that are collectively decided. For example, if 40 per cent of the voters say that they do not know their opinion on the Brexit deal (cp. PanelBase, 2019), it is hardly fair to say that collective decisions reflect the will of the people. Experiments are an efficient way to provide important information on the effects of policies for the decision-makers. Interestingly, they also seem to serve as a means to help individuals to form their opinions.

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APPENDIX

In Table A1, we find statistically significant coefficients for education and the group of municipalities. In the data, higher education seems to be linked to lower support for BI and residency in urban and rural municipalities seems be linked to higher support for BI compared to residency in the middle group.

Table A1. Coefficients of the logistic regression on Q1, legitimacy of BI (weighted).

	Estimate	SE	*p* value	Odds ratio	Lower 95% CI	Upper 95% CI	Reference category
Intercept	2.07	0.31	<0.001	7.94	4.41	14.71	
Treated (vs. controls)	0.53	0.16	<0.001	1.70	1.25	2.34	Controls
Gender: male (vs. female)	−0.03	0.15	0.87	0.98	0.72	1.31	Female
Age: 35–44 (vs. 25–34)	−0.04	0.19	0.83	0.96	0.67	1.39	25–34
Age: 45–59 (vs. 25–34)	0.11	0.18	0.56	1.11	0.78	1.59	25–34
Education: secondary	−0.51	0.24	<0.05	0.60	0.37	0.94	Primary
Education: tertiary	−0.73	0.24	<0.01	0.48	0.30	0.77	Primary
Socioeconomic status: studying	0.20	0.23	0.40	1.22	0.77	1.93	Working
Socioeconomic status: unemployed	0.13	0.19	0.48	1.14	0.79	1.64	Working
Socioeconomic status: other	−0.03	0.22	0.91	0.97	0.63	1.50	Working
Type of household: with children	−0.17	0.16	0.29	0.84	0.61	1.16	Only adults
Municipality group: middle	−0.57	0.20	<0.01	0.57	0.39	0.84	Urban
Municipality group: rural	0.07	0.27	0.78	1.08	0.65	1.87	Urban
N	1,514						

Abbreviations: CI, confidence interval; SE, standard error.