

Inclusion Policy Lab: Evaluation Results

*Ayuntamiento de Barcelona – Social Support
and Inclusion Adherence Pathways Project. Non
take-up program*

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This report has been prepared by the General Secretariat of Inclusion of the Ministry of Inclusion, Social Security, and Migration within the framework of the Inclusion Policy Lab, as part of the Recovery, Transformation, and Resilience Plan (RTRP), with funding from the Next Generation EU funds. As the agency in charge of carrying out the project, the Council of Barcelona has participated in the writing of this report. This collaborating entity is one of those implementers of the pilot projects and has collaborated with the General Secretariat of Inclusion in the design of the RCT methodology, actively participating in the provision of the necessary information for the design, monitoring, and evaluation of the social inclusion itinerary. Furthermore, their collaboration has been essential to gathering informed consents, ensuring that participants in the itinerary were adequately informed and that their participation was voluntary.

In the case of this evaluation of the project's take-up, Barcelona City Council had the support of researchers from the Institut Metròpoli, who have played a fundamental role in the development of the methodology and in the identification of the results of the RCT evaluation exercise. This was agreed between the City Council itself, the Institut Metròpoli, the MISSM and the researchers from CEMFI and J PAL Europa.

A research team coordinated by the CEMFI (Center for Monetary and Financial Studies) has substantially collaborated in conducting this study. Specifically, María Hernández de Benito (Professor at the University of Alicante) and Teresa Molina-Millán (Professor at the University of Alicante), under the coordination of Mónica Martínez-Bravo (until January 8, 2024) and Samuel Bentolila, professors at CEMFI, have participated. The researchers have been actively involved in all phases of the project, including adapting the initial proposal to the needs of the evaluation through randomized experiments, the design of the evaluation, the design of measurement instruments, the processing of the data and the econometric estimations that result in the quantitative results.

The partnership with J-PAL Europe has been a vital component in the efforts of the General Secretariat of Inclusion to improve social inclusion in Spain. Their team has provided technical support and shared international experience, assisting the General Secretariat in the comprehensive evaluation of pilot programs. Throughout this partnership, J-PAL Europe has consistently demonstrated a commitment to promoting the adoption of evidence-based policy of empirical data into strategies that seek to promote inclusion and progress within our society.

This evaluation report has been produced using the data available at the time of its writing and is based on the knowledge acquired about the project up to that date. The researchers reserve the right to clarify, modify, or delve into the results presented in this report in future publications. These potential variations could be based on the availability of additional data, advances in evaluation methodologies, or the emergence of new information related to the project that may affect the interpretation of the results. The researcher is committed to continuing exploring and providing more accurate and updated results for the benefit of the scientific community and society in general.

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Executive Summary

- The **Minimum Income Scheme**, established in May 2020, is a minimum income policy that aims to guarantee a minimum income to vulnerable groups and provide ways to promote their social and labor integration.
- Within the framework of this policy, the Ministry of Inclusion, Social Security, and Migration (MISSM) fosters a strategy to promote inclusion through pilot projects of social innovation, which are conducted in the **Inclusion Policy Lab**. These projects are evaluated according to the standards of scientific rigor and using the methodology of Randomized Controlled Trials.
- This document presents the evaluation results and main findings of the "Social Support and Inclusion Adherence Pathways Project. Non take-up program" and had been conducted in **cooperation between the MISSM and the Barcelona City Council**.
- This study evaluates an alternative recruitment approach based on clear, personalized, and motivational communication, opposed to traditional and impersonal communication. The **Control Group** received a standard and impersonal SMS while the **Treatment Group** received a personalized and motivational SMS, allowing for clearer and more direct communication.
- The project took place in **the city of Barcelona in the following districts**: Ciutat Vella, Gracia, Horta-Guinardo, L'Eixample, Les Corts, Nou Barris, Sant Andreu, Sant Marti, and Sants-Montjuic. A total of 446 individuals participated (225 in the treatment group and 221 in the control group).
- On average, most project participants are women. Additionally, they have an average age of 40 years old, and 70% hold Spanish nationality. Regarding participating households, about half were beneficiaries of the Childhood Fund and resided in single-parent households.
- Of the total SMS initially sent to the treatment group (221 individuals), 21.3% agreed to participate in the "AMUNT!" project (47 individuals). In contrast, only 15% of the participants in the control group agreed to participate in the "AMUNT!" project, which means only 33 individuals out of 225 contacted via SMS individuals in the control group.
- The main evaluation results are as follows:
 - **Increased participation in the "AMUNT!" program**: the treatment group shows a higher acceptance to participate in the "AMUNT!" program by 7 percentage points compared to participants in the control group.
 - **Increased appointment attendance**: participants in the treatment group show higher attendance at the in-person appointment for the presentation and explanation of the program. This gap is around 9 percentage points with respect to participants in the control group.
 - **Increased appointment acceptance**: individuals in the treatment group demonstrate higher acceptance of the informational appointment by approximately 9 percentage points.
 - **Recruitment process stages reached**: participants who receive a personalized SMS reach a higher stage within the recruitment process compared to participants who receive a standard SMS.

1 Introduction

General Regulatory Framework

The Minimum Income Scheme (MIS), regulated by Law 19/2021 ¹, is an economic benefit whose main objective is to prevent the risk of poverty and social exclusion of people in situations of economic vulnerability. Thus, it is part of the protective action of the Social Security system in its non-contributory modality and responds to the recommendations of various international organizations to address the problem of inequality and poverty in Spain.

The provision of the MIS has a double objective: to provide economic support to those who need it most and to promote social inclusion and employability in the labor market. This is one of the social inclusion policies designed by the General State Administration, together with the support of Autonomous Communities, the Third Sector of Social Action and local corporations². It is a central policy of the Welfare State that aims to provide minimum economic resources to all individuals in Spain, regardless of where they live.

Within the framework of the National Recovery, Transformation, and Resilience Plan (RTRP) ³, the General Secretariat of Inclusion (onwards, SGI by its acronyms in Spanish) of the Ministry of Inclusion, Social Security, and Migration (MISSM) participates significantly in Component 23 "New public policies for a dynamic, resilient, and inclusive labor market", framed in Policy Area VIII: "New care economy and employment policies".

Investment 7: "Promotion of Inclusive Growth by linking socio-labor inclusion policies to the Minimum Income Scheme" is among the reforms and investments proposed in this Component 23. Investment 7 promotes the implementation of a new model of inclusion based on the MIS, which reduces income inequality and poverty rates. Therefore, the MIS goes beyond being a mere economic benefit and supports the development of a series of complementary programs that promote socio-labor inclusion. However, the range of possible inclusion programs is very wide, and the government decides to pilot different programs and interventions to evaluate them and generate knowledge that allows prioritizing certain actions. With the support of investment 7 under component 23, the MISSM establishes a new framework for pilot inclusion projects constituted in two phases through two royal decrees covering a set of pilot projects based on experimentation and evaluation:

¹ Law 19/2021, dated December 20, establishing the Minimum Income Scheme (BOE-A-2021-21007).

² Article 31.1 of Law 19/2021, of December 20, 2021, establishing the Minimum Income Scheme.

³ The Recovery, Transformation, and Resilience Plan refers to the Recovery Plan for Europe, which was designed by the European Union in response to the economic and social crisis triggered by the COVID-19 pandemic. This plan, also known as Next Generation EU, sets out a framework for the allocation of recovery funds and for boosting the transformation and resilience of member countries' economies.

- **Phase I: Royal Decree 938/2021⁴**, through which the MISSM grants subsidies for the execution of 16 pilot projects of inclusion pathways corresponding to autonomous communities, local organizations, and the Third Sector of Social Action organizations. This royal decree contributed to the fulfillment of milestone number 350⁵ and monitoring indicator 351.1⁶ of the RTRP.
- **Phase II: Royal Decree 378/2022⁷**, which grants subsidies for a total of 18 pilot projects of inclusion pathways executed by autonomous communities, local organizations, and the Third Sector of Social Action organizations. Along with the preceding Royal Decree, this one helped the RTRP's monitoring indicator number 351.1 to be fulfilled.

To support the implementation of evidence-based public and social policies, the Government of Spain decided to evaluate the social inclusion pilot projects using the Randomized Controlled Trial (RCT) methodology. This methodology, which has gained relevance in recent years, represents one of the most rigorous tools to measure the causal impact of a public policy intervention or a social program on indicators of interest, such as social and labor insertion or the well-being of beneficiaries.

Specifically, RCT is an experimental method of impact evaluation in which a representative sample of the population potentially benefiting from a public program or policy is randomly assigned either to a group receiving the intervention or to a comparison group that does not receive the intervention for the duration of the evaluation. Thanks to the randomization in the allocation of the program, this methodology can statistically identify the causal impact of an intervention on a series of variables of interest. This methodology enables us to analyze the effect of this measure, which helps determine whether the policy is adequate to achieve the planned public policy objectives. Experimental evaluations enable us to obtain rigorous results of the intervention effect, i.e., what changes the participants have experienced in their lives due to the intervention. In addition, these evaluations provide an exhaustive analysis of the program and its effects, providing insights into why the program was effective, who has benefited most from the interventions, whether there were indirect or unexpected effects, and which components of the intervention worked, and which did not.

⁴ Royal Decree 938/2021, of October 26, 2021, which regulates the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migration in the field of social inclusion, for an amount of €109,787,404, within the framework of the Recovery, Transformation, and Resilience Plan (BOE-A-2021-17464).

⁵ Milestone 350 of the RTRP: "Improve the rate of access to the Minimum Income Scheme and increase the effectiveness of the MIS through inclusion policies, which, according to its description, will translate into supporting the socio-economic inclusion of the beneficiaries of the MIS through itineraries: eight collaboration agreements signed with subnational public administrations, social partners and social action organizations of the third sector to conduct the itineraries. The objectives of these partnership agreements are: (i) to improve the MVI access rate; ii) increase the effectiveness of the MVI through inclusion policies."

⁶ Monitoring indicator 351.1 of the RTRP: "at least 10 additional collaboration agreements signed with subnational public administrations, social partners and social action organizations of the third sector to conduct pilot projects to support the socio-economic inclusion of MVI beneficiaries through itineraries".

⁷ Royal Decree 378/2022, of May 17, 2022, regulating the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migration in the field of social inclusion, for an amount of €102,036,066, within the framework of the Recovery, Transformation and Resilience Plan (BOE-A-2022-8124).

These evaluations have focused on the promotion of social and labor inclusion among MIS beneficiaries, recipients of regional minimum incomes, and other vulnerable groups. In this way, the MISSM establishes a design and impact evaluation of results-oriented inclusion policies, which offers evidence for decision-making and its potential application in the rest of the territories. The promotion and coordination of 32 pilot projects by the Government of Spain has led to the establishment of a laboratory for innovation in public policies of global reference named the Inclusion Policy Lab.

For the implementation and development of the Inclusion Policy Lab, the General Secretariat of Inclusion has established a governance framework that has made it possible to establish a clear and potentially scalable methodology for the design of future evaluations and promoting decision-making based on empirical evidence. The General State Administration has had a triple role as promoter, evaluator and executive of the different programs. Different regional and local administrations and the Third Sector of Social Action organizations have implemented the programs, collaborating closely in all their facets, including evaluation and monitoring. In addition, the Ministry has had the academic and scientific support of the Abdul Latif Jameel Poverty Action Lab (J-PAL) Europe and the Centre for Monetary and Financial Studies (CEMFI), as strategic partners to ensure scientific rigor in the assessments. Likewise, the Inclusion Policy Lab has an Ethics Committee ⁸, which has ensured the strictest compliance with the protection of the rights of the people participating in the social inclusion itineraries.

The present report refers to "Social Support and Inclusion Adherence Pathways Project. Non take-up program⁹", for socio-labor integration in Barcelona: evaluation of a recruitment based on clear communication. This project was executed within the framework of Royal Decree 938/2021 ¹⁰ by the Barcelona City Council. This report contributes to the fulfillment of milestone 351 of the RTRP, "Following the completion of at least 18 pilot projects, publication of an evaluation on the coverage, effectiveness, and success of the MIS, including recommendations to increase the level of application and improve the effectiveness of social inclusion policies."

⁸ Regulated by Order ISM/208/2022, of March 10, 2022, which creates the Ethics Committee linked to social inclusion itineraries, on 20/05/2022 it issued a favorable report for the realization of the project that is the subject of the report.

⁹ Within the "AMUNT!" project, a randomized controlled trial was conducted to evaluate the effect of certain actions aimed at reducing the non take-up of the project.

¹⁰ On December 28, 2021, a convention was signed between the General State Administration, through the SGI, and the Barcelona City Council for the implementation of a social inclusion project within the framework of the Recovery, Transformation, and Resilience Plan. This Convention was published in the *Boletín Oficial del Estado* on February 1, 2022 (BOE No. 27).

Context of the project

The situation of "non-take-up" refers to the lack of access to public benefits or services by individuals who meet the eligibility criteria. This represents underutilization of opportunities and reduces the effectiveness of social actions designed by Public Administrations.

The fundamental reasons contributing to this situation can be classified into four categories. Firstly, there is a lack of information about the benefit or service, either due to unawareness of the program's existence or lack of adequate accessibility to the program. Secondly, application processes can be complex and act as an additional barrier, especially for individuals with lower educational levels, who are typically the most vulnerable. Additionally, there may be a distorted perception of costs and benefits, where potential participants may perceive that the costs of application outweigh the benefits. Lastly, participation in social programs can generate a certain stigma for the beneficiary, exposing its need for help to the community.

In this context and based on the presence of the non-take-up issue within the AMUNT! project, this project established an exercise to assess the usefulness of modulating the initial communication message about the project on the response to project incorporation¹¹.

The "AMUNT!" project begins its recruitment process with a list of 5,472 potential participants. The technical team contacted 3,980 individuals by postal and phone to confirm their attendance at informational sessions. As a result, a total of 729 informed consents were obtained from individuals agreeing to participate in the program, which is approximately 18% of the total.

The low participation achieved does not threaten the implementation or evaluability of the intervention. However, it highlights the need to incorporate additional participants to achieve coverage closer to the plan. Despite this, incorporating new participants is not viable for the overall evaluation of the program, as their inclusion would be late and under different conditions compared to those already involved. Nevertheless, newer incorporations are fully valid for evaluating specific measures that encourage participation in the program, such as adjusting the initial message that serves as the first contact for participants.

For these reasons, additional recruitment is sought from a pool of potential participants of 843 individuals, all of whom are beneficiaries of the MIS, more precisely of the child complement, which will be exclusively subject to an RCT impact evaluation of the usefulness of presenting a motivational message in the first contact of the recruitment process.

¹¹The comprehensive evaluation of the "AMUNT!" project can be consulted in the specific report detailing the impact assessment of this project.

Regulatory framework associated with the project and the governance structure

The regulatory framework associated with this specific evaluation within the extensive "AMUNT!" project remains consistent with the framework followed in this general project. However, the Barcelona City Council leads the design initiative, the methodology, and even the calculation of evaluation results.

In broader terms, the issue addressed in the "AMUNT!" pilot project is social exclusion, which is tackled by several public institutions. For example, at the European level, the Action Plan of the European Pillar of Social Rights (EPSR) was approved in 2021, aiming to complement Member States' actions in providing quality social services and integrating disadvantaged groups into the labor market and society at large.

Regarding the specific issue of non-take-up in this evaluation exercise, it is crucial to emphasize the right to social protection and the need to address the non-take-up of citizens' rights and benefits (Recommendation of the European Council of April 26, 2023).

At national level, the National Strategy for the Prevention and Fight against Poverty and Social Exclusion serves as a reference document, responding to the Spanish Government's commitment to maintain and develop the welfare state to address social challenges, especially the full social inclusion of the most vulnerable individuals. Additionally, through Royal Decree 818/2021, of September 28, the activation programs for employment of the National Employment System are regulated. At regional level, the Operational Program of the European Social Fund for Catalonia 2021-2027 stands out to address the main challenges in employment, education, training, and social inclusion. Given this specific evaluation of measures aimed at reducing non-take-up would result in more adequate access for the collective joining the general project, this framework would also be relevant.

Since individuals who agree to participate through this second recruitment gain access to the "AMUNT!" project, the pilot project under review in this report is equally aligned with regional, national, and European strategies in the field of socio-labor inclusion and reduction of non-take-up, as well as with the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), specifically contributing to SDGs 1, 4, 8, and 10.

The scientific objective of the project is to evaluate the effectiveness of sending a novel SMS, a simple and cost-effective measure, compared to the use of traditional communication tools. Additionally, the aim is to promote knowledge transfer to the policymaking process and be accountable for the project's results.

The governance framework established for the proper execution and evaluation of the project includes the following actors:

- **Barcelona City Council** is the promoter and responsible entity of the project execution, and Institut Metròpoli, as the scientific organization supporting the City Council in the design and RCT evaluation of the project.

- **The Ministry of Inclusion, Social Security and Migration (MISSM)** is the funding source of the project and responsible for the RCT evaluation. Therefore, the General Secretariat of Inclusion assumes a series of commitments with the Barcelona City Council:
 - Provide support to the beneficiary entity for the design of the actions to be implemented, for the execution and monitoring of the grant's purpose, as well as for profiling potential participants in the pilot project.
 - Design the Randomized Controlled Trial (RCT) methodology of the pilot project in coordination with the beneficiary entity and scientific collaborators. Likewise, conduct the project evaluation.¹²
 - Ensure strict compliance with ethical considerations by obtaining approval from the Ethics Committee.
- **CEMFI and J-PAL Europe** are scientific and academic institutions that support MISSM in the design and RCT evaluation of the project.

Taking all the above into account, this report follows the following structure: **section 2** provides a **description of the project**, detailing the problem to be addressed, the specific intervention associated with take-up, and the target audience for the intervention. Next, **Section 3** contains information related to the **evaluation design**, defining the Theory of Change linked to the project and the hypotheses, information sources, and indicators used. **Section 4** describes the **implementation of the intervention**, the analysis of the sample, randomization results, and the level of participation and attrition of the intervention. This section is followed by **Section 5** where **the results of the evaluation** are presented, along with a detailed analysis of the econometric analysis conducted and the results for each of the indicators used. Finally, the **Conclusions** of the project evaluation are described in **section** ¡Error! No se encuentra el origen de la referencia.. Besides, in the **appendix** ¡Error! No se encuentra el origen de la referencia., additional information is provided on the management tools and governance of the pilot project.

¹² In the case of this evaluation regarding the take-up of the project, the Barcelona City Council, with the support of researchers from Institut Metròpoli, developed the methodology and provided the results of the RCT evaluation exercise. Both the methodology and the manner of obtaining the results achieved were agreed upon among the City Council itself, the MISSM, and the researchers from CEMFI and J-PAL Europe. This document is based on internal reports from the Barcelona City Council and on the communication "Take-up of the AMUNT! pilot project for socio-labor inclusion in Barcelona: evaluation of a recruitment based on clear communication" presented at the IX REPS Congress (Spanish Network of Social Policy) by Sebastià Riutort, Frederic Romea, Pau Alarcón, and Hena López.

Ethics Committee linked to the Social Inclusion Itineraries

During research involving human subjects in the field of biology or the social sciences, researchers and workers associated with the program often face ethical or moral dilemmas in the development of the project or its implementation. For this reason, in many countries it is common practice to create ethics committees that verify the ethical viability of a project as well as its compliance with current legislation on research involving human beings. The Belmont Report (1979) and its three fundamental ethical principles – respect for individuals, profit and justice – constitute the most common frame of reference in which ethics committees operate, in addition to the corresponding legislation in each country.

With the aim of protecting the rights of participants in the development of social inclusion itineraries and ensuring that their dignity and respect for their autonomy and privacy are guaranteed, [Order ISM/208/2022 dated March 10](#) creates the Ethics Committee linked to the Social Inclusion Itineraries. The Ethics Committee, attached to the General Secretariat of Inclusion and Social Welfare Objectives and Policies, is composed of a president – with an outstanding professional career in defense of ethical values, a social scientific profile of recognized prestige and experience in evaluation processes – and two experts appointed as members.

The Ethics Committee has conducted analysis and advice on the ethical issues that have arisen in the execution, development, and evaluation of the itineraries, formulated proposals in those cases that present conflicts of values and approved the evaluation plans of all the itineraries. In particular, the Ethics Committee issued its approval for the development of the present evaluation on October 20, 2022. This approval decision is relevant both for the entirety of the "AMUNT!" project and for this specific exercise of evaluating the take-up of the project, which is explicitly referenced within the memorandum submitted to the committee.

2 Description of the program and its context

This section describes the program that the Barcelona City Council implemented within the framework of the evaluation project. Furthermore, it describes the objective of the project, the target population, the territorial scope, and provides a detailed description of the intervention.

2.1 Introduction

The primary objective of this specific evaluation project is to determine whether sending a motivating, personalized and empathetic SMS leads to a higher take-up or participation rate compared to sending an SMS with impersonal information typically used in such communications. This impact assessment

examines the specific effect of this communication policy, which falls within the realm of "nudges". These are small-scale actions with minimal associated costs that can positively influence broader policies. Therefore, within the context of take-up issues, it would not relate to other more substantial actions such as monetary transfers or supportive policies that may be implemented in such programs in general.

Available figures on the uptake of social benefits reveal that in many Western European countries, over 50% of potentially eligible individuals for social assistance do not apply for it (Van Mechelen and Janssens, 2017). In OECD countries, non-take-up rates range from 40% to 80% (Hernanz et al., 2004). Furthermore, this information is often not public and may vary depending on the selected data source. Analyzing the underlying reasons for this phenomenon is essential, as a high non-take-up rate can lead to greater long-term public expenditures (Dubois et al., 2014). The literature exhibits how administrative barriers in the social benefit application processes, lack of accurate information, and social stigma are determinants in defining actions regarding non-take-up (Moffitt and Ko, 2022).

To reduce non-take-up rates, several research efforts have been conducted within the framework of nudge theory. These interventions are designed to influence people's decisions and behaviors in a predictable manner, without imposing restrictions or limitations, and often with very low or even zero cost, as in this case. The aim is to use cognitive biases to steer decision-making towards options that generate both individual and social benefits (Sunstein and Thaler, 2008).

In this context, sending specific and personalized messages can be used to decrease non-take-up rates, incorporating nudges into the design of these SMS messages, so that individuals perceive the service as a potential improvement opportunity (Gorini et al., 2023; Patel et al., 2021, 2023). Linos et al. (2022) conducted a study through an RCT in the United States to demonstrate how sending certain messages affects adherence to minimum income programs. Similarly, Chareyron et al. (2018) performed a study which confirms that sending a specific informational letter significantly improves application rates among social assistance beneficiaries in France. At national level, the study by Costas et al. (2022) stands out, analyzing how sending an informative SMS about a social benefit to families with children aged 0 to 16 reduces non-take-up resulting from lack of awareness of the benefit.

2.2 Target population and territorial scope

The target population of the project encompasses all individuals benefiting from the Child Aid Supplement (onwards CAPI by its acronyms in Spanish)¹³ within the recipients of the Minimum Income Scheme (MIS). In these cases, their income is at most 50% higher than the reference income for the MIS, thus the aid received exclusively comprises the CAPI from the MIS.

The project covers the following districts which are part of the city of Barcelona: Ciutat Vella, Gracia, Horta-Guinardo, L'Eixample, Les Corts, Nou Barris, Sant Andreu, Sant Marti, and Sants-Montjuic. In

¹³The CAPI came into effect in January 2022 and is a monthly household benefit linked to childhood. It is a supplement that is part of the MIS, although it can be granted independently.

addition to these districts, a small participation of individuals from outside of Barcelona is also included, forming a group.

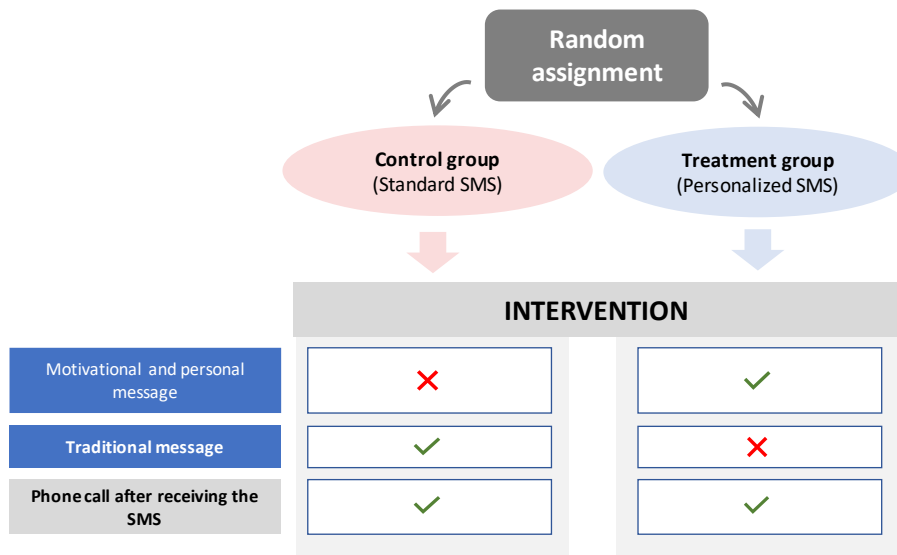
2.3. Description of interventions

This project requires developing an additional recruitment process for the "AMUNT!" inclusion program of the Barcelona City Council. This program offers a unique entry point for counseling and multidimensional support to recipients of the MIS in the city of Barcelona. In the initial participant recruitment process, only 21.6% of potential participants agreed to participate in the program.

Due to the high non-take-up rate of the project, Barcelona City Council decided to implement a second recruitment process to evaluate the impact of clear and direct communication through the sending of SMS messages. This message includes a motivational, approachable, and personalized tone, directed specifically to the recipient. Subsequently, the technical team conducted phone calls with the same content in both, the control group and treatment group. The SMS and phone call inform candidates about a socio-labor support service offered by the Barcelona City Council, without specific mention of the pilot project "AMUNT!".

The intervention has been designed following the methodology of a Randomized Controlled Trial (RCT), with a control group receiving a standard SMS message and a treatment group receiving a personalized and innovative SMS message. **Figure 1** summarizes the main differences between the standard SMS and the innovative one.

Figure 1: Scheme of the intervention



Below is the text sent via SMS to each of the groups, both originally sent in Catalan:

Standard SMS (control group)

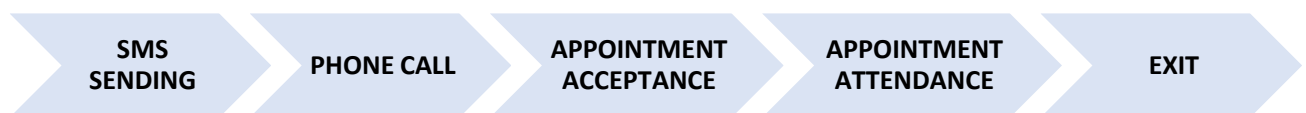
*Mr./Mrs. DNI/NIE***00000A, you will soon receive a call from AJBCN to arrange an appointment for accessing a municipal service that complements your Social Security benefit.*

Motivational SMS (treatment group)

*Hello MARÍA DNI/NIE***00000A, as a beneficiary of Social Security benefits, you are now entitled to personalized social and employment support services. ATTENTION: the City Council will CALL YOU in the coming days and explain how you can take advantage of this OPPORTUNITY.*

In this way, the phases of the treatment are broadly as follows:

Figure 2: Treatment phases



- The **sending of the SMS**, whether it is innovative or standard, to the candidate.
- Following the SMS, a **phone call** is made with the aim of explaining the service and offering an in-person appointment.
- Subsequently, if the contacted person is interested in the project, an appointment is offered, and the candidate decides whether to **accept** it or not.
- Once the appointment is accepted, the participant **attends the in-person appointment**.
- The **exit** phase focuses on the acceptance of participating in the "AMUNT!" program, following the attendance of the appointment. Thus, the final phase culminates with the signing of the informed consent by the participants.

The intervention in this evaluation relates exclusively to the difference in motivational terms and personalization of the initial informative message of the "AMUNT!" project. However, the participant's response to the various phases of the project recruitment process will play a relevant role in the evaluation. This includes whether the participant responds to the project information call, accepts the information appointment about the project in that call, attends the appointment, and ultimately joins the project. All this information is relevant for formulating the evaluation indicators.

3 Evaluation design

This section describes the design of the impact assessment of the project described in the preceding section. The section describes the Theory of Change, which identifies the mechanisms and aspects to measure, the hypotheses to test in the evaluation, the sources of information to build the indicators, and the design of the experiment itself.

3.1 Theory of change

This report, with the aim of designing an evaluation that enables us to understand the causal relationship between the intervention and its final objective, develops a Theory of Change. The Theory of Change makes it possible to schematize the relationship between the needs identified in the target population, the benefits or services that the intervention provides, and the immediate and medium-

long term results sought by the intervention, to understand the relationships between them, the assumptions on which they are based, and to outline measures or outcome indicators.

Theory of Change

A Theory of Change begins with the correct identification of the needs or problems to be addressed and their underlying causes. This situational analysis should guide the design of the intervention, i.e., the activities or products that are provided to alleviate or resolve the needs, as well as the processes necessary to properly implement the treatment. Next, we identify the expected effect(s) based on the initial hypothesis, i.e., what changes – in behavior, expectations, or knowledge – are expected to be obtained in the short term with the actions conducted. Finally, the process concludes with the definition of the medium- to long-term results that the intervention aims to achieve. Sometimes, the effects directly obtained with the actions are identified as intermediate results, and one identifies the indirect effects in the final results.

The development of a Theory of Change is a fundamental element of impact evaluation. At the design stage, the Theory of Change helps to formulate hypotheses and identify the indicators needed for the measurement of results. Once the results are achieved, the Theory of Change makes it easier, if results are not as expected, to detect which part of the hypothetical causal chain failed, as well as to identify, in case of positive results, the mechanisms through which the program works. Likewise, the identification of the mechanisms that made the expected change possible allows a greater understanding of the possible generalization or not of the results to different contexts.

This Barcelona City Council has identified the need to increase the effective participation of individuals who agree to engage in the "AMUNT!" program. This phenomenon is closely related to the awareness of the services and activities included in the "AMUNT!" program, as well as the communication of the program's content.

This need or issue defines the scope of action of the pilot project, through the sending of a motivational, personal, and relatable SMS with a direct reference to the existence of the "AMUNT!" program. These messages refer to a service complementary to the Social Security benefits they were recipients of, without mentioning the name of the "AMUNT!" program.

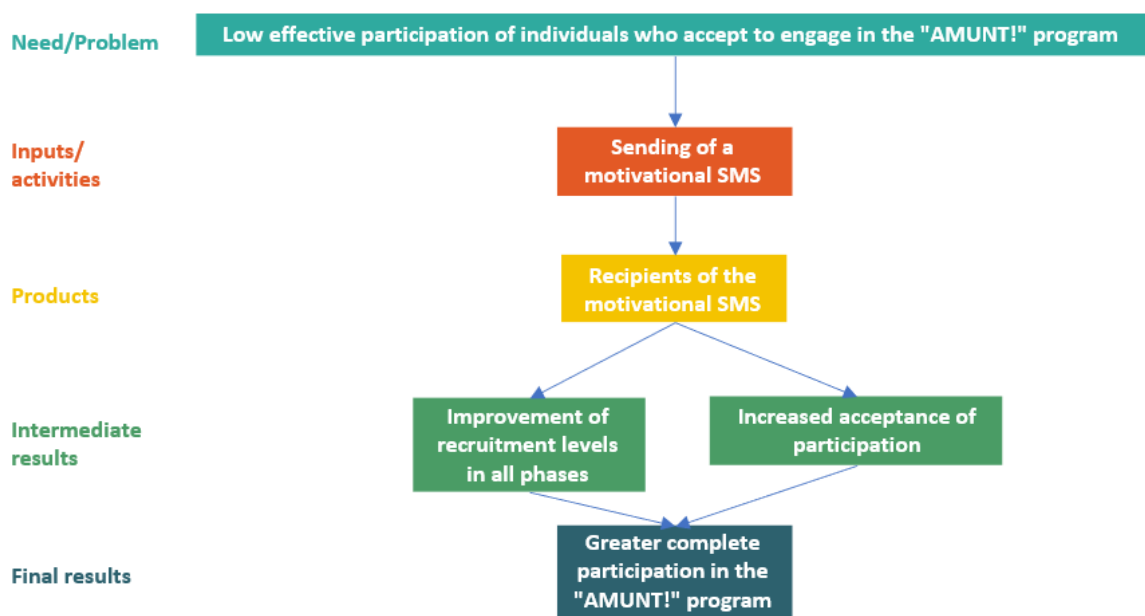
This resource produces a specific output. By measuring the obtained outputs, it is identified whether the beneficiaries have received the activities or inputs and to what extent. Proper receipt of the resources and activities implemented is indispensable for the program to achieve the expected intermediate and final results because if the beneficiaries do not effectively receive the program, observing improvements in participation rates in the "AMUNT!" program can become a hard task.

As a direct result of the intervention, this project expects an improvement in recruitment levels. Additionally, a positive effect is expected in each of the four phases of the recruitment cycle separately (phone call, acceptance of appointment, attendance to the appointment, and acceptance of the program).

In general terms, increased participation in the various recruitment phases of the pilot project should result in a higher participation rate in the "AMUNT!" program and a reduction in the initially recorded non-take-up levels.

The following figure illustrates this causal sequence of actions, initiated by the identified need or issue and the activities and resources necessary to achieve the expected changes in the participants.

Figure 3: Theory of Change



3.2 Hypotheses

The main objective of the itinerary is to evaluate whether a motivational, personal, and close treatment in communication via SMS improves the participation rate compared to impersonal SMS communication.

This study proposes the following hypotheses, defining an initial hypothesis from which the following four derive:

1. Increase the "AMUNT!" program participation

The main hypothesis of the pilot project establishes that the use of motivational and personal SMS messages, compared to standard SMS messages, increases the likelihood of individuals accepting to participate in the "AMUNT!" program.

2. Increase in appointment attendance

This hypothesis suggests that sending an innovative SMS increases the possibility of attending the appointment scheduled during the phone call.

3. Increase in appointment acceptance

This hypothesis considers that receiving an innovative SMS compared to a standard SMS increases the probability of accepting the appointment regarding the program.

4. Increase in call acceptance

This hypothesis postulates that sending a motivational SMS increases the chances of accepting the call after receiving the innovative SMS, compared to receiving a standard SMS.

5. Maximum phase of the recruitment process reached

The hypothesis focuses on how sending an innovative SMS leads to reaching a higher phase within the recruitment process (call acceptance, appointment acceptance, appointment attendance, and participation in "AMUNT!"), compared to sending a standard SMS.

3.3 Source of information

To gather the necessary information to construct the outcome indicators, this analysis uses administrative data primarily from the MISSM and the Barcelona City Council, providing descriptive information of potential participants. Consequently, the variables used in this project proceed from a database that merges individual information of participants from administrative records of the MISSM and the Barcelona City Council, both before and after the intervention.

Additionally, the staff of the Office of Social and Economic Benefits (OPSE) of the Barcelona City Council conducted all phone calls directly. These calls aimed to arrange in-person appointments to provide further information about the "AMUNT!" program.

3.4 Indicators

This section defines the indicators that this report uses to evaluate the impact evaluation of the pathway, divided according to the hypotheses previously outlined.

1. Participation in the "AMUNT!" program

Measured through a binary variable that takes the value 0 when the participant does not engage in the socio-labor inclusion program "AMUNT!" and 1 when they do.

2. Appointment attendance

Measured through a binary variable that takes the value 0 when the participant does not attend the appointment scheduled during the call, where the project is informed and explained, and 1 when they do attend.

3. Appointment acceptance

Binary variable that takes the value 1 when the participant accepts the appointment offered during the phone call and 0 when they do not.

4. Call acceptance

Binary variable that takes the value 1 when the participant answers the call made after the SMS is sent and 0 when they do not.

5. Phase of the recruitment process reached

Indicator that captures the maximum phase reached during the recruitment process after the sending of an innovative SMS. It takes the following values: 0 when receiving the SMS; 1 when accepting the call; 2 when accepting the appointment; 3 when attending the appointment; and 4 when accepting participation in the program.

3.5 Design of the experiment

This report employs an experimental evaluation known as a Randomized Controlled Trial (RCT) to assess the impact of interventions on the mentioned indicators. Participants are randomly assigned to the treatment groups and the control group. The process of recruitment and selection of intervention participants, as well as the random assignment and the temporal framework of the experiment, are detailed below.

Recruitment of intervention beneficiaries

The starting population consists of recipients of the Child Aid Supplement (CAPI) within the beneficiaries of the Minimum Income Scheme (MIS), with incomes at most 50% higher than the MIS income. Additionally, the project design set a maximum of 500 individuals to recruit, with the SMS sent in four different waves, each one accompanied by corresponding calls and appointment scheduling. After sending the SMS, this evaluation defines a series of phases to achieve the adherence to the "AMUNT!" program.

Therefore, the process from sending the SMS to joining the "AMUNT!" project presents the following phases:

- **Sending a single SMS** (innovative or standard) to the candidate.
- **Phone contact** to explain the service and offer, in case of interest, an in-person appointment with a municipal worker to further explain the service and subsequent guidance to benefit from it in the best way possible. The content of this call was the same for all participants.
- **Appointment Acceptance:** if the person was interested, a day and time were offered, along with the contact phone number of the professional in charge of assisting them.
- **Appointment attendance,** where the appointment system itself sent an automatic reminder SMS 24 hours before the appointment, and the participant had up to two opportunities to attend the appointment.

- **Acceptance of participation in "AMUNT!"** once the interview is completed. If affirmative, participants signed an informed consent to formalize their adherence to the "AMUNT!" program.

The group to be contacted consisted of recipients of the MIS, specifically, the group exclusively receiving the Child Aid Supplement (CAPI). The MISSM provided the Barcelona City Council with a list of CAPI beneficiaries, which, after some data cleansing tasks, comprised a total of 843 individuals. Initially, the list sent by the MISSM consisted of 859 individuals, but 93 individuals did not report their mobile phone numbers, an essential element for communication. After consulting the Barcelona City Council's SAIS database, some numbers were obtained, but 16 remained without information. Unable to obtain additional information, the sample size remained at 843 individuals.

Table 1: Distribution of the sample by rent range

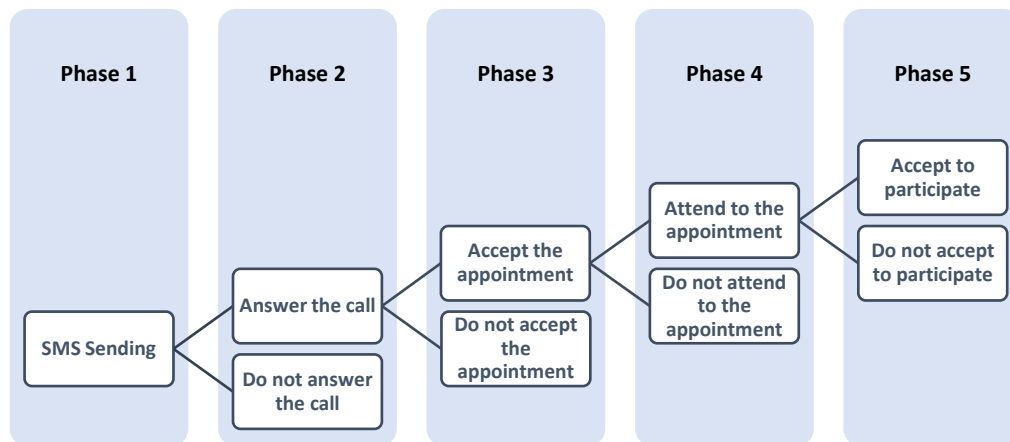
Rent range	People	Distribution
1	622	73.8%
2	121	14.4%
3	59	7.0%
4	41	4.9%
Total	843	100.0%

Table 2: Distribution of the sample by residency district

District	Candidates	Distribution
08 - NOU BARRIS	184	21.80%
10 - SANT MARTI	131	15.50%
03 - SANTS-MONTJUIC	121	14.40%
01 - CIUTAT VELLA	106	12.60%
07 - HORTA-GUINARDO	80	9.50%
09 - SANT ANDREU	74	8.80%
11 - FUERA BARCELONA	61	7.20%
02 - L'EIXAMPLE	43	5.10%
06 - GRACIA	29	3.40%
04 - LES CORTS	11	1.30%
05 - SARRIA	3	0.40%
Total	843	100.00%

Given the context of the "AMUNT!" project, several exercises were conducted to simulate recruitment scheduling, which would be executed by sending various SMS packages. The scheduling of this new recruitment had to consider the maximum weekly volume of calls that could be handled and, especially, the maximum weekly number of social care appointment slots that can be scheduled. Additionally, this scheduling should not impact the attention received by the participants already active in the treatment group of the "AMUNT!" project's general recruitment, as this could affect the overall implementation of the project and its evaluation. In other words, neglecting these individuals could lead to their deactivation, which needed to be avoided.

Figure 4: Phases of the participation in the project



Source: "Take-up of the AMUNT! pilot for socio-labor inclusion in Barcelona: evaluation of a recruitment based on clear communication" presented at the IX REPS Congress (Spanish Network of Social Policy) by Sebastià Riutort, Frederic Romea, Pau Alarcón, and Henar López.

Once participants reach the final phase of the project, they may join the "AMUNT!" program by signing the informed consent form, thereby confirming their participation in the program.

Informed Consent

One of the fundamental ethical principles of research involving human beings (respect for persons) requires study participants to be informed about the research and consent to be included in the study. Informed consent is usually part of the initial interview and has two essential parts: the explanation of the experiment to the person, and the request and registration of their consent to participate. Consent should begin with a comprehensible presentation of key information that will help the person make an informed decision, i.e., understand the research, what is expected of it, and the potential risks and benefits. Documentation is required as a record that the process has taken place and as proof of informed consent, if so.

Informed consent is required in most research and may be oral or written, depending on different factors such as the literacy of the population or the risks posed by consent. Only under very specific circumstances, such as when the potential risks to participants are minimal and the informed consent is very complex to obtain or would harm the validity of the experiment, informed consent may be avoided, or one may be given partial information to participants with the approval of the ethics committee.

Random assignment of participants

After determining the group of potential participants who will receive the SMS (either innovative or standard), the evaluation team randomly assigns participants to either the treatment group (innovative SMS) or the control group (standard SMS). Random allocation is the cornerstone of RCTs for identifying a causal relationship between the treatment and the outcomes. When performed properly, this process ensures that the treatment and control groups are statistically comparable,

encompassing both observable and unobservable variables. This homogeneity provides the required structure for accurately measuring the potential effects of the intervention.

The unit of the random assignment is individuals. Furthermore, no stratification is applied: half are randomly assigned the innovative SMS message, and the other half are assigned the standard SMS message.

Figure 5: Sample design

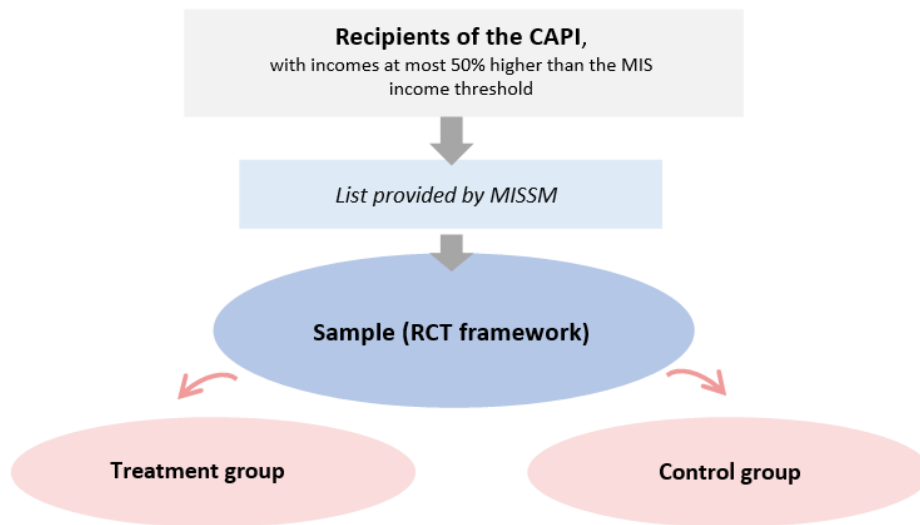
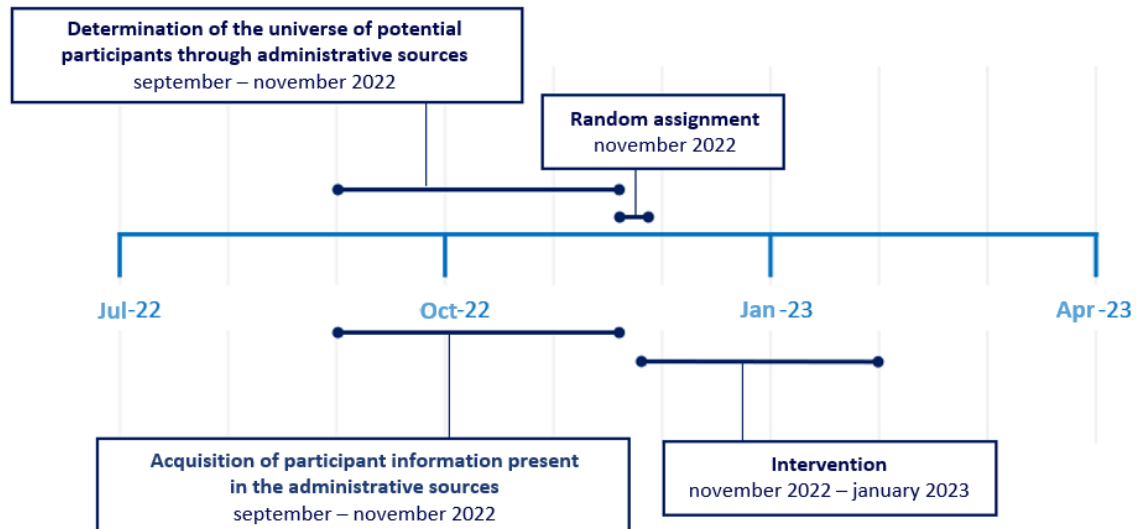


Figure 6 illustrates the timeline for the implementation and evaluation of the itinerary. Following the completion of the experimental evaluation design, the participant recruitment process by the Barcelona City Council—where potential beneficiaries are recruited through selection from administrative sources—occurs between November 7th and December 21st, 2022. After recruitment, the technical team randomly allocates individuals and observes their behavior throughout the phases of the "AMUNT!" project recruitment. The pilot project concludes with participants signing the informed consent, formalizing their involvement in the "AMUNT!" program.

Figure 6: Evaluation timeline



4 Description of the implementation of the intervention

This section describes the practical aspects of how the intervention was implemented within the framework of the evaluation design. It presents the outcomes of the participant recruitment process and other relevant logistical aspects to contextualize the evaluation findings.

4.1 Sample description

As mentioned in **section 3.5**, the experimental framework and the scale of resources available to the Barcelona City Council for this endeavor allowed for a total of 4 SMS campaigns, contacting the first 500 individuals in the sample. Recruitment for this project took place through these four waves of SMS campaigns. In the first wave, a total of 300 SMS messages were sent; in the second wave, 100 SMS messages; in the third wave, a total of 60 SMS messages; and in the fourth wave, 40 SMS messages.

Thus, a total of 250 participants received an innovative SMS (treatment group), and a total of 250 received a standard SMS (control group). During the recruitment implementation, 54 individuals could not receive the SMS and/or be contacted due to telephone issues. Consequently, the final evaluation was conducted using a sample of 446 individuals, with 221 receiving the standard SMS (control group) and 225 receiving the motivational SMS (treatment group).

Characteristics of the final evaluation sample

Table 3 presents the characteristics of the individuals who participated in the study. Information is available only for the 446 individuals who received an SMS. Data in **Table 3** comes from administrative records from the MISSM and the Barcelona City Council, collected prior to the start of the intervention. This table consists of six columns: variable, number of observations, mean, standard deviation, minimum, and maximum.

Half of the study participants received motivational SMS. Regarding gender distribution, 70% of the participants are female. The average age of the sample is 40 years old. Additionally, 71% of the participants hold Spanish nationality, and 46% of the individuals live in single-parent households.

Regarding the use of social services before the intervention, 84% of the sample was registered in the Social Action Information System (SAIS) as of November 1, 2022. SAIS is the software application that manages the information system of social service users of the Barcelona City Council. Furthermore, 49% of the participants received the 0-16 Childhood Fund during the year 2022. This fund consists of a social emergency benefit for families with members aged 0 to 16 in situations of vulnerability, provided by the Barcelona City Council.

In terms of geographical distribution, the districts with the highest representation are Nou Barris, with 22% of the participants residing in this district, followed by Sant Marti with 16% and 15% in Sants-Montjuic. Similarly, 14% reside in Ciutat Vella and 8% in Horta-Guinardo, in Sant Andreu, or outside of Barcelona. Finally, only 4% reside in Gracia, also 4% in L'Eixample; and 1% in Les Corts.

Table 3: Descriptive statistics of the sample

Variable	N	Mean	Standard Deviation	Minimum	Maximum
Motivational SMS	446	0.50	0.50	0	1
<i>Socioeconomic variables (baseline)</i>					
Female	446	0.70	0.46	0	1
Age	446	40.48	8.83	18	65
Spanish Nationality	446	0.71	0.45	0	1
In SAIS	446	0.84	0.36	0	1
Household beneficiary of the childhood fund	446	0.49	0.50	0	1
Single-parent household	446	0.46	0.50	0	1
<i>Residency district (baseline)</i>					
Ciutat Vella	446	0.14	0.35	0	1
L'Eixample	446	0.04	0.21	0	1
Sants-Montjuic	446	0.15	0.36	0	1
Les Corts	446	0.01	0.09	0	1
Gracia	446	0.04	0.20	0	1

Variable	N	Mean	Standard Deviation	Minimum	Maximum
Horta-Guinardo	446	0.08	0.27	0	1
Nou Barris	446	0.22	0.41	0	1
Sant Andreu	446	0.08	0.27	0	1
Sant Marti	446	0.16	0.36	0	1
Outside of Barcelona	446	0.08	0.27	0	1

4.2 Random assignment results

The sample is defined exclusively using administrative records. Within the set of potential participants, their assignment to either the treatment group or the control group follows the procedure explained in **section 3.5**. This study performs a balance test to ensure that, on average, the observable characteristics of the participants in both groups are equal. Achieving balance between experimental groups is crucial for inferring the program's causal effect by comparing their outcomes.

The following table displays the result of the random assignment.

Table 4: Result of the random assignment

	Control group	Treatment group	Total
01 - CIUTAT VELLA	47	59	106
02 - L'EIXAMPLE	18	25	43
03 - SANTS-MONTJUIC	61	60	121
04 - LES CORTS	5	6	11
05 - SARRIA	2	1	3
06 - GRACIA	17	12	29
07 - HORTA-GUINARDO	39	41	80
08 - NOU BARRIS	82	102	184
09 - SANT ANDREU	40	34	74
10 - SANT MARTI	68	63	131
11 – OUTSIDE OF BARCELONA	42	19	61
Total	421	422	843

Although the previous table provides district-level details, this variable did not determine the stratification of the sample. In practice, there were no stratification variables in this experiment; it was only observed that the outcome of the random assignment process provided a district-wise allocation that was manageable within the call planning.

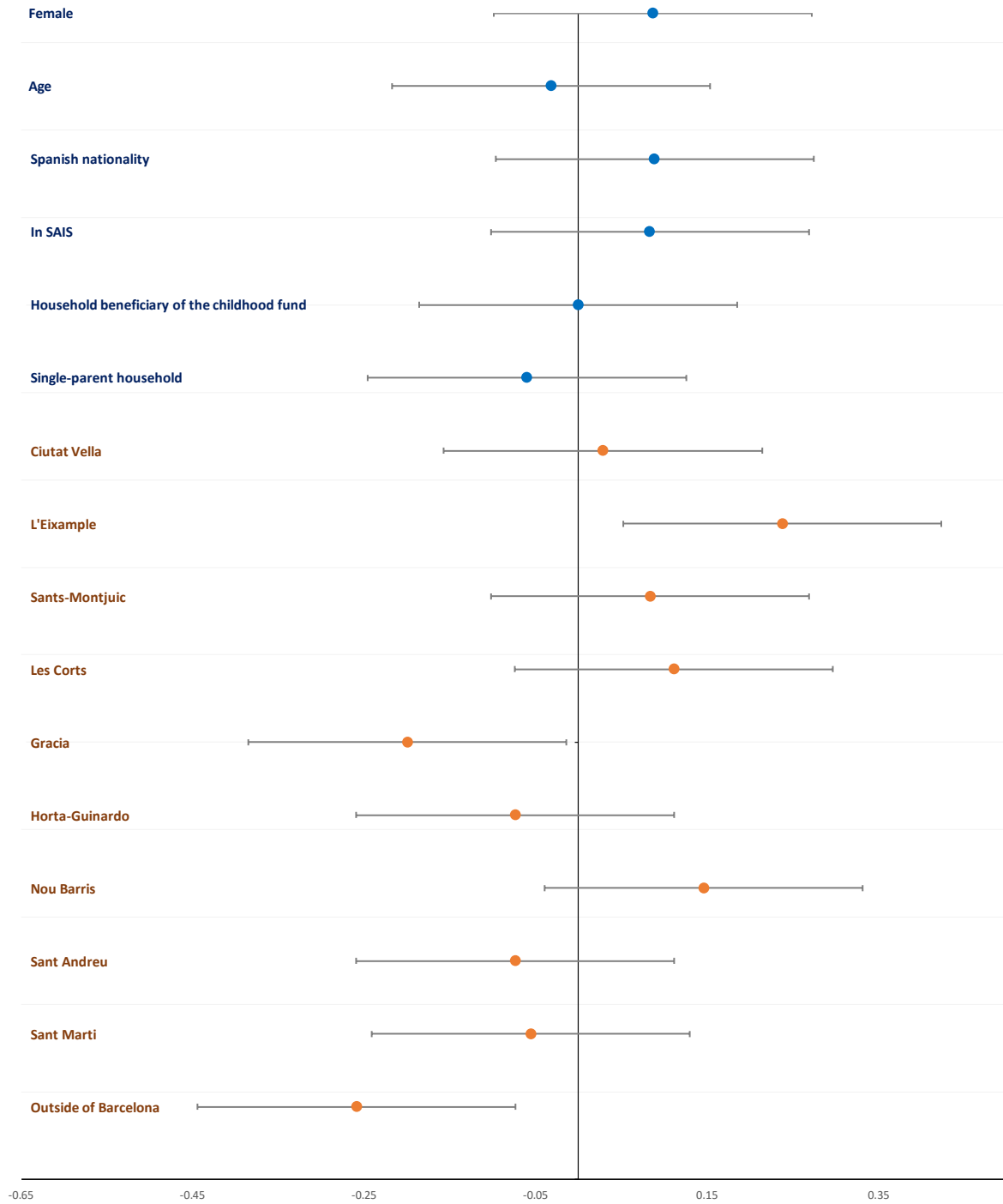
Figure 7 shows the results of balance tests between the control group and the treatment group. The balance test contrasts if, on average, the observable characteristics of the participants in both groups are equal. Balance between the experimental groups is crucial for inferring the causal effect of the program by comparing their results. All data reflected in this figure refer to administrative data collected before the intervention. For each observable variable, the difference between the mean of

that variable in the treatment group and the control group is represented by a point, and around it, the 95% confidence interval for such difference is centered. A confidence interval containing zero, that is, the vertical axis, indicates that the mean difference between groups is not statistically significant, or in other words, not statistically different from zero. It will be concluded, therefore, that the intervention groups are balanced in that characteristic. In the case where the confidence interval of the mean difference does not contain zero, it can be concluded that the difference is statistically significant, and therefore, the groups are unbalanced in that characteristic.

Figure 7 shows that the treatment and control groups are not statistically different in most variables. However, there are some exceptions. In the case of variables related to the districts of Barcelona, the average of participants living in L'Eixample is 2% in the control group compared to 7% in the treatment group. This difference is significant at 5%. Similarly, the average of participants living in the Gracia neighborhood is 6% in the control group compared to 2% in the treatment group, whose difference is significant at 5%. Lastly, regarding participants living outside Barcelona, this difference is significant at 5%, where the average of people residing in this area is 11% compared to 4% in the treatment group.

In general terms, indicators related to socio-economic variables do not present differences between groups.

Figure 7: Differences of standardized means between treatment and control group (interval of confidence of 95%)



Note: in blue, the socioeconomic variables are displayed, and in orange, the districts of Barcelona where the project takes place.

4.3 Degree of participation and attrition by groups

The recipient group of an SMS message (novel or standard) constitutes the experimental sample that was randomly assigned to the control (standard) and treatment (novel) groups. However, both the response to the phone call and the rest of the participation phases are voluntary. On one hand, it is advisable to analyze the degree of participation in each phase after sending the SMS, since the estimation of results will refer to the average effects based on the level of participation. On the other hand, this section presents whether the non-receipt of the SMS by some of the participants reduces the comparability of the treatment and control groups after the intervention.

Degree of participation

The randomization process, initially conducted with 843 individuals, eventually involved 500 participants, with 250 assigned to the treatment group and 250 to the control group. As mentioned earlier, during the recruitment implementation, 54 individuals could not be reached due to phone issues, resulting in non-delivered SMSs or inability to contact them.

Subsequently, the OPSE (Office of Social and Economic Benefits of the Barcelona City Council) managed to speak with 336 individuals, accounting for 67.2% of the initial sample (500). Out of these 336 individuals, a total of 192 accepted the appointment during the phone call, representing 38.4% of the sample (500). A noteworthy 57.1% of the effectively contacted individuals agreed to schedule an intake appointment with a professional (192 out of 336 contacted participants). The main reasons for non-acceptance of the appointment include inability to attend at the offered date and time, lack of interest, and work incompatibility.

Concerning the scheduled individuals, a total of 127 attended the appointment, which translates to 37.8% of the contacted individuals (336 individuals) and 66.1% of the total appointments made (192). Ultimately, 63% of the individuals attending the social care appointment, amounting to 80 individuals, agreed to participate in the project and receive the service offered in the "AMUNT!" program. Regarding the experimental groups, 47 out of these 80 individuals belong to the treatment group, and 33 individuals belong to the control group.

In general terms, 16% of the participants agreed to participate in the "AMUNT!" program, with 59% of the participating individuals belonging to the treatment group.

Table 5: Recruitment record ¹⁴

		Treatment group		Control group		TOTAL	
		N	%	N	%	N	%
SMS	Planned SMS	250	50.0%	250	50.0%	500	100%
	Sent SMS	221	44.2%	225	45.0%	446	89.2%
Not contacted yet		221	44.2%	225	45.0%	446	89.2%

¹⁴ This table is based on the 500 cases to which SMS messages were initially attempted to be sent. However, there were issues with 54 cases where the SMS messages did not reach their destination.

		Treatment group		Control group		TOTAL	
Contacted individuals	<i>Contacted</i>	172	38.5%	164	36.7%	336	75.3%
	<i>Not contacted</i>	49	10.9%	61	13.7%	110	24.7%
Appointment acceptance	Contacted individuals	172	38.5%	164	36.7%	336	75.3%
	<i>Accept the appointment</i>	105	31.3%	87	25.9%	192	57.1%
	<i>Do not accept the appointment</i>	67	19.9%	77	22.9%	144	42.9%
Appointments made	People called for an appointment	105	31.3%	87	25.9%	192	57.1%
	<i>Go to the appointment*</i>	72	37.5%	55	28.6%	127	66.1%
	<i>Do not go to the appointment*</i>	33	17.2%	32	16.7%	65	33.9%
Accept to participate in the project	Individuals go to the appointment	72	37.5%	55	28.7%	127	66.2%
	<i>Accept to participate</i>	47	37.0%	33	26.0%	80	63.0%
	<i>Do not accept to participate</i>	25	19.7%	22	17.3%	47	37.0%

Note: * exhausting two appointment attempts.

Attrition by groups

Table 6 displays the total number of participants in the study per intervention group. Out of the 500 selected participants, 250 were randomly assigned to receive the standard SMS, and 250 to receive the motivational SMS. Of the 500, 446 (89%) received one of the two SMS messages, and 54 (11%) did not receive any SMS due to issues with their phone numbers. **Table 6** shows that out of the 250 participants assigned to each group, around 88% received the standard SMS, which is 221 participants; and around 90% received the motivational SMS, which is 225 participants. The 2-percentage-point difference between the groups is not statistically significant.

Table 6: Participation registry for SMS reception

Group	Total	SMS receiving
Total	500	446 (89%)
Treatment	250	225 (90%)
Control	250	221 (88%)

5 Results of the evaluation

The random assignment of the experimental sample to the control and treatment groups ensures that, with a sufficiently large sample, the groups are statistically comparable, and therefore any difference observed after the intervention can be causally associated with the treatment. Econometric analysis essentially provides this comparison. However, it has the advantages of allowing the inclusion of other variables to gain precision in the estimates and of providing confidence intervals for the estimates. In this section, we present the econometric analysis conducted, the estimated regressions, and the analysis of the results obtained.

5.1 Description of the econometric analysis: estimated regressions

The regression model used to estimate the causal effect of an intervention in an RCT is the difference between the average outcome value for the control group and the treatment group. This difference captures the causal impact of the intervention, as the random allocation procedure ensures that, on average, the treatment and control groups are comparable, and any observed difference in outcomes between the two groups can be attributed to the intervention. **Table 13** shows that the observed characteristics, for which information is available, are balanced on average for the group receiving the standard SMS and the group receiving the motivational SMS. In this way, the difference between the average outcome values of the groups would capture the average effect of the intervention. To increase the precision of the estimators, the results are presented with two alternative specifications, in which variables capturing socioeconomic characteristics of the participants are added.

The main specification is as follows:

$$Y_{i,t=1} = \alpha + \beta T_i + \delta X_i + \varepsilon_i$$

where $Y_{i,t=1}$ is the dependent variable of interest observed after the intervention for person i , T_i is a binary variable capturing whether the person has been assigned to the treatment (=1), meaning they received the motivational SMS, or received the standard SMS (=0). X_i is a vector of controls including the participant's age; a binary variable taking a value of one if the participant is female and zero otherwise; a binary variable taking a value of one if the participant has Spanish nationality and zero if not; a binary variable taking a value of one if the participant is registered in SAIS and zero otherwise; a binary variable taking a value of one if the participant's household receives the Childhood Fund and zero if not; and a binary variable taking a value of one if the participant resides in a single-parent household and zero otherwise. ε_i is the error term.

5.2 Analysis of the results

5.2.1 Main results

This section presents the results of the evaluation on the indicators, following the structure of the hypothesis.

1. "AMUNT!" program participation

Table 7 displays the effect of receiving the motivational SMS on the probability of accepting participation in the socio-labor inclusion program "AMUNT!" and presents two specifications: one (1) without controls and another (2) with a vector of controls.

The results indicate that the motivational SMS increased the probability of accepting participation in the program by 7 percentage points, which is significant at the 5% level. The average participation rate in the control group is 14%, representing a 50% increase.

Table 7: Effect on the probability of participating in the program “AMUNT!”

	Accept to participate in “AMUNT!”	
	(1)	(2)
Treatment	0.06*	0.07***
	(0.04)	(0.03)
Observations	446	446
R^2	0.01	0.07
Dependent variable control mean	0.14	0.14
Controls	No	Yes

Notes: level of significance: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Robust standard errors reported in parentheses. The results of estimating a linear probability model are shown.

2. Appointment attendance

Table 8 presents the effect of receiving the motivational SMS on the probability of attending the program appointment, and two specifications are provided: (1) without controls and (2) with a control vector.

The results indicate that receiving a motivational SMS treatment compared to receiving a standard SMS increases the probability of attending the appointment by approximately 9 percentage points, a significant effect at the 5% level. This represents a 38% increase in the participation rate compared to the control group average.

Table 8: Effect on the probability of attending the appointment

	Attendance to the appointment	
	(1)	(2)
Treatment	0.08**	0.09**
	(0.04)	(0.04)
Observations	446	446
R^2	0.01	0.08
Dependent variable control mean	0.24	0.24
Controls	No	Yes

Notes: level of significance: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Robust standard errors reported in parentheses. The results of estimating a linear probability model are shown.

3. Appointment acceptance

Table 9 presents the effect of receiving the motivational SMS on the probability of accepting the program appointment, and two specifications are provided: (1) without controls and (2) with a control vector.

The results indicate that the treatment of receiving a motivational SMS compared to receiving a standard SMS increases the probability of accepting the appointment by approximately 9 percentage points, a significant effect at the 5% level. This represents a 24% increase in the participation rate.

Table 9: Effect on the probability of accepting the appointment

	Accept the appointment	
	(1)	(2)
Treatment	0.08** (0.04)	0.09** (0.05)
Observations	446	446
R^2	0.01	0.08
Dependent variable control mean	0.38	0.38
Controls	No	Yes

Notes: level of significance: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. Robust standard errors reported in parentheses. The results of estimating a linear probability model are shown.

4. Call acceptance

Table 10 presents the effect of receiving the motivational SMS on the probability of accepting the call after receiving the SMS, and two specifications are provided: (1) without controls and (2) with a control vector.

The results indicate that the treatment does not have a statistically significant effect on the probability of responding to the social affairs call after receiving the SMS. The lack of effect in this phase may be partially due to the high participation, where 73% of the control group accepted the social affairs call after receiving the standard SMS.

Table 10: Effect on the probability of accepting a call

	Accept the call	
	(1)	(2)
Treatment	0.03 (0.04)	0.04 (0.04)
Observations	446	446
R^2	0.00	0.11

	Accept the call	
	(1)	(2)
Dependent variable control mean	0.73	0.73
Controls	No	Yes

Notes: level of significance: ***p<0.01; **<0.05; *p<0.1. Robust standard errors reported in parentheses. The results of estimating a linear probability model are shown.

5. Phase of the recruitment process reached

Table 11 presents the impact of the motivational SMS on an indicator capturing the maximum phase reached during the recruitment process, and two specifications are provided: (1) without controls and (2) with a control vector.

The results indicate that participants who received the motivational SMS on average reach a more advanced phase of the recruitment process than participants who received the standard SMS. The effect is statistically significant at the 5% level.

Table 11: Phase of the recruitment process reached

	Phase of the recruitment process reached	
	(1)	(2)
Treatment	0.18*	0.21**
	(0.10)	(0.10)
Observations	446	446
R ²	-	-
Dependent variable control mean	1.49	1.49
Controls	No	Yes

Notes: level of significance: ***p<0.01; **<0.05; *p<0.1. Robust standard errors reported in parentheses. The results of estimating a probit model are shown.

5.2.2 Heterogeneity analysis

This section presents the analyses of effects according to the participants characteristics. Specifically, whether the effects differ by gender, nationality, use of SAIS, recipient of the Child Welfare Fund, and residing in a single-parent household.

The specification used is as follows:

$$Y_{i,t=1} = \alpha + \beta T_i + \gamma T_i * Z_i + \delta X_i + \varepsilon_i$$

where Z_i is the binary variable capturing the characteristic under which the heterogeneous effect of receiving the motivational SMS is analyzed (included in X_i). The coefficient of interest in this case corresponds to the interaction between the treatment and the binary variable Z_i .

The results from **Table 12** show that, overall, the effect of the program is not heterogeneous across any of the considered variables, except when we analyze the effects of the program based on the prior utilization of social affairs services (through the variable SAIS). Column (3) indicates that the effect of the motivational SMS on participation in the "AMUNT!" project, while not statistically significant at standard levels, is concentrated among those participants who were registered in SAIS before the start of the intervention. However, the fact that the study does not have enough statistical power to accurately estimate heterogeneous effects is noteworthy.

Table 12: Heterogeneous effects on accepting to participate in the "AMUNT!" program¹⁵

	(1)	(2)	(3)	(4)	(5)
Motivational SMS	0.06 (0.06)	0.12* (0.07)	-0.00 (0.07)	0.06 (0.04)	0.07* (0.04)
Motivational SMS and female	0.01 (0.07)		0.09 (0.08)	0.03 (0.07)	-0.00 (0.07)
Motivational SMS and Spanish nationality		-0.07 (0.08)			
Motivational SMS and in SAIS			0.09 (0.08)		
Motivational SMS and Childhood fund				0.03 (0.07)	
Motivational SMS and single-parent household					0.00 (0.07)
Observations	446	446	446	446	446
R ²	0.07	0.07	0.07	0.07	0.07
Dependent variable control mean	0.14	0.14	0.14	0.14	0.14

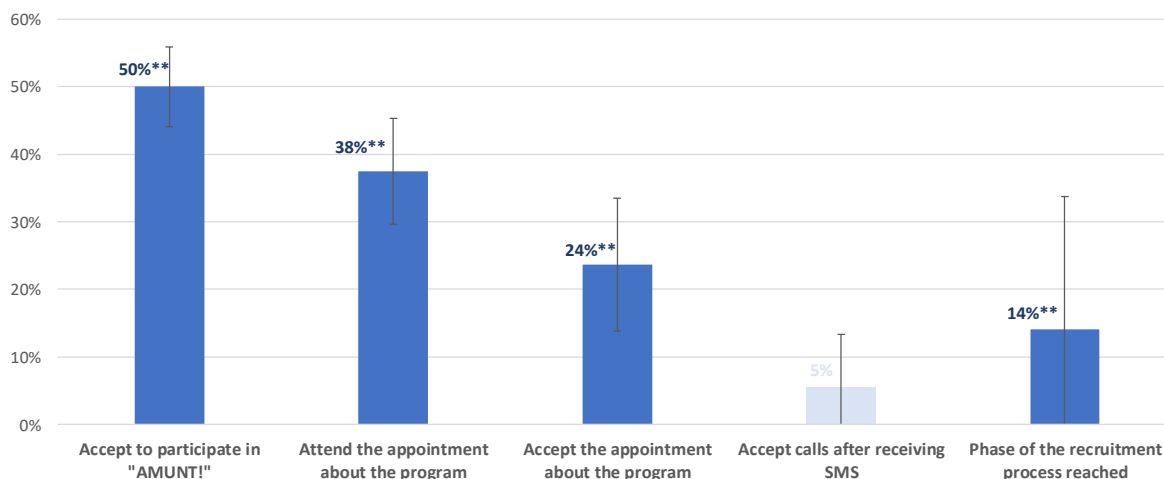
Note: significance level: ***p<0.01; **p<0.05; *p<0.1. Robust standard errors reported in parentheses. The added controls include gender, age, nationality, having used SIAS, being beneficiaries of the Childhood Fund, and residing in a single-parent household.

6 Conclusions of the evaluation

This pilot project has enabled the impact evaluation of using motivational and personalized communication versus standard communication on participation in the socio-labor inclusion project "AMUNT!". The intervention, implemented at the start of the recruitment process, involved presenting differentiated content in the project's notification SMS to potential participants. The evaluation is experimental, with participants randomly assigned to receive the standard SMS or the motivational SMS was done randomly.

¹⁵ Each column of the table represents a model with the variables for which results are presented.

Figure 8: Effect of the main indicators on the intervention



Note: significance level: ***p<0.01; **p<0.05; *p<0.1. Dark blue indicates indicators significant at the 5% level, while light blue indicates the non-significant variable. The effects included in the graphs refer to regressions with controls and are expressed as a percentage relative to the mean of the control group in the final survey.

The treatment has a positive and significant effect on participation in the socio-labor inclusion program "AMUNT!". This effect continues throughout the phases of the recruitment process, including accepting an appointment, and attending it with the social services to learn about the program, but not in the initial phase (accepting the social services call). The results show that the magnitude of the effect is consistent during the recruitment process in absolute terms, around 8 percentage points in the intermediate phases, and 7 percentage points in the final phase. In relative terms, when compared to the participation rate of the control group, we observe that the final effect on the participation rate of the inclusion program represents an increase of approximately 50% compared to the control group (42% if we use the results of the specification without including controls). It is worth noting that during the phases of the recruitment process following the receipt of the SMS, all participants received the same information about the "AMUNT!" program, and this information was provided following the same procedures. The social agents responsible for the recruitment process of the participants were not aware of the type of SMS that the participants had received.

Overall, receiving a motivational and personal SMS leads to more people attending appointments with social agents, learning about the program, and agreeing to participate. Although the effect of the program diminishes slightly over time, the final effect remains positive and statistically significant. Finally, the motivational SMS does not necessarily mean an additional cost for the Barcelona City Council compared to the standard SMS.

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Appendix

Economic and regulatory management

1. Introduction

Within the framework of the Recovery, Transformation, and Resilience Plan, the General Secretariat of Inclusion (SGI) of the Ministry of Inclusion, Social Security, and Migrations is significantly involved in Component 23 "New public policies for a dynamic, resilient, and inclusive labor market," framed within Policy Area VIII "New care economy and employment policies."

Investment 7 "Promotion of Inclusive Growth through the linkage of socio-labor inclusion policies to the Minimum Income Scheme" is one of the reforms and investments proposed in this Component 23. Investment 7 promotes the implementation of a new inclusion model based on the Minimum Income Scheme (MIS), which reduces income inequality and poverty rates. To achieve this goal, the development of pilot projects for the implementation of social inclusion pathways with the autonomous communities and cities, local entities, and Third Sector of Social Action organizations, as well as with the different social agents.

Royal Decree 938/2021, of October 26, which regulates the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migrations in the field of social inclusion, for an amount of €109,787,404, within the framework of the Recovery, Transformation, and Resilience Plan¹⁶, contributed to meeting 350 for the first quarter of 2022 as outlined in the Council's Implementation Decision: "Improve the access rate of the Minimum Income Scheme, and increase the effectiveness of the MIS through inclusion policies," which, according to its description, will translate into supporting the socio-economic inclusion of MIS beneficiaries through itineraries: eight collaboration agreements signed with subnational public administrations, social partners, and Third Sector organizations of Social Action to execute the itineraries. The objectives of these partnership agreements are: i) improve the MIS access rate; ii) increase the effectiveness of the MIS through inclusion policies. Likewise, along with Royal Decree 378/2022, of May 17¹⁷, at least 10 additional collaboration agreements signed with subnational public administrations, social partners, and Third Sector of Social Action organizations to implement pilot projects to support the socio-economic inclusion of the beneficiaries of MIS through

¹⁶Royal Decree 938/2021, of October 26, regulating the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migrations in the field of social inclusion, for an amount of 109,787,404 euros, within the framework of the Recovery, Transformation, and Resilience Plan (BOE-A-2021-17464). It can be consulted at the following link: https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-17464.

¹⁷ Royal Decree 378/2022, of May 17, regulating the direct granting of subsidies from the Ministry of Inclusion, Social Security, and Migrations in the field of social inclusion, for an amount of 102,036,066 euros, within the framework of the Recovery, Transformation, and Resilience Plan (BOE-A-2022-8124). It can be consulted at the following link: [link](https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-8124): https://www.boe.es/diario_boe/txt.php?id=BOE-A-2021-17464.

itineraries” contributed to compliance with monitoring indicator number 351.1 in the first quarter of 2023, linked to the Operational Agreements document¹⁸.

Furthermore, following the execution and evaluation of each of the subsidized pilot projects, an assessment will be conducted to evaluate the coverage, effectiveness, and success of the minimum income schemes. The publication of this evaluation, which will include specific recommendations to improve the access rate to the benefit and enhance the effectiveness of social inclusion policies, contributes to the achievement of milestone 351 of the Recovery, Transformation, and Resilience Plan scheduled for the first quarter of 2024.

In accordance with Article 3 of Royal Decree 938/2021, dated October 26, subsidies will be granted through a resolution accompanied by an agreement of the head of the Ministry of Inclusion, Social Security and Migration as the competent authority for granting them, without prejudice to the existing delegations of competence in the matter, upon request of the beneficiary organizations.

On **December 24, 2021**, the Barcelona City Council was notified of the Resolution of the General Secretariat for Objectives and Policies of Inclusion and Social Security, granting a subsidy in the amount of €9,319,398.05 to the Area of Social Rights, Global Justice, Feminism, and LGBTI of the Barcelona City Council. On December 28, 2021, a Convention was signed between the General Administration of the State, through the General Secretariat for Objectives and Policies of Inclusion and Social Security, and the Area of Social Rights, Global Justice, Feminism, and LGBTI of the Barcelona City Council for the implementation of a social inclusion project within the framework of the Recovery, Transformation, and Resilience Plan, which was published in the "Boletín Oficial del Estado" on February 1, 2022 (BOE no. 27).¹⁹

2. Timeline of the intervention

Article 16(1) of Royal Decree 938/2021, of October 26, established that the deadline for the implementation of the social inclusion itineraries covered by the subsidies provided for in this text shall not exceed the deadline of June 30, 2023, while their evaluation, shall not extend beyond March 31, 2024, in order to meet with the milestones, set by the Recovery, Transformation, and Resilience Plan in terms of inclusion policy.

¹⁸ Decision of the European Commission approving the document 'Operational Provisions of the Recovery, Transformation and Resilience Plan', which can be consulted at the following link: <https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/hacienda/Documents/2021/101121-CountersignedESFirstCopy.pdf>.

¹⁹ Resolution of January 21, 2022, from the General Secretariat for Objectives and Policies of Inclusion and Social Security, publishing the Agreement with the Barcelona City Council for the implementation of a project for social inclusion within the framework of the Recovery, Transformation, and Resilience Plan. It can be consulted at the following link: https://www.boe.es/diario_boe/txt.php?id=BOE-A-2022-1639.

However, in accordance with Section 2 of the first final provision of Royal Decree 378/2022, of May 17, within the framework of the Recovery, Transformation, and Resilience Plan, Section 4 of Article 6 and Section 1 of Article 16 are amended to extend the maximum period of the pilot projects of social inclusion itineraries covered by the grants until **October 31, 2023**, while maintaining the deadline of **March 31, 2024**, for their evaluation.

On October 20, 2022, the Barcelona City Council requested an extension of the implementation period until **September 30, 2023**, authorized by resolution of the SGOPIPS dated October 25, 2022.

Within this general timeframe, implementation begins on September 7, 2022, with the start of the intervention itinerary, continuing with the tasks of execution until **September 30, 2022**, and subsequently focusing solely on project dissemination and evaluation tasks until **March 31, 2024**.

3. Relevant agents

Among the relevant agents in the implementation of the project are:

- The **Barcelona City Council**, beneficiary entity and coordinator of the project through:
 - a) **Area of Social Rights, Global Justice, Feminism, and LGTBI** of the Barcelona City Council.
 - b) **Barcelona Activa**, responsible for developing municipal work experience and entrepreneurship and digital literacy training.
 - c) **Barcelona Education Consortium**, which has provided sector-specific training, skills accreditation services, and basic training.
 - d) **Municipal Institute of Social Services**, which has provided social care and support through the social work team, psychologist, and social work technician.
- **Catalan Social Action Entities (ECAS)** by its acronyms in Spanish), which has been responsible for deploying labor inclusion actions (Làbora), providing job orientation and support, and the ICT bootcamp.
- The **Ministry of Inclusion, Social Security and Migration (MISSM)** as the sponsor of the project, and the main responsible party for the RCT evaluation process. The General Secretariat for Objectives and Policies of Inclusion and Social Provision (MISSM) undertakes the following commitments:
 - a) Assist the beneficiary entity for the design of the actions to be conducted for the execution and monitoring of the grant object, as well as for the profiling of potential project participants.
 - b) Design the Randomized Controlled Trial (RCT) methodology of the pilot project in coordination with the beneficiary entity.
 - c) Evaluate the pilot project in coordination with the beneficiary entity.
- **CEMFI and J-PAL Europe**, as scientific and academic institutions that support MISSM in the design and evaluation of RCT.

Sample balance

Table 13 presents balance tests between the group that received the standard SMS and the group that received the motivational SMS. All data presented in this table comes from administrative data collected before the intervention. The first two columns show the means for the control group (standard SMS) and the treatment group (motivational SMS), the next two columns show the difference between the treatment and control groups and the resulting p-value from a test of this difference in means. The last three columns show the total number of participants (control + treatment), as well as the number of participants in the control and treatment groups. **Table 13** shows that all available socioeconomic variables are balanced. The only variables in which we find imbalances between experimental groups are the residency districts variables. Statistically significant differences are observed between the treatment and control groups in residents of the L'Eixample district, Gracia district, and participants from outside Barcelona.

Table 13: Balance test between experimental groups

Variable	Means				N		
	Control	Treatment	Diff.	P-value	Total	Control	Treatment
<i>Socioeconomic variables</i>							
Female	0.68 (0.22)	0.72 (0.20)	0.04	0.34	446	221	225
Age	40.62 (81.3)	40.34 (75.13)	-0.28	0.74	446	221	225
Spanish nationality	0.69 (0.21)	0.73 (0.20)	0.04	0.34	446	221	225
In SAIS	0.83 (0.14)	0.86 (0.12)	0.03	0.39	446	221	225
Childhood Fund beneficiary	0.49 (0.25)	0.49 (0.25)	0.00	0.93	446	221	225
Single-parent household	0.47 (0.25)	0.44 (0.25)	-0.03	0.58	446	221	225
<i>Residency district</i>							
Ciutat Vella	0.14 (0.12)	0.15 (0.13)	0.01	0.64	446	221	225
L'Eixample	0.02 (0.02)	0.07 (0.06)	0.05	0.02**	446	221	225
Sants-Montjuic	0.14 (0.12)	0.17 (0.14)	0.03	0.27	446	221	225
Les Corts	0.00 (0.00)	0.01 (0.01)	0.01	0.32	446	221	225

Variable	Means				N		
	Control	Treatment	Diff.	P-value	Total	Control	Treatment
Gracia	0.06 (0.06)	0.02 (0.02)	-0.04	0.01**	446	221	225
Horta-Guinardó	0.09 (0.08)	0.07 (0.07)	-0.02	0.45	446	221	225
Nou Barris	0.19 (0.15)	0.25 (0.19)	0.06	0.11	446	221	225
Sant Andreu	0.09 (0.08)	0.07 (0.06)	-0.02	0.44	446	221	225
Sant Marti	0.17 (0.14)	0.15 (0.13)	-0.02	0.55	446	221	225
Outside of Barcelona	0.11 (0.10)	0.04 (0.04)	-0.07	0.01**	446	221	225

Note: significance level: ***p<0.01; **p<0.05; *p<0.1. Robust standard errors reported in parentheses.