

Promoting Venezuelan migrants' registration to Sisbén

Pre-Analysis Plan

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Abstract

This intervention aims to estimate the effectiveness of information to promote migrant registration in the social registry Sisbén and to explore the role of social capital for this purpose. The Colombian government uses Sisbén to classify the population according to their economic and social situation and target social programs. Qualitative evidence has shown multiple barriers to migrants' registration in this database, which may preclude their visibility and potential eligibility for social assistance. In the first phase of the study, we randomly assign a sample of Venezuelan migrants into a control group and two treatment groups: i) a group that receives information on the process of Sisbén registration via SMS; and ii) a group that receives the same information on Sisbén registration via WhatsApp. In the second phase of the study, which is not an experiment, another group of Venezuelan migrants receives messages via WhatsApp inviting them to refer their Sisbén information with their friends thus to study information diffusion and social capital. We expect the results to shed light on how to eliminate the documented barriers and misinformation that leads to not registering for Sisbén using cost-effective communication methods, and help trace out the importance of social networks among displaced Venezuelans living in Colombia.

Keywords: displacement, information, nudge, targeting, social capital
JEL Classification: C93, D83, D90, I38, O15.

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1) Motivation and contributions

Over the last decade, more than six million Venezuelans have left their country. About two million are currently in Colombia. The challenges to socioeconomically integrating this population into the country are innumerable. The Colombian government decided to host and receive them by regularizing their immigration status in the country through the Temporary Protection Statute for Venezuelans (ETPV, for its acronym in Spanish). Since the launch of the ETPV at the beginning of 2021, more than two million Venezuelan migrants in Colombia have completed the pre-registration process (RUMV, for its acronym in Spanish), and 1.6 million have completed the required biometric registration.

One of the potential next steps in the integration process is affiliation to Sisbén, the Identification System of Potential Beneficiaries of Social Programs. The Sisbén is a database that classifies the population according to their economic and social situation. The National Planning Department (DNP, for its acronym in Spanish), the institution in charge of managing Sisbén at the national level, aims to complete 1,050,000 Venezuelan migrants' Sisbén surveys by the end of 2022. This information system has become a key instrument for targeting social programs in Colombia, such as “Familias en Acción” and the Subsidized Health Regime, since implementing agencies use Sisbén to target and select beneficiaries according to the specified rules governing each assistance program.

Since 2021, the DNP has undertaken several strategies to enroll Venezuelan migrants with a temporary protection permit (PPT, for its acronym in Spanish). Despite these efforts, the DNP team in charge of Sisbén has observed challenges registering Venezuelan migrants. They have identified the following barriers to registration: i) Myths about the scope of Sisbén (equivalence with health insurance); ii) Lack of knowledge about the survey and the system; iii) Mistrust of a 'new' institution requesting personal data. Mitigating these barriers to Sisbén registration and providing information on the consequences of non-affiliation are critical objectives for the national and local governments to support the demand for state services from Venezuelan migrants.

The study will make three main contributions:

1. Test the relative cost-effectiveness of two messaging strategies for contacting the migrant population.
2. Develop an understanding of bottlenecks and stages with the highest attrition throughout the Sisbén registration process.

- Map and improve the understanding of how informal social networks, social capital, and information diffusion through “word of mouth” may relate to registration in Sisbén.

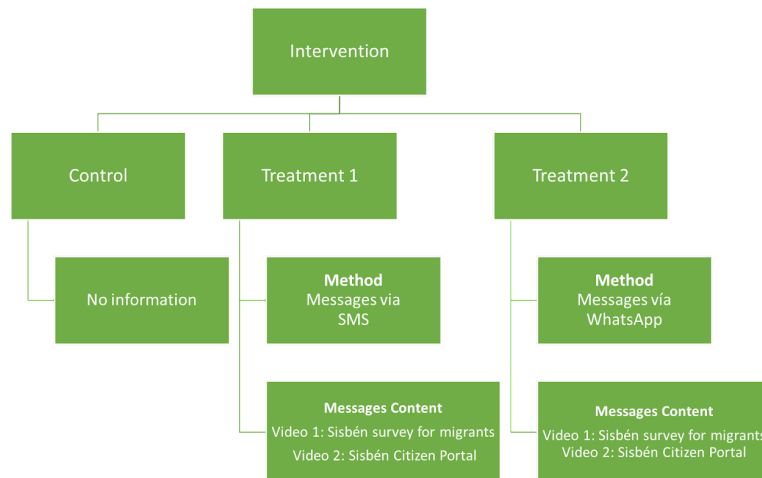
2) Intervention

The study has two main phases. In the *first*, we seek to evaluate the effect of different information nudges on Sisbén registration. In the *second* phase, we aim to identify the dynamics of participants’ social capital and if it correlates with Sisbén take-up or not.

a) First phase

The first stage consists of an RCT. We will send the participants a baseline survey that includes screening questions. We will assign eligible participants, who from now on we will call “Generation 0”, into three groups, one control and two treatments (see Figure 1)⁸. Participants assigned to the control group will not receive any information, besides the baseline and endline survey. Participants in Treatment 1 group will receive informational nudges via SMS. Participants in Treatment group 2 will receive information through WhatsApp. The content of the messages is the same for the two treatment groups.

Figure 1. Randomized groups and treatments



Source: Own elaboration.

⁸ Eligibility criteria: Venezuelans, of legal age, with a temporary protection permit (PPT), who have not yet registered to complete the Sisbén survey according to administrative records from the Colombian government..

Each treatment group will receive four different messages for two weeks, as described below. Within each message there is an embedded link to two videos (Videos and messages' contents are described in Annexes A and B).

- **Message 1:** All participants in the treatment groups receive a link to a video about the Sisbén survey for migrants (Video 1).
- **Message 2:** All participants in the treatment groups receive a link to a video about Sisbén's Citizen Portal (Video 2).
- **Message 3:** All participants in treatment groups receive a link to a video about Sisbén survey for migrants (Video 1). **Message 4:** All participants in treatment groups receive a link to a video about Sisbén's Citizen Portal (Video 2).

b) Second phase

The second phase of the study will complement the first phase's intervention by mapping out migrant networks and information diffusion among those networks. In this second phase, we will send eligible participants -participants that already requested Sibén- three to four messages inviting them to ask other Venezuelans to contact us and be part of the study. From now on, we will refer to this first group of participants as "Generation 1." Each participant from Generation 1 will receive a unique code that referrals must send us through WhatsApp to register in the study.

At the moment the referrals contact us with the code via WhatsApp, we will send them the baseline survey which includes screening questions to determine their eligibility. From now on, we will refer to this second group as "Generation 2". Similarly to Generation 1, eligible participants of Generation 2 will receive three to four messages via WhatsApp inviting them to refer other Venezuelans to the study and respond to an endline survey. Referrals from Generation 2, which we identify as "Generation 3" , are also invited to respond the baseline survey.

The message contents are described in Annex B.

Figure 2. Expected timeline

Phase	Generation	Activity	Timeline (2022)
Phase 1 (RCT)	Generation 0	Baseline	July-August
		Interventions	October
		Endline	October
Phase 2 (Social capital)	Generation 1	Baseline	July-August
		Referrals	October
		Endline	November
	Generation 2	Baseline	November
		Referrals	November
		Endline	December
Generation 3	Baseline	December	

Source: Own elaboration.

3) Data

The initial sample frame of the study will be the ineligible Venezuelans from the screening process of the Project “Increasing ETPV take-up and use (ETPV)” who accepted to be contacted for future studies. These individuals live in Magdalena (Santa Marta and Ciénaga), and Atlántico (Sabanalarga and Baranoa) and registered in December of 2021 for the ETPV project. In May 2022, as part of that study, we sent a message to 3,826 eligible participants to ask their willingness to participate in other studies. Of those, 2,769 accepted to be contacted in the future.

From these last 2,769 participants, eligible participants for the RCT, Generation 0, will be those Venezuelans who are above 18 years old that have not requested Sisbén at the moment of the baseline and consented to participate in the Sisbén study. For these participants, we will (i) administer a WhatsApp baseline survey and screening, (ii) send informative videos through WhatsApp/SMS, and (iii) administer an endline survey.

From those 2,769 participants, eligible participants for the second phase of the study, Generation 1, will be those Venezuelans who are above 18 years old that did requested Sisbén until the moment of the baseline and consented to participate in the Sisbén study. Additionally, participants of the second stage will be the referrals of Generation 1, that is Generation 2, and the referrals of Generation 2, that is Generation 3. For these

individuals, we will (i) administer a baseline survey to determine their eligibility, ii) ask for referrals, and (iii) administer an endline survey. Table 1 shows the order of data collection for each of the generations.

These data will be cross-referenced with DNPs administrative records. Using the ID numbers, dates of birth, and names of the participants, DNP will merge our records with theirs to have actual measures of requesting the Sisbén survey and the ensuing process. With this information, we can observe whether the household the person resides in has requested the survey, has been surveyed, selected for a particular social program, and other outcomes along the pipeline.

Table 1. Expected data collection

Order	Generation	Questionnaires/Metrics	Respondents	Measures
1		Baseline survey	Control, Treatment 1, Treatment 2	Screening questions Sociodemographic characteristics Knowledge about Sisbén Myths about Sisbén Social capital
2	0	Metrics about video's reproduction	Treatment 1, Treatment 2	Whether the participant reproduced the video or not What percentage of the total video was reproduced How many times did the participant reproduce the video In which second the video was paused or stopped Proxy variables to spillovers
3		Quizzes about the interventions		Questions to verify the treatment understanding
4		Endline survey	Control, Treatment 1, Treatment 2	Knowledge about Sisbén Myths about Sisbén Social capital
5	1	Baseline survey	All participants from Generation 1	Screening questions Sociodemographic characteristics Knowledge about Sisbén Myths about Sisbén Social capital
6		Questions about referrals		Questions about referrals' participation expectations
7		Endline survey		Questions about their attempts to refer
8	2	Baseline survey	All participants from Generation 2	Screening questions Sociodemographic characteristics Knowledge about Sisbén Myths about Sisbén Social capital
9		Questions about referrals		Questions about referrals' participation expectations
10		Endline survey		Questions about their attempts to refer
11	3	Baseline survey	All participants from Generation 3	Screening questions Sociodemographic characteristics Knowledge about Sisbén Myths about Sisbén Social capital

Source: Own elaboration.

3.1 Experimental design

For the first phase of the study, given the sample and the goals of the intervention, we will randomly assign treatment at the individual-level, allocating persons into one of three groups: i)

control group, which does not receive information on Sisbén registration; ii) a group that receives information on the Sisbén registration process via SMS; iii) a group that receives the same information on Sisbén registration via WhatsApp.

Given eligibility criteria and consent, 860 individuals will be part of the RCT. We assign one third into each of the three groups, with sample sizes of 303 (Control), 280 (Treatment 1), and 277 (Treatment 2). Using previous information collected for these individuals, we test for balance across the three assignment groups in Table 2, finding that the sample is well-balanced.

Table 2. Balance in attributes across randomized groups

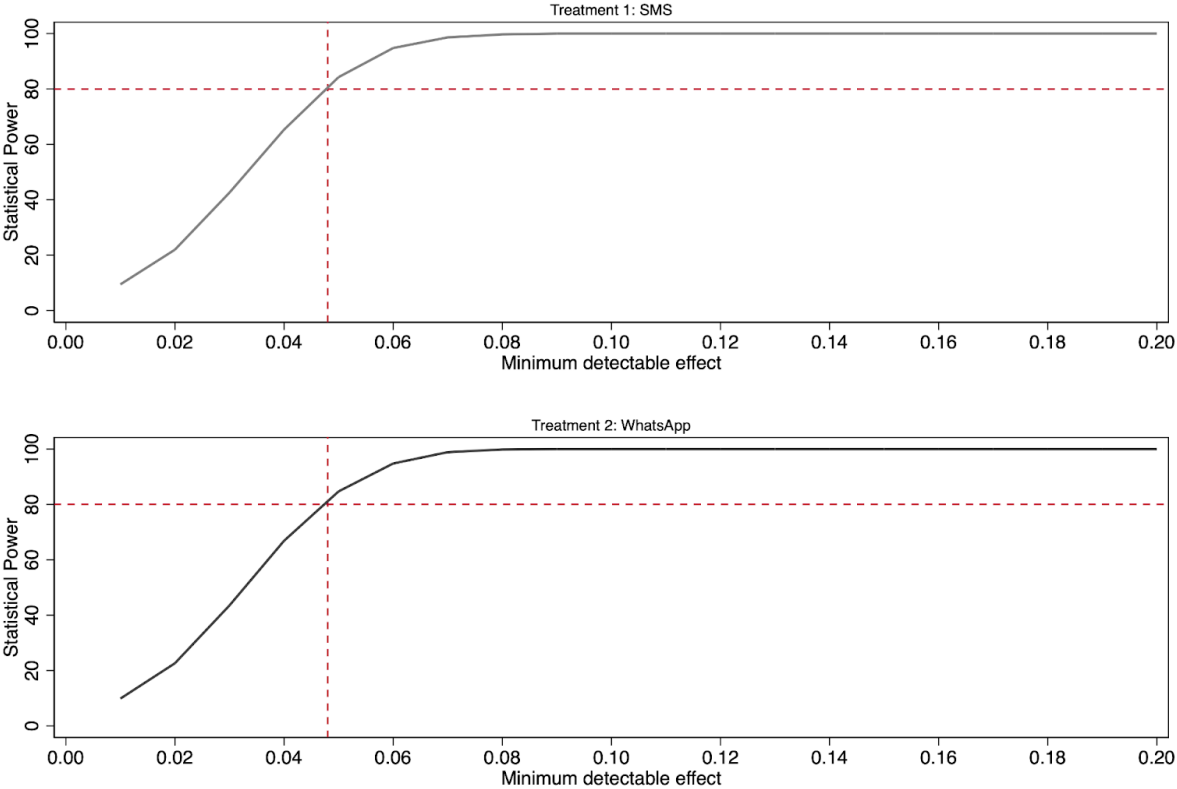
	Control	Treatment 1	Treatment 2	P(C=T1=T2)	N
Female	0.693 (0.462)	0.696 (0.461)	0.671 (0.471)	0.790	860
Age	33.558 (10.618)	34.679 (10.233)	33.744 (9.862)	0.379	860
Secondary complete	0.615 (0.488)	0.624 (0.485)	0.560 (0.497)	0.295	768
Active in labor market	0.548 (0.499)	0.532 (0.500)	0.495 (0.501)	0.425	860
Household size	5.315 (1.972)	5.192 (1.587)	4.988 (1.849)	0.145	768
Children in household	2.270 (1.321)	2.396 (1.804)	2.325 (1.623)	0.660	768
Other family members are Colombian	0.314 (0.465)	0.361 (0.481)	0.332 (0.472)	0.483	860
Observations	303	280	277		

Source: Own elaboration.

Notes: The table presents means for each variable and standard deviations in parentheses. The p-values are obtained by regressing each variable on treatment group dummy variables with robust standard errors, and correspond to the hypothesis that means for Control, Treatment 1 and Treatment 2 groups are equal.

We conduct power calculations by simulation since we have no pre-intervention data on Sisben registration for these eligible individuals (it is zero for all). We then split these into the three groups and simulate a binary outcome with a normal distribution with mean 0.10 and standard deviation 0.4, calculating power for different effect sizes (from 1 to 20 percentage points). This process is repeated 10,000 times for each effect size. The resulting power calculations are shown in Figure 2.

Figure 2. Power calculations



N=860; Control=306; T1=265; T2=289

Source: Own elaboration from simulations.

On average, the groups have the following sizes: Control (N=306), Treatment 1 (N=265), and Treatment 2 (N=289). With a rejection rate of 5% and power of 80%, we can detect a change of just below 5 percentage points for each of the two treatment groups (coefficient=0.05). This minimum detectable effect may be lower if the outcome has less dispersion (lower variance) and by including controls in the regressions we specify below. This same minimum detectable effect applies to the difference between treatments, that is, we can identify a differential effect of five percentage points or greater with the eligible sample between Treatments 1 and 2.

Although the second phase does not have an experimental design, what we will do is to send messages inviting the Generations 1 and 2 to refer Sisbén information with fellow Venezuelans to study information diffusion.

We will also analyze secondary outcomes relating to information about Sisbén among Venezuelan migrants. In qualitative work, several myths about Sisbén were commonly found, specifically regarding its nature (conceptions of it not being an information system, but a social program or other aid) and the required documents to request registration. We will ask participants their perceptions through quiz questions to understand whether the provided information helps eliminate these myths. According to our power calculations, we may detect a change of 10 percentage points on binary variables that identify correct answers.

3.2. Incentives

To motivate survey participation, respondents will participate in a raffle for a grocery voucher of 200,000 Colombian pesos (approximately \$50 US dollars) among each 50 participants. Additionally, to incentivize participants to refer other Venezuelans to the study, we set another scheme of raffles of grocery vouchers and a cell phone among those that refer. The detailed scheme of incentives is presented in Table 3.

Table 3: Incentives

Phase	Generation	Activity	Incentives
Phase 1 (RCT)	Generation 0	Baseline	Raffle for a grocery voucher of \$200,000 Colombian pesos among every 50 participants.
		Interventions	None
		Endline	Raffle for a grocery voucher of \$200,000 Colombian pesos among every 50 participants.
Phase 2 (Social capital)	Generation 1	Baseline	Raffle for a grocery voucher of \$200,000 Colombian pesos among every 50 participants.
		Referrals	If at least 3 referrals send the code, the participant who referred them will participate in the raffle of a grocery voucher for \$200,000 Colombian pesos.
			If at least 3 seed referrals request the Sisbén survey, the participant who referred them will participate in the raffle of a cell phone at the end of the referral period.
	Endline	The participant, whether Generation 1 or 2, with the highest number of successfully registered referrals, will directly win another grocery voucher of \$200,000 pesos. Raffle for a grocery voucher of \$200,000 Colombian pesos among every 50 participants.	
Phase 2 (Social capital)	Generation 2	Baseline	Raffle for a grocery voucher of \$200,000 Colombian pesos among every 50 participants.
		Referrals	If at least 3 referrals send the code, the participant who referred them will participate in the raffle of a grocery voucher for \$200,000 Colombian pesos.
			If at least 3 seed referrals request the SISBEN survey, the participant who referred them will participate in the raffle of a cell phone at the end of the referral period.
	Endline	The participant, whether Generation 1 or 2, with the highest number of successfully registered referrals, will directly win another grocery voucher of \$200,000 pesos. Raffle for a grocery voucher of \$200,000 Colombian pesos among every 50 participants.	
	Generation 3	Baseline	Raffle for a grocery voucher of \$200,000 Colombian pesos among every 50 participants.

4) Hypotheses and empirical strategy

Given the experimental design described above, we will estimate the following regression by OLS:

$$Y_i = \alpha + \beta_1 \text{Treatment1}_i + \beta_2 \text{Treatment2}_i + X_i^0 \beta_X + \varepsilon_i \quad (1)$$

where Y_i is whether the household has requested the Sisbén survey and whether the survey has been carried out, as well as quiz questions regarding myths about Sisbén. The coefficients of interest will be attached to binary variables that capture differences in these outcomes between treatment groups and the control group. Since randomization occurs at the individual-level, we will use robust standard errors to account for non-spherical errors. Also, given that we will estimate effects on multiple outcomes using the same source of variation, we will adjust our p-values using false discovery rate adjusted q -values (Benjamini and Hochberg, 1995). We will also conduct heterogeneous analysis to explore differential impact and robustness tests to ensure that our results are due to the intervention and not any other factors.

This empirical specification allows testing the following hypotheses on our primary and secondary outcomes:

- **H1 (Control versus All Treatments):** The dissemination of information leads to greater registration from Venezuelan migrants in Sisbén.
- **H2 (Treatment 1 versus Treatment 2):** The form of delivering the information has a differential impact. That is, SMS delivery has a different effect than WhatsApp delivery of information.

5) Threats to inference

The main threat to our identification strategy is non-compliance, which may take several forms, but all of them dilute the strength of the intervention. First, receiving an SMS or WhatsApp message does not guarantee that the selected household member watches the video and internalizes the information. Without views, the treatment would be diluted and make information ineffective. To ensure that the video can be watched, we have uploaded it to a platform to minimize personal data consumption and have included additional controls to determine who watches the video. Cellular network coverage may also be a problem if participants live in poor coverage areas.

Second, we face an intention-action gap. Participants may watch the video and understand the information, but it may not lead to the effective, finally desirable action: request the Sisbén survey. As with the first potential threat, this would dilute the treatment yet provide evidence that providing information is not enough to bridge the intention-action gap.

Third, given the duration of the study, we may experience attrition in various stages of the project. While we have designed the study with incentives and reminders to promote participation throughout the entire process, some Venezuelans often change their mobile numbers, migrate to other parts of Colombia, and could choose to stop participation. In part, this informs us on different moments that may lead Venezuelans to abandon the registration process but could be an important threat to our identification strategy if this attrition is systematic. We expect to see some level of these three problems, which we will attempt to circumvent using several design elements and ex-post corrections when available.

Fourth, in addition to the “logistic” drivers of attrition, there may also be some behavioral reasons why participants could withdraw from the study. For instance, participants could face long work journeys, or an intense employ of time in other activities, leading to attrition attributable to cognitive overload, decision fatigue, or inattention. Moreover, participants may just forget to respond to us after establishing contact, because of their use of the mobile phones for other activities.

Finally, some threats are associated with the phase of social capital mapping. If Venezuelans’ networks are very close, many referrals for phase two may be the same participants of phase one, inhibiting us to distinguish the effectiveness of the videos and the social capital. Another risk is that participants from the first generation refer themselves or inexistent people to increase their chances of winning the incentive raffles. To mitigate this risk, we designed identification questions to confirm participants' identities and we will also administer screening questions to referrals.

6) Ethics and IRB approval

The study received IRB approval by Innovations for Poverty Action (Protocol 16384) on 06/30/2022. The study was found to have minimal risk. All of the research procedures fall within the expedited review categories.

References

Benjamini, Y. and Hochberg, Y. (1995). Controlling the false discovery rate: a practical and powerful approach to multiple testing. *Journal of the Royal Statistical Society: Series B (Methodological)*, 57(1):289–300.

7) Annex A: Video content

Video 1: *Sisbén survey for migrants*

This video informs about the following points:

- The migrant population that is in Colombian territory must also be classified according to their economic situation and their living conditions through Sisbén.
- Migrants who want to complete the Sisbén survey can do so like any other Colombian, through the Citizen Portal or the Sisbén Office in their municipality of residence.
- Migrants must comply with the requested documentation and not complete the survey in special accommodation places such as shelters, daily pay or camps.
- More information can be obtained on the website www.sisben.gov.co.

Video 2: *Citizen Portal*

This video informs about the following points:

- The Citizen Portal is a web page where various procedures related to Sisbén can be carried out, without the need to go to any office.
- Through the Portal, you can check if the registered person's family unit is in the database. If not, you can request for the survey to be done at home.
- All the information provided in the survey can be consulted in the Citizen Portal, and if there is any change in said information, it can also be updated.
- The Citizen Portal is also used to check the status of other system requests.
- More information can be obtained on the website www.sisben.gov.co.

8) Annex B: Messages

Table. Messages for Generation 0

	WhatsApp Content - Treatment 2	SMS Content - Treatment 1	Control
Message 1	<p>Hello [name]. We are IPA Colombia, thank you for agreeing to participate in our study. We invite you to open this video so you can learn more about the SISBÉN survey and the documents you need to register.</p> <p>[Video link: SISBÉN]</p> <p>Request your SISBÉN survey on the Citizen Portal. https://portalciudadano.sisben.gov.co/</p>	<p>Hello [name]. We are IPA Colombia, thank you for agreeing to participate in our study. We invite you to open this video so you can learn more about the SISBÉN survey and the documents you need to register.</p> <p>[Video link: SISBÉN]</p> <p>Request your SISBÉN survey on the Citizen Portal. https://portalciudadano.sisben.gov.co/</p>	
Message 2	<p>Hello [name]. Remember to request your survey from SISBEN through the Citizen Portal. https://portalciudadano.sisben.gov.co/</p> <p>Requesting the survey and obtaining your classification in the SISBÉN is up to you!</p> <p>Do you want to know more about the Citizen Portal? We invite you to open this video: [Video link: Citizen Portal]</p>	<p>Hello [name]. Remember to request your survey from SISBEN through the Citizen Portal. https://portalciudadano.sisben.gov.co/</p> <p>Requesting the survey and obtaining your classification in the SISBÉN is up to you!</p> <p>Do you want to know more about the Citizen Portal? We invite you to open this video: [Video link: Citizen Portal]</p>	

Message 3	Hello [name]. With a valid ID, request the Sisbén survey, the first step so that you can access services from the Colombian Government. https://portalciudadano.sisben.gov.co/	Hello [name]. With a valid ID, request the Sisbén survey, the first step so that you can access services from the Colombian Government. https://portalciudadano.sisben.gov.co/	
	In this video we tell you the documents you need to register. [Video link: SISBÉN]	In this video we tell you the documents you need to register. [Video link: SISBÉN]	
Message 4	Hello [name]. Have you already requested your survey from SISBEN through the Citizen Portal? https://portalciudadano.sisben.gov.co/	Hello [name]. Have you already requested your survey from SISBEN through the Citizen Portal? https://portalciudadano.sisben.gov.co/	
	Requesting the survey and obtaining your classification in the SISBÉN is up to you! [Video link: Citizen Portal]	Requesting the survey and obtaining your classification in the SISBÉN is up to you! [Video link: Citizen Portal]	
Message 5	Hello [name]. Thank you for participating in our study. We hope you have requested the SISBEN survey! https://portalciudadano.sisben.gov.co/	Hello [name]. Thank you for participating in our study. We hope you have requested the SISBEN survey! https://portalciudadano.sisben.gov.co/	Hello [name]. Thank you for participating in our study.
	We are raffling [X] market vouchers and we are handing them out to the winners.// You are the happy winner of a market voucher.	We are raffling [X] market vouchers and we are handing them out to the winners.// You are the happy winner of a market voucher.	We are raffling [X] market vouchers and we are handing them out to the winners.// You are the happy winner of a market voucher.

Table. Messages for Generations 1 and 2

	<p>Hello [name]. We are IPA Colombia, thank you for agreeing to participate in our study about the Sisbén.</p> <p>Earn when your referrals also participate in the study!</p>
Message 1	<p>Share our contact and this [code] to Venezuelan acquaintances. Ask them to write to us from their cell phone and give us your [code] If we receive at least 3 referrals in the next two weeks, you will participate in the raffle for one more market voucher for \$200,000 Colombian pesos. And if your referrals request the SISBÉN survey for the first time, you will participate in a raffle for a smartphone! Don't forget to tell your referrals about the Sisbén</p>
Message 2	<p>Hello [name]. We are IPA Colombia, thank you for participating in our study about the Sisbén.</p> <p>Remember to share our contact and this [code] to Venezuelan acquaintances. Ask them to write to us from their cell phones and give us your [code]. If we receive the message of at least 3 referrals in the next week, you will participate in the raffle for another market voucher for \$200,000 Colombian pesos. And if your referrals request the Sisbén survey, you will participate in a raffle for a smartphone! Don't forget to tell your referrals about the Sisbén.</p>
Message 3	<p>Hello [name]. We are IPA Colombia, thank you for participating in our study about the Sisbén.</p> <p>Remember to share our contact and this [code] to Venezuelan acquaintances. Ask them to write to us from their cell phones and give us your [code]. If we receive the message of at least 3 referrals in the next week, you will participate in the raffle for another market voucher for \$200,000 Colombian pesos. And if your referrals request the Sisbén survey, you will participate in a raffle for a smartphone! Don't forget to tell your referrals about the Sisbén.</p>
Message 4	<p>Hello [name].</p> <p>Last days to send us your referrals and win! The person with the highest number of referrals who register in our study will win automatically a market voucher of \$200,000 pesos. Don't forget to tell your referrals about the SISBÉN</p>
Message 4	<p>Hello [name]. We are raffling [X] market vouchers and we are handing them out to the winners.// You are the happy winner of a market voucher.</p> <p>If you sent us 3 referrals and they request the SISBÉN survey, you will participate in a raffle for a smartphone! Remind them to sign up!</p>