Jnl. Soc. Pol. (2024), 53, 1, 167–188 doi:10.1017/S0047279422000575

Why Do Poor People Not Take up Benefits? Evidence from the Barcelona's B-MINCOME Experiment

BRU LAÍN* **AND ALBERT JULIÀ****

*University of Barcelona, Department of Sociology, Faculty of Economics and Business Av. Diagonal 690, 08034 Barcelona, Spain
email: bru.lain@ub.edu
**University of Barcelona, Department of Sociology, Faculty of Economics and Business Av. Diagonal 690, 08034 Barcelona, Spain
email: albert.julia.cano@ub.edu
Corresponding author, email: bru.lain@ub.edu

Abstract

Non-take-up, i.e. individuals not applying for a benefit they are eligible for, is a widespread problem limiting the reach of welfare and protection systems. This paper seeks to understand it by means of a theoretical framework comprising two levels of analysis: the claimants' individual characteristics in relation to the information barriers they face, and the administrative logic and functioning regarding the communications strategy used by public institutions. To test the hypotheses of these two levels of analysis, the paper analyses the B-MINCOME pilot scheme, a cash transfer programme implemented in the city of Barcelona between 2017 and 2019. Findings indicate that, although claimants' characteristics may play a significant role, the administrative functioning and the communications strategy are fundamental in determining take-up rates. The conclusions briefly address some of the technical and moral concerns raised by non-take-up.

Keywords: non-take-up; B-MINCOME; conditional benefits; individual characteristics; communications strategy

Introduction

Low coverage rates of conditional and means-tested benefits negatively affect social protection systems (EESC, 2013). One of the factors behind them is non-take-up, i.e. potential claimants not applying for a benefit despite being eligible for it as meeting all requirements. Merely having policies in place is not enough; they must be thoroughly implemented and reach the neediest groups (EMIN, 2014).

The magnitude of the problem is alarming. In the United States, the *Earned Income Tax Credit* reports a meagre take-up rate of 25 per cent, amounting to 6,7 million non-claimants each year (Bhargava and Manoli, 2015). In OECD countries, non-take-up rates for social assistance programmes range between

40 and 80 per cent (Hernanz *et al.*, 2004: 4) and stand at 50 per cent for means-tested benefits across all European countries (Matsaganis *et al.*, 2008: 12). In Finland, those not claiming assistance benefits stands at between 40 and 50 per cent (Bargain *et al.*, 2012), while the French *Revenue de Solidarité Active* is just taken up by 36 per cent of its potential recipients (Domingo and Pucci, 2014: 119). In Spain, the *Rentas Mínimas de Inserción* do not even reach 10 per cent of their target population (Ayala *et al.*, 2021). Other research reveals even worse figures across Europe (Eurofound, 2014: 20). The concerns this raises for national and regional institutions is evident. According to the European Commission, "Non-take-up is a matter of concern and needs to be carefully monitored" (EC, 2013: 89). Similarly, the European Economic and Social Committee fears that most "minimum income schemes [. . .] fall short of alleviating poverty" and is thus "concerned that non-take-up of such schemes tests their effectiveness still further" (EESC, 2013: 9).

Beyond these concerns, any attempt to improve the performance of cash transfer policies requires an understanding of why people do not claim them. This paper addresses this phenomenon and aims to pinpoint some of its possible causal factors. To do so, it analyses the B-MINCOME pilot scheme, an experimental cash transfer programme implemented in Barcelona from 2017 to 2019. The paper presents the main factors underpinning non-take-up highlighted in the literature to analyse them in light of this pilot scheme. The data collected allows us to study and compare the two main dimensions of analysis the literature usually identifies as most relevant: i) the individual characteristics of the applicants in relation to the information barriers they face, and ii) the administrative and institutional functioning in terms of communications strategies. Which of these two dimensions is more relevant to addressing the issue of non-take-up? Responding to this question may be of help for other similar programmes, and is therefore the central goal of this paper.

The first section reviews the most relevant factors affecting non-take-up according to the literature and defines the hypotheses to test. The second offers a summary of this pilot scheme and the data used. Based on different logistic regression models, the third section compares the variables and hypotheses determining the likelihood of not applying for this benefit. The findings in section four reveal that beyond potential claimants' individual characteristics, the administrative functioning and communications strategy employed by public institutions are key in explaining why an individual may or may not apply for the B-MINCOME benefit. Conclusions suggest that the problem of non-take-up does not only affect the efficiency and effectiveness of this kind of benefits, but also raises moral concerns on how social protection systems perform in relation to the most vulnerable individuals and social groups.

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

Why do people not take up a benefit?

Reducing the number of people not applying for a benefit "requires more than just making them eligible" (Heckman and Smith, 2004: 287). Attention must therefore be given to factors that beyond establishing *de jure* eligibility requirements lead to *de facto* applications for a benefit. In the 1970s, scholars mostly looked at ignorance, stigma, and administrative complexities. During the following decade explicative models of decision-making processes gained importance, first focusing on econometric explanations based on gender, age, education, or income; and second prioritizing a more psychological approach considering the claimants' attitudes and beliefs (Huby and Whyley 1996: 3). Based on the literature, the main factors behind non-take-up can be classified according to two levels of analysis.

1) Individual and claimant level

Application rates are usually explained on the basis of two premises. First, the applicant's sociodemographic variables (education, gender, age, origin, household composition, etc.) in combination with socioeconomic ones (income, receiving other benefits, financial assets, etc.). In the United States, black individuals with low levels of education from poor families and with no professional experience show lower-than-average application rates (Heckman and Smith, 2004: 282). In Spain, 55.89 per cent of homeless people do not apply for income support (Khalifi *et al.*, 2016: 290). In sum, "many groups of special interest to policymakers [. . .] have high rates of eligibility but low probabilities of program participation" (Heckman and Smith, 2004: 246).

The second premise refers to the observed behaviour that is attributed to certain mechanisms of instrumental and parametric rationality (Kerr, 1982; Kleven and Kopczuk, 2011). This explanation emphasises the private transaction costs incurred by an individual making rational choices between the expected utility of a benefit and the effort required to apply for it (Fuchs *et al.*, 2020). These costs "may be quite important, especially [. . .] when access to the program is conditioned" (Coady, Crosh and Hoddinott, 2004: 8). Among these costs, "there is strong evidence that information barriers play a major role in determining differences in program participation rates" (Heckman and Smith, 2004: 286). People may be deterred from claiming a benefit because these information barriers entail excessively high personal costs. First, the fact that one is aware of the existence of the benefit, of the eligibility requirements and of the application process (Ranci and Arlotti, 2019: 575; Eurofound, 2014: 30). Second, the shame (Walker *et al.*, 2013), the stigma a person experiences (Currie, 2004: 11), or the perception of stigmatization they feel when others devalue their identity (Baumberg, 2016: 183) may impose insurmountable costs. Third, the level of participation in social or community networks based on ethnicity, language or affinity reduces these costs as distributing the

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

information about the benefit and its application procedure (Currie, 2004: 7; Mäkinen, 2018: 13). Finally, the household composition: single-person households usually report lower rates of take-up because the information and opportunity costs are very high as being assumed by a single person (Eurofound, 2014; Tempelman and Houkes-Hommes, 2016). These costs are lower in households with several members as they can be shared. The presence of minors increases the likelihood of claiming a benefit due to the higher perceived need of parents when the welfare of children is considered (Hernanz *et al*., 2004), particularly in single-mother households (Brady, 2018).

The literature attributes significant explanatory weight to these information costs, especially when correlated with variables such as education (associated with reading and writing skills), place of origin (related to proficiency in the language and knowledge of the legal framework and other benefits), household composition (with multiple members and minors), and place of residence (associated with stigma or networks). The weight of these individual sociodemographic variables tends to increase when controlled by two further economic factors: the family's income (Gustafsson, 2002; Huby and Whyley, 1996) and being in receipt of other benefits (Blundell, Fry and Walker, 1988; Finn and Goodship, 2014). Given the profile of individuals applying for the B-MINCOME benefit, these variables seem particularly relevant in explaining the pilot's take-up rates. Accordingly, it can be predicted that:

Hypothesis 1: *the more information barriers caused by sociodemographic and socioeconomic characteristics, the less likely take-up for the benefit became.*

However, these kinds of explanations tend to omit the fact that the lack of information – and thus the bias in calculating cost-benefit trade-offs – depends to a great extent on factors beyond the rational individual scope and particular characteristics (Buckland and Dawson, 1989; van Oorschot, 1995). Informational barriers "do not fully account for the low participation rate" (Heckman and Smith, 2004: 245-6). Effectively, "People may not claim even where perfectly informed: imperfect information is not the only reason for non-take-up" (Atkinson, 1995: 252). Hence, other non-individual factors must exist.

2) Administrative and institutional level

The administrative logic and the functioning of the institutions do also have an effect (Deacon and Bradshaw, 1983; van Oorschot, 1996). A key element to study this is the communications strategy employed by the public institutions (Fuchs, 2007: 7) when informing about the existence of a benefit (Craig, 1991; Chetty, Friedman and Saez, 2013) and its application process (Mäkinen, 2018; Eurofound, 2014). Regarding the former, the effect of a publicity campaign will

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

differ depending on whether it is merely publicised on an institutional website, or through more direct methods such as letters, phone calls or face-to-face contact with social workers (Daponte, Sanders and Taylor, 1999; Warin, 2018). The same occurs with the application process. A long or complex process may increase opportunity costs due to the time or travel requirements necessary to complete the application form (Anne and Chareyron, 2017). Likewise, processes requiring a large number of supporting certificates, deeds, or records to accredit the applicant's eligibility present another obstacle (Currie, 2004: 11). Digital tools and *online administration* offer many advantages, but the digital divide remains an obstacle for the most vulnerable populations (Finn and Goodship, 2014: 64).

As detailed below, the communications strategy of the B-MINCOME consisted of i) sending out letters to all potential applicants with a detailed explanation and the application form, and ii) holding 400 information sessions where they were invited by phone and mail. This communications strategy seems fundamental, as observed in similar experiments (Betkó *et al.*, 2019). The fact that some potential claimants' cohabitants also received the letter of invitation (due to also being social service users and meeting all the requirements) may have encouraged them to regard the project as important and thus to increase the pilot's take-up rate. As described below, the number of application forms collected during the information sessions in comparison with those received by post would also demonstrate the impact of these sessions. This leads us to assume that:

Hypothesis 2: *receiving more than one letter of invitation per household increased the individuals' likelihood of taking-up the benefit.*

Hypothesis 3: *attending an information session dramatically increases the likelihood of taking-up the benefit.*

There are some additional variables related to how a benefit is implemented that should be considered. First, the fact that the application processes or its requirements may not be sufficiently detailed can lead to a certain "administrative discretion" (Eurofound, 2014: 35, Mäkinen, 2018: 21), especially under conditions of minimal institutional accountability (Brodkin, 1997: 3). When the implementation favours professional practice over formal procedures, the task of social workers becomes "a matter of assessment [. . .] of users' behaviours, where this behaviour and no longer only users' conditions and/or status, determines their eligibility" (Warin, 2018: 64). Administrative discretion undoubtedly affects take-up rates (Elster, 1988: 60). Second, the duration and the amount of a benefit are also crucial, since a low take-up rate is expected when it is short-lived and low value (Riphahn, 2001; Whelan, 2010; Domingo and

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

Pucci, 2014). Third, the length of time a benefit has been available and the changes it may have undergone are also important (Mäkinen, 2018: 13; Hernanz *et al.*, 2004: 17). High take-up rates are observed when it is operational over a long period and has experienced few changes, but lower when it is implemented for the first time or its design is altered (Ranci and Arlotti, 2019). Finally, there are always people or certain social groups who tend to be excluded by default. Nomadic or irregular populations may lack a postal address or bank account which make proving settled status, income or family ties more difficult and further hinder their eligibility (EMIN, 2014; ESPN, 2016). "Hard-to-reach social groups – such as the homeless, people with a disability or mental illness, or immigrants – may still fall through the cracks of the system" (De Wispelaere and Stirton, 2011: 117).

Nevertheless, in the case of the B-MINCOME pilot schema, stringent implementation rules and clear application process were exhaustively explained from the outset. Being newly launched and having a temporary nature may have reduced its potential claimants' confidence in the program, and then have reduced their likelihood to apply. However, considering the potential claimants' profile, the incentives of applying (24 months of duration and clearly defined amount of the benefit[1], the formative and relational opportunities offered by the social policies, the permanent-tailored advice of social workers, etc.) seem attractive enough to exceed their possible lack of trust on such a programme. Furthermore, the number of potential claimants who may have been excluded was deemed irrelevant considering the exhaustive work carried out by the social services[2]. In sum, it seems reasonable to assume that the possible aggregate effect of these four additional variables had a negligible impact, and therefore they are not considered in our statistical analysis.

Barcelona's B-MINCOME experiment

B-MINCOME was an experimental project co-funded by the EU's Urban Innovative Actions programme, implemented by Barcelona City Council's Social Rights Area in collaboration with five universities and research centres (Laín, Riutort and Julià, 2019; Laín and Torrens, 2019). Its goal was to reduce poverty and social exclusion rates in the ten poorest neighbourhoods of the city. It aimed to test the effectiveness and efficiency of combining an economic benefit with active social-inclusion policies. From November 2017 to November 2019 and based on a randomised control trial, 1,000 individuals from a universe of 4,824 were randomly selected and assigned to ten treatment groups (based on whether the benefit was conditional or unconditional on participation in active policies) while a further 500 individuals were also selected as a control group. The benefit of up to € 1,676 was granted individually although it was calculated according to the beneficiaries' household income, members, living costs (food,

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

clothing, basic suppliers, etc.) and housing costs (rent or mortgage). The benefit was paid monthly into a credit card with no maintenance costs and it could be accumulated, so permitting beneficiaries to use it as they pleased (withdrawing money or paying with the same credit card).

Participation only required the completion of an application form which then entered a draw to select the final participants and to assign them into the different treatment groups. Only those individuals not exceeding the severe poverty threshold (below 40 per cent of the median equivalent income) were able to participate. Eligibility requirements were: 1) to be registered as a resident of Barcelona for two years and living in the treatment area; 2) to be a user of social services; 3) the participant (or one member of their household) must be aged between 25 and 60; 4) to accept the assigned group and the type of participation; 5) to authorise the city council to obtain personal information and commit to completing the assessment surveys; and 6) that the joint assets of the participants' household did not exceed four times the value of their estimated benefit.

The study was carried out by a consortium made up of the Catalan Institute for the Evaluation of Public Policies (IVALUA), the Barcelona Institute of Regional and Metropolitan Studies (IERMB), the Youth Foundation, the Institute of Environmental Science and Technology (ICTA) and the Institute of Government and Public Policy (IGOP) from the Autonomous University of Barcelona, the Polytechnic University of Catalonia, and a municipal team including six social workers. An Advisory Board of thirty professional, academic and social institutions was created to follow up the design and implementation. Ethical clearance was provided by an Ethic Committee made up of members of the City council, juridical services, and other public servants with ethical expertise in the public administration, in charge of assisting participants' complaints and guiding the consortium in any potentially ethically-conflicting scenario[3].

Data and method

Sample

Analyses are based on records of social services users which provided information on their sociodemographic characteristics, household composition, addresses and telephone numbers for contact purposes. The study sample comprised 4,824 potential candidates meeting all eligibility criteria. They were firstly informed of the pilot scheme and its application process through postal letters inviting them to attend one of the 400 information sessions held in their neighbourhoods. 2,525 applications (52.34 per cent of all candidates) were collected, of which 2,039 (80.8 per cent) were personally delivered during the sessions, and 486 (19.2 per cent) were later received by post. Application forms were then refined by means of the interoperable records of public administrations to verify

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

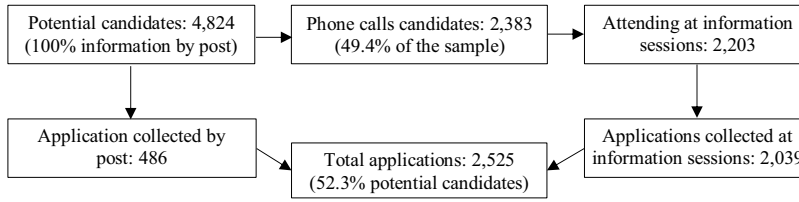

FIGURE 1. Diagram of eligible candidates sample evolution

the accuracy of the data provided and to ensure that there were no duplicate applications nor more than one per household since, in some cases, various members of the same household were identified as eligible.

During the various rounds of phone calls, 2,383 (49.4 per cent) of candidates were finally contacted[4]: 91.2 per cent said they were about to attend the information sessions, 5.8 per cent were not interested in participating, and 3 per cent had already sent the application form. 2,203 (92.4 per cent) of contacted candidates attended the information sessions. Thus, a total of 45.7 per cent of the total 4,824 candidates who were sent a letter finally attended the face-to-face sessions where the project was described, all questions answered, and support provided to anyone who needed help to complete the application form. These sessions lasted approximately 45 minutes, with an average of 10 individuals in each session, involving around 80 professionals, social workers and social scientists. The difference between those who attended and who did not had a remarkable impact, since 92.3 per cent of the former went on to apply for the benefit (Figure 1).

Variables and method

In order to analyse the factors affecting the likelihood of take-up, a hierarchical logistic regression was designed with different models to observe the specific and cumulative incidence of each of the variables presented in the theoretical framework in the first section of this paper. The sociodemographic variables identified at the individual analytical level were entered in model one (M1) including the educational level of the letter addressee (no qualifications; level 1 = compulsory secondary education not completed; level 2 = compulsory secondary education; level 3 = higher secondary education or professional training; level 4 = university); gender (female; male); age; country of origin (Spain; foreign); number of cohabitants (one; two; three; four; five or more; 'no information'[5]); if there were children under 16 in the household; and the neighbourhood of residence sorted by its level of average income in 2017 (with the highest one, € 29,881 taken as a reference in comparison with € 21,604 of the lowest one).

The socioeconomic variables identified in the first level of our theoretical framework were added in model two (M2). First, we incorporated the claimant's household income based on their 2017 personal income tax return. As we did

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

TABLE 1. Descriptive statistics of sociodemographic and economic variables

	%		%	Mean
		Age		45.8
Maximum household level of studies		**Neighbourhood**		
No studies	26.8	N1	13.0	
Level 1	9.8	N2	8.5	
Level 2	36.7	N3	3.7	
Level 3	20.3	N4	5.1	
Level 4	6.5	N5	14.8	
Sex		N6	2.0	
Women	65.3	N7	8.7	
Men	34.7	N8	20.8	
Country of origin m. l.		N9	9.5	
Spain	56.4	N10	13.8	
Foreign	43.6	**Household income (€/year)**		11,510.06
Household members		**Level of public benefits**		1,219.49
One	3.5	**Municipal benefit (< 16 years)**		
Two	14.4	Yes	33.8	
Three	20.9	No	66.2	
Four	20.6	**More than one letter**		
Five or more	38.0	Yes	45.2	
Missing info	2.6	No	54.8	
Children < 16 years old		**Face-to-face information session**		
Yes	55.2	Yes	45.7	
No	44.8	No	54.3	
N	4,824			

not have this information in 34.7 per cent of the cases, we conducted a multiple imputation to complete the missing values based on the other values entered in the model. Average income per claimant's household was € 11,510 (Table 1). We also added the annual income received from other public benefits and the variable of having received the benefit for children under 16 available in Barcelona since 2013. These two economic variables captured the relationship between formal inclusion in the public benefit system and the value of the benefits received, with the individual likelihood of taking-up of the B-MINCOME benefit. Thus, M1 and M2 assess hypothesis 1 as they describe the impact of individual factors which may entail greater or lesser information costs and consequently may go on to affect take-up rates.

In models three (M3) and four (M4) of the hierarchical regression, we added the factors identified in our second level of theoretical analysis: the administrative and institutional functioning regarding the communications strategy. In M3 we focus on communications regarding the existence of the B-MINCOME benefit to test hypothesis 2 by entering the variable of an individual whose household had received more than one invitation letter (27.2 per cent) (Table 1). In M4 we look at the communications offered on the application

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

processes to test hypothesis 3 by using the variable of having taken part in the information sessions that, as indicated above, appears to be essential.

Results and discussion

Individual factors: sociodemographic variables

The results of the hierarchical logistic model show that the individual sociodemographic variables identified in the first level of our theoretical framework had an irregular impact. For example, contrary to other findings (Bargain *et al.*, 2012: 11), level of education did not affect the likelihood of take-up. We did not find significant differences in any model between people with a high level of education (who may be expected to have a greater understanding of the programme and face lower information barriers overall) and those with a low level or no education. Age seems of much relevance. According to Kayser and Frick (2001), higher rates of non-take-up among the elderly were expected as they often have lower levels of literacy and education and consequently face higher information barriers. Results in all models in Table 2 seem to confirm this. Nevertheless, this result may also be due to the fact that older people may have had fewer incentives to apply as they knew they could be randomly assigned to an inclusion police they may not have been willing to participate in.

Regarding gender, results indicate that men were more likely to apply when they were the letter addresses in M2. This is consistent with other findings (Kemp and Davidson, 2009), despite this difference being not statistically significant in the other models. Contrary to other cases (Tempelman and Houkes-Hommes, 2016), the number of household members had no effect (Table 2). However, potential claimants living with children under 16 were more interested in applying, which corroborates our hypothesis in line with previous research (Currie, 2004; Hernanz *et al.*, 2004).

The neighbourhood had an impact, partly due to its sociodemographic characteristics, though this is not conclusive. Unlike other observations (Goodin *et al.*, 2003: 51), those from the lowest income areas were more likely to apply than those from richer ones. However, the likelihood was also higher in the second highest average income areas. This paradoxical polarisation leads us to induce that, although the economic profile of a neighbourhood may be influential, other cultural or ethnographic variables could explain this relationship more accurately. As described in our theoretical analysis, literature explaining that cultural networks and ethnic ties can contribute to reducing stigma (Calnitsky, 2016) and information costs (Sharkey and Faber, 2013) would support the idea that potential claimants living in the poorest areas would have shown higher rates of take-up. However, although the qualitative and ethnographic research performed during the project revealed that community ties

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

TABLE 2. Hierarchical logistic regressions of requesting to apply

	M1		M2		M3		M4	
	OR	S.E.	OR	S.E.	OR	S.E.	OR	S.E.
Individual or user level								
Maximum level of studies *(ref. No studies)*								
Level 1	1.193	(0.12)	1.163	(0.12)	1.065	(0.13)	1.065	(0.17)
Level 2	0.942	(0.08)	0.995	(0.08)	0.857†	(0.09)	0.771*	(0.12)
Level 3	1.005	(0.09)	0.976	(0.10)	0.834†	(0.10)	0.822	(0.13)
Level 4	1.147	(0.14)	1.131	(0.15)	0.954	(0.15)	0.918	(0.19)
Sex *(ref. Men)*								
Women	0.905	(0.07)	0.845*	(0.07)	0.901	(0.07)	0.889	(0.10)
Age	0.981***	(0.00)	0.988***	(0.00)	0.988***	(0.00)	0.989***	(0.00)
Country of origin *(ref. Foreign)*								
Spain	0.690***	(0.07)	0.651***	(0.08)	0.641***	(0.08)	0.625***	(0.10)
Household members *(ref. 5 or more)*								
One	0.597**	(0.18)	1.016	(0.19)	1.481*	(0.19)	1.442	(0.26)
Two	0.608***	(0.11)	0.980	(0.12)	1.155	(0.12)	1.106	(0.16)
Three	0.631***	(0.09)	0.979	(0.10)	1.045	(0.10)	1.071	(0.13)
Four	0.724***	(0.09)	1.004	(0.09)	1.047	(0.09)	1.066	(0.12)
Missing info	0.351***	(0.20)	0.622*	(0.22)	0.727	(0.22)	1.234	(0.27)
Children < 16 years old *(yes=1)*	1.945***	(0.08)	1.341***	(0.08)	1.413***	(0.08)	1.580***	(0.12)
Neighbourhood *(ref. N10)*								
N1	2.321***	(0.13)	2.191***	(0.13)	2.235***	(0.13)	1.976***	(0.18)
N2	1.310*	(0.14)	1.252	(0.14)	1.265†	(0.14)	1.644**	(0.19)
N3	2.318***	(0.18)	2.309***	(0.19)	2.327***	(0.19)	1.873*	(0.26)
N4	2.729***	(0.17)	2.376***	(0.18)	2.371***	(0.18)	2.805***	(0.23)
N5	1.103	(0.12)	1.023	(0.12)	1.040	(0.12)	1.442*	(0.17)

TABLE 2. Continued

	M1		M2		M3		M4	
	OR	S.E.	OR	S.E.	OR	S.E.	OR	S.E.
N6	1.286	(0.23)	1.054	(0.24)	1.033	(0.24)	0.829	(0.34)
N7	1.1857***	(0.14)	1.847***	(0.15)	1.949***	(0.15)	1.373	(0.20)
N8	1.904***	(0.11)	1.772***	(0.12)	1.871***	(0.12)	1.471*	(0.16)
N9	1.284†	(0.13)	1.239	(0.14)	1.262†	(0.14)	2.200***	(0.18)
Household income			1000*	(0.00)	1.000	(0.00)	1.000	(0.00)
Level of public benefits			1.001***	(0.00)	1.001***	(0.00)	1.001***	(0.00)
Municipal benefit children < 16 years *(yes=1)*			0.990	(0.10)	1.258*	(0.10)	1.052	(0.13)
Administrative and institutional level								
More than one letter *(yes=1)*					1.782***	(0.08)	1.042	(0.11)
Face-to-face information session *(yes=1)*							42.460***	(0.11)
Constant	2.289***	(0.18)	0.889	(0.20)	0.671*	(0.20)	0.237***	(0.27)
-2 Log Likelihood	5878.37		5531.53		5475.44		3451.09	
R^2 Nagelkerke	0.20		0.28		0.29		0.65	
N	4,824		4,824		4,824		4,824	

Note: OR=Odds Ratio; S.E.=Standard Error.
*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$

were established throughout the project, it cannot be assumed they existed before it, nor even to what extent they may have affected take-up rates[6].

In this regard, previous exploratory analyses pointed out a certain association between the typology of neighbourhoods and their ethnic and cultural composition. Although there is not a correlation between the country of origin in each neighbourhood and the income level, we found a relationship between the average of their level of education and their income: the highest income areas (the reference category in the regression model) had more targeted population with tertiary and post-secondary studies (8.1% and 24.4% respectively) and less with no studies (19.8%). Therefore, socio-cultural and educational factors seem influential, though we should be cautious as the variable 'maximum level of studies' in Table 2 does not support this assumption. Further qualitative research on the effect of education, ethnic and cultural composition is therefore required in this respect.

In line with the importance of community, cultural and social networks in lowering stigma and information costs and consistent with other studies (Bertrand, Luttmer and Mullainathan, 2000), country of origin is one of the most relevant sociodemographic factors. Those born outside Spain were more likely to apply. Therefore, language and/or cultural barriers do not seem to have caused foreign-born people to be less interested in applying. This would contradict Dragos *et al.* (2011) who sustained that in some contexts, language constitutes a barrier. Nevertheless, if we differentiate by country of birth, the results are markedly different. As seen in the analysis of the marginal effects of regression models (Figure 2 of the Appendix), those living with people from North or Sub-Saharan Africa were more likely to apply than those living with local-born people. Those born in Latin America (with Spanish as a native language) and 'the rest of the world' (primarily Asia) were also more likely to apply but only when the model is not controlled by attending the face-to-face information sessions.

Individual factors: socioeconomic variables

Model two of the hierarchical regression (M2 of Table 2) shows the results of entering the claimants' household income and the public benefits previously received. The results show that receiving other benefits and their total amount somewhat determines the likelihood of taking-up. This trend increases in those who received the municipal benefit for families with children under 16, although this variable loses statistical significance in model M4 when the communications strategy is introduced. Therefore, our analysis partially endorses the first hypothesis: individual sociodemographic characteristics do contribute to explaining the information costs potential claimants must face and they determine to a great extent the likelihood of applying for the benefit. Moreover, when socioeconomic variables such as the claimants' household income and being in receipt of other benefits are also considered, personal factors seem to gain much

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

explanatory power. In sum, some expected information barriers (being elderly or not having previously received other public benefits) determine the probability of non-take-up to a great extent; some are not statistically significant (education); although other counterintuitive factors arise at the same individual level (being native-born).

Administrative and institutional factors: the communication strategy

Regarding the administrative and institutional level of our theoretical framework, the variable of having received more than one information letter in the potential claimant's household is statistically significant in M3, but not in M4. Thus, the hypothesis two is partially confirmed. This is because the factor with the greatest explanatory weight was attendance at information sessions (the Nagelkerke R^2 increased by 0.36 points from M3 to M4). Those who attended had an OR of 42.46 of applying for the benefit compared to those who did not (confirming therefore hypothesis 3). The magnitude of the results on how information sessions affect may be conditional on the fact that applicants could have similar characteristics differentiating them from those who did not attend the sessions. Table 3 (Appendix) shows the results of the logistic regression on the effects of some sociodemographic and socioeconomic characteristics that could make the target population take part in the sessions to a greater or lesser extent. Those born outside Spain were more likely to attend, as were those who received a higher amount of public benefits, those who received the municipal benefits for children under 16 and, in a higher proportion, those whose households had received more than one letter of invitation.

Despite the higher explanatory power of attendance to the face-to-face sessions, some individual characteristics (such as age, country of origin, having children under 16 years old, the neighbourhood of residence, or having received other public benefits) remain statistically significant and thus relevant to understand the phenomenon. Nevertheless, according to the power of the sociodemographic and socioeconomic variables at the individual level of our theoretical model (R^2 Nagelkerke=0.28, M2 Table 1), and of those belonging to the administrative and institutional functioning (added R^2 Nagelkerke=0.37, M4 - M2 Table 1), results indicate that factors associated to this second level of analysis have a higher explanatory power.

Conclusions

Results are consistent with some causal factors described in the literature. In line with our theoretical approach and with our first hypothesis, sociodemographic and socioeconomic variables and the information barriers they entail are of paramount importance. However, they do not fully account for the entire

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

phenomenon. The logic and functioning of institutions when communicating about a benefit seem to have a greater influence. As our two additional hypotheses maintain, the impact of the communications strategy is very different when only informing about the existence of a benefit through letters or phone calls, or when personally informing, accompanying and counselling potential claimants throughout the entire application process with personalized information sessions. The way public institutions address people seems therefore key in reducing non-take-up rates, especially when direct communications strategies are used.

We signalled four factors belonging to the second level of theoretical analysis that may also discourage people from applying for a benefit (an insufficiently detailed application process; the duration and the amount of the benefit; the time it has been available and the changes it has undergone; or the existence of hard-to-reach, vulnerable population). Although we explained the reasons why they do not seem significant in this case, these and other additional factors (Castro and West, 2022) beyond the scope of this article may certainly play a role in explaining non-take-up rates. Further research would contribute to refining these findings and reassessing our understanding of the entire phenomenon.

As seen, appropriate and exhaustive communications are essential to reach all potential claimants. As a result, the cost of the policy will increase due to the tasks and the human resources necessary to implement a comprehensive communications strategy. This raises the technical question of whether this cost can be assumed for other, larger-scale programmes (Hudson, Hunter and Peckham, 2019). Moreover, this cost is expected to increase, thus decreasing their efficiency, as the benefit is more focused and conditional, especially when targeting the most vulnerable, hard-to-reach groups. Thus, conditional benefits easily fall into a circular paradox: the more focused they are, the greater the risk of non-take-up, and hence, the higher the cost of implementation.

This research revolved around the simple question of whether individual or institutional factors were more relevant in explaining non-take-up. The answer is more complex though, since it also involves some moral concerns (Laín, 2021, 2022). As it is shown, not claiming a benefit does not solely (nor primarily) respond to individual factors but to the administrative functioning of public institutions. Whether or not a person decides to apply for a benefit does not seem an especially controversial question. However, from a moral standpoint, it is very much a matter of concern if the person is not claiming the benefit because they are unaware of its very existence, they have not been properly informed about a too complex application process, or this is only accessible through an online procedure they are not able to navigate. The phenomenon of non-take-up must be addressed not only by those invested in the adequate technical performance of social protection systems but also by those morally concerned about how contemporary societies treat their most vulnerable members.

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

Supplementary material

To view the reports on the pilot results and other supplementary material, please visit: https://ajuntament.barcelona.cat/bmincome/en/financial-aids-information.

Acknowledgements

The authors would like to thank the reviewers and editors for helpful comments on this paper.

Competing interests

The authors declare none.

Notes

1 An individual living with another adult and two minors, with an overall income of € 900 and housing costs of € 700, was assigned a benefit of € 400.

2 The costs and tasks performed to reach all potential claimants, particularly those from vulnerable groups, are detailed at: https://ajuntament.barcelona.cat/dretssocials/sites/default/files/arxius-documents/bmincome_eco_eval_d723_and_d724.pdf.

3 Participants could reach the Ethical Committee either indirectly asking their social workers, or directly by phone or email through the Pilot's webpage.

4 After reviewing the contact details, around 9 per cent of the sample were found to have no contact telephone number or had their calls restricted at that time. It was also impossible to establish clear, fluid communication with 1.8 per cent of the sample due to language problems or because the telephone no longer belonged to the person being contacted.

5 'No information' refers to cases in which we do not know the number of household's members, as they do not have a specific address (e.g. evictees), and their postal address is one of the municipal social services centres.

6 Although this research cannot reveal whether these community ties may have affected the participants' decisions before the draw, they do account for some reasons participants retrospectively adduce to have encouraged them to apply. More information in this regard can be accessed at: https://youngfoundation.org/wp-content/uploads/2020/02/Voices-of-Basic-Income.pdf.

References

Anne, D. and Chareyron, S. (2017), 'Une analyse spatiale du non-recours aux dispositifs sociaux', *Revue d'économie politique*, 127, 2, 227–253.

Atkinson, A. B. (1995), *Incomes and the welfare state. Essays on Britain and Europe*, Cambridge: Cambridge University Press.

Ayala, L., Arranz, J. M., García-Serrano, C., and Martínez-Virto, L. (2021), 'The effectiveness of minimum income benefits in poverty reduction in Spain', *International Journal of Social Welfare*, 30, 2, 152–169.

Bargain, O., Immervoll, H. and Viitamäki, H. (2012), 'No claim, no pain. Measuring the non-take-up of social assistance using register data', *Journal of Economic Inequality*, 10, 375–395.

Baumberg, B. (2016), 'The stigma of claiming benefits: a quantitative study', *Journal of Social Policy*, 45, 2, 181–199.

Bertrand, M., Luttmer, E. and Mullainathan, S. (2000), 'Network Effects and Welfare Cultures', *The Quarterly Journal of Economics*, 115, 3, 1019–1056.

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

Betkó, J., Spierings, N., Gesthuizen, M. and Scheepers, P. (2019), 'The Who and the Why? Selection Bias in an Unconditional Basic Income Inspired Social Assistance Experiment', in L. Delsen (ed.), *Empirical Research on an Unconditional Basic Income in Europe*, Cham. Switzerland: Springer.

Bhargava, S. and Manoli, D. (2015), 'Psychological Frictions and the Incomplete Take-Up of Social Benefits: Evidence from an IRS Field Experiment', *American Economic Review*, 105, 11, 3489–3529.

Blundell, R., Fry, V. and Walker, I. (1988), 'Modelling the Take-up of Means-Tested Benefits: The Case of Housing Benefits in the United Kingdom', *The Economic Journal*, 98, 390, 58–74.

Brady, M. (2018), 'Targeting single mothers? Dynamics of contracting Australian employment services and activation policies at the street level', *Journal of Social Policy*, 47, 4, 827–845.

Brodkin, E. Z. (1997), 'Inside the welfare contract: discretion and accountability in state welfare administration', *Social Service Review*, 71, 1, 1–33.

Buckland, S. and Dawson, P. (1989), 'Household claiming behaviour', *Social Policy and Administration*, 23, 1, 60–71.

Calnitsky, D. (2016), ''More normal than welfare': the Mincome experiment, stigma, and community experience', *Canadian Review of Sociology/Revue canadienne de sociologie*, 53, 1, 26–71.

Castro, E. and West, S. (2022), 'The Case for Basic Income Experiments', *Journal of Policy Analysis and Management*, 41, 2, 639–644.

Chetty, R., Friedman, J. N. and Saez, E. (2013), 'Using Differences in Knowledge Across Neighborhoods to Uncover the Impacts of the EITC on Earnings', *American Economic Review*, 103, 7, 2683–2721.

Coady, D., Crosh, M. and Hoddinott, J. (2004), *Targeting of Transfers in Developing Countries. Review of Lessons and Experience*, Washington: World Bank Regional and Sectoral Studies.

Craig, P. (1991), 'Costs and Benefits: a review of research on take-up of income-related benefits', *Journal of Social Policy*, 20, 4, 537–565.

Currie, J. (2004), *The Take Up of Social benefits*. National Bureau of Economic Research Working Paper 10488, https://www.nber.org/papers/w10488 [accessed 05.08.2020].

Daponte, B., Sanders, S. and Taylor, L. (1999), 'Why Do Low-Income Households Not Use Food Stamps? Evidence from an Experiment', *Journal of Human Resources*, 34, 3, 612–628.

Deacon, A. and Bradshaw, J. (1983), *Reserved for the Poor: The Means Test in British Social Policy*, Oxford: Martin Robertson & Co.

De Wispelaere, J. and Stirton, L. (2011), 'The administrative efficiency of basic income', *Policy & Politics*, 39, 1, 115–132.

Domingo, P. and Pucci, M. (2014), 'Impact du non-recours sur l'efficacité du RSA activité seul', *Économie et Statistique*, 467, 1, 117–140.

Dragos, C. R., Hudson, M. and Phillips, J. (2011), *Migrant workers' interactions with welfare benefits: A review of recent evidence and its relevance for the tax credits system*. London: HM Government, https://www.hmrc.gov.uk/research/report115.pdf [accessed 05.08.2020].

EC (European Commission) (2013), *Towards Social Investment for Growth and Cohesion including implementing the European Social Fund 2014-2020* (SWD 2013/39). Brussels: European Commission.

EESC (European Economic & Social Committee) (2013), *European minimum income and poverty indicators* (SOC/482-EESC-2013-1960). Brussels: European Economic & Social Committee, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013SC0039&from=GA [accessed 05.08.2020].

Elster, J. (1988), 'Is there (or should there be) a right to work?', in A. Gutman (ed.), *Democracy and the Welfare state*, Princeton: Princeton University Press.

EMIN (European Minimum Income Network) (2014), *Non-take-up of minimum income schemes by the homeless population*. Brussels: Directorate-General for Employment, Social Affairs and Inclusion.
ESPN (European Social Policy Network) (2016), *Minimum Income Schemes in Europe. A study of national policies*. Brussels: Directorate-General for Employment, Social Affairs and Inclusion.
Eurofound (2014), 'Access to benefits', Unpublished Working Paper, Dublin: Eurofound.
Finn, D. and Goodship, J. (2014), *Take-up of benefits and poverty: an evidence and policy review*. London: Centre for Economic and Social Inclusion.
Fuchs, M. (2007), 'Social Assistance - No, thanks? Empirical Analysis of non-take-up in Austria 2003', Euromod Working Paper Series EM4/07 2003, https//www.euromod.ac.uk/sites/default/files/working-papers/em4-07.pdf [accessed 05.08.2020].
Fuchs, M., Gasior, K., Premroc, T., Hollan, K. and Scoppetta, A. (2020), 'Falling through the social safety net? Analysing non-take-up of minimum income benefit and monetary social assistance in Austria', *Social Policy and Administration*, 54, 5, 827–843.
Goodin, R., Headey, B., Muffels, R. and Direvn, H. (2003), *The real worlds of welfare capitalism*. Cambridge: Cambridge University Press.
Gustafsson, B. (2002), 'Assessing non-use of social assistance', *European Journal of Social Work*, 5, 2, 149–158.
Heckman, J. and Smith, J. A. (2004), 'The Determinants of Participation in a Social Program: Evidence from a Prototypical Job Training Program', *Journal of Labor Economics*, 22, 2, 243–298.
Hernanz, V., Malherbet, F. and Pellizzari, M. (2004), 'Take- Up of Welfare Benefits in OECD Countries: A Review of the Evidence', OECD Social, Employment and Migration Working Papers 17, Paris: OECD Publishing.
Huby, M. and Whyley, C. (1996), 'Take-up and the Social Fund', *Journal of Social Policy*, 25, 1–18.
Hudson, B., Hunter, D., and Peckham, S. (2019), 'Policy failure and the policy-implementation gap: can policy support programs help?' *Policy design and practice*, 2, 1, 1–14.
Kayser, H. A. and Frick, J. (2001), 'Take it or leave it: (non-) take-up behavior of social assistance in Germany', *Journal of Applied Social Science Studies*, 121, 1, 27–58.
Kemp, P. A. and Davidson, J. (2009), 'Gender Differences Among New Claimants of Incapacity Benefit', *Journal of Social Policy*, 38, 4, 589–606.
Kerr, S. (1982), 'Deciding about supplementary pensions: a provisional model', *Journal of Social Policy*, 11, 4, 505–517.
Khalifi, L., Bermejo, E., Pérez, T., Hernández, A. and Abellán, J. (2016), '¿Por qué las personas sin hogar no solicitan ayuda económica? El caso de la RMI en España', Proceedings of the XVIII World Economic Meeting, University of Alcalá, Spain, 1-3 July, 275–291.
Kleven, H. J. and Kopczuk, W. (2011), 'Transfer Program Complexity and the Take-Up of Social Benefits', *American Economic Journal: Economic Policy*, 3, 1, 54–90.
Laín, B. (2021), 'Basic income experiments: limits, constraints and opportunities', *Ethical Perspectives*, 28, 1, 89–101.
Laín, B. (2022), 'Between Epistemic Necessity and Political Utility: The Role of Basic Income Experiments', *Journal of Policy Analysis and Management*, 41, 2, 633–639.
Laín, B., Riutort, S. and Julià, A. (2019), 'The B-MINCOME project. Municipal innovation on guaranteed minimum incomes and active social policies', *Barcelona Societat*, 23, 1–18.
Laín, B. and Torrens, L. (2019), 'Barcelona's minimum living wage initiative', *Transfer. European Journal of Labour and Research*, 25, 3, 387–391.
Mäkinen, L. (2018), *Report and Recommendations from the Peer Review on Coverage and Non-take-up of Minimum Income*. European Minimum Income Network, https://www.emin-eu.net [accessed 05.08.2020].
Matsaganis, M., Paulus, A. and Sutherland, H. (2008), *The take up of social benefits*. Brussels: European Commission, https://www.ec.europa.eu/social/BlobServlet?docId=9833&langId=en [accessed 05.08.2020].

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

Ranci, C. and Arlotti, M. (2019), 'Resistance to change. The problem of high non-take up in implementing policy innovations in the Italian long-term care system', *Policy and Society*, 38, 4, 572–588.
Riphahn, R. T. (2001), 'Rational Poverty or Poor Rationality? The Take-up of Social Assistance Benefits', *Review of Income and Wealth*, 47, 3, 379–398.
Sharkey, P. and Faber, J. W. (2013), 'Where, When, Why, and For Whom Do Residential Contexts Matter? Moving Away from the Dichotomous Understanding of Neighborhood Effects', *Annual Review of Sociology*, 40, 1, 559–579.
Tempelman, C. and Houkes-Hommes, A. (2016), 'What stops households from taking up much needed benefits?', *The Review of Income and Wealth*, 62, 4, 685–705.
van Oorschot, W. (1995), 'The process of realizing rights to means-tested benefits: New perspectives on the causes of non-take-up', Tilburg University. Work and Organization Research Centre Working Paper 95.01.001/2, https://www.pure.uvt.nl/ws/portalfiles/portal/1186911/OW5619859.pdf [accessed 05.08.2020].
van Oorschot, W. (1996), 'Modelling non-take-up: The interactive model of multi-level influences and the dynamic model of benefit receipt', in W. van Oorschot (ed.), *New perspectives on the non-take-up of social security benefits*, Tilburg: Tilburg University Press.
Walker, R., Kyomuhendo, G.B., Chase, E., Choudhry, S., Gubrium, E.K., Jo, Y.N., Lødemel, I., Mathew, L., Mwiine, A., Pellissery, S. and Ming, Y. (2013), 'Poverty in Global Perspective: Is Shame a Common Denominator?', *Journal of Social Policy*, 42, 2, 215–233.
Warin, P. (2018), 'The analysis of non-take-up: beyond the service relation model', *Revue Suisse de travail social*, 23, 18, 60–75.
Whelan, S. (2010), 'The take up of means-tested income support', *Empirical Economics*, 39, 3, 847–875.

Appendix

TABLE 3. Logistic regressions of participate into face-to-face information sessions

	OR	S.E.
Individual or user level		
Maximum level of studies *(ref. No studies)*		
Level 1	1.009	(0.12)
Level 2	0.946	(0.09)
Level 3	0.883	(0.10)
Level 4	0.906	(0.14)
Sex *(ref. Men)*		
Women	0.931	(0.07)
Age	0.989***	(0.00)
Country of origin *(ref. Foreign)*		
Spain	0.783***	(0.08)
Household members *(ref. 5 or more)*		
One	1.239	(0.20)
Two	1.045	(0.12)
Three	0.910	(0.10)
Four	0.957	(0.09)
Missing info	0.413***	(0.23)
Children < 16 years old *(yes=1)*	1.213*	(0.08)
Neighbourhood *(ref. N10)*		
N1	1.954***	(0.13)
N2	0.963	(0.14)
N3	2.203***	(0.18)
N4	1.578**	(0.16)
N5	0.840	(0.12)
N6	1.355	(0.24)
N7	2.168***	(0.14)
N8	1.916***	(0.11)
N9	0.748*	(0.14)
Household income	1.000†	(0.00)
Level of public benefits	1.000***	(0.00)
Municipal benefit children < 16 years *(yes=1)*	1.645***	(0.09)
Administrative and institutional level		
More than one letter *(yes=1)*	2.413***	(0.08)
Constant	0.455***	(0.20)
-2 Log Likelihood	5760.37	
R2 Nagelkerke	0.23	
N	4,824	

Note: OR=Odds Ratio; S.E.=Standard Error.

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ † $p < 0.1$.

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

TABLE 4. Logistic regressions of requesting to apply with the sample that do not participate to face-to-face information sessions

	OR	S.E.
Individual or user level		
Maximum level of studies *(ref. No studies)*		
Level 1	1.017	(0.19)
Level 2	0.709*	(0.13)
Level 3	0.701*	(0.16)
Level 4	1.008	(0.22)
Sex *(ref. Men)*		
Women	0.870	(0.11)
Age	0.988**	(0.00)
Country of origin *(ref. Foreign)*		
Spain	0.760*	(0.12)
Household members *(ref. 5 or more)*		
One	1.041	(0.31)
Two	0.801	(0.19)
Three	0.946	(0.15)
Four	1.060	(0.14)
Missing info	1.074	(0.29)
Children < 16 years old *(yes=1)*	1.829***	(0.14)
Neighbourhood *(ref. N10)*		
N1	1.766**	(0.21)
N2	1.180	(0.22)
N3	1.626	(0.32)
N4	3.600***	(0.25)
N5	1.203	(0.19)
N6	0.776	(0.44)
N7	0.894	(0.25)
N8	1.082	(0.19)
N9	1.816**	(0.20)
Household income	1.000	(0.00)
Level of public benefits	1.000***	(0.00)
Municipal benefit children < 16 years *(yes=1)*	1.104	(0.15)
Administrative and institutional level		
More than one letter *(yes=1)*	0.982	(0.12)
Constant	0.284***	(0.31)
-2 Log Likelihood	2430.90	
R2 Nagelkerke	0.20	
N	2,621	

Note: OR=Odds Ratio; S.E.=Standard Error.
*** p < 0.001 ** p < 0.01 * p < 0.05 † p < 0.1.

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press

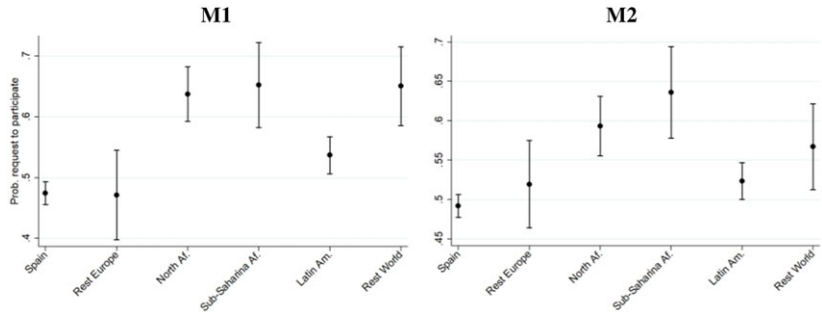

FIGURE 2. Margins effects of the type of country of origin on requesting to apply
Note: M1: controlled by household level of studies, sex; age; household members; children < 16 years old; neighborhood; household income; level of public benefits; municipal benefit children < 16 years; more than one letter. M2: controlled by the same M1 variables plus the participation of the face-to-face information sessions.
Sample description by country of origin: Spain (56.4%), Rest Europe (3.2%); North Af. (10.4%); Sub-Saharan Af. (3.8%); Latin Am. (21.1); Rest World (5.1%).

https://doi.org/10.1017/S0047279422000575 Published online by Cambridge University Press