ADN Dignidad Long Term Impact Evaluation

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HAEC | Humanitarian Assistance Evidence Cycle

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ACRONYMS

AAH	Action Against Hunger
BHA	Bureau for Humanitarian Assistance
CUA	Cash for Urban Assistance
DRC	Danish Refugee Council
HAEC	Humanitarian Assistance Evidence Cycle
HH	Household
ICER	Incremental Cost-Effectiveness Ratio
IPW	Inverse Probability Weighting
MPCA	Multi-purpose cash assistance
NRC	Norwegian Refugee Council
PP	Percentage points
r-CSI	Reduced Coping Strategies Index
RDD	Regression Discontinuity Design
USAID	United States Agency for International Development

ABSTRACT

The Venezuelan humanitarian crisis represents one of the largest displacement crises in the world, putting strain on host countries' capacity to deliver essential social assistance. Understanding how to effectively support these displaced populations has become imperative. To this effect, cash transfers are a well-established effective development tool. However, little is known about their effectiveness in aiding the displaced population in the Venezuelan crisis context. Evidence on the sustainability of impacts in the longer term is particularly scarce. This study contributes to filling this gap and presents evidence on ADN Dignidad's multipurpose cash assistance in Colombia 13 to 18 months after program completion.

ADN Dignidad[3] is implemented by the Cash for Urban Assistance (CUA) Consortium, led by Action Against Hunger (AAH) in partnership with the Danish Refugee Council (DRC) and the Norwegian Refugee Council (NRC), with funding from the United States Agency for International Development's (USAID's) Bureau for Humanitarian Assistance (BHA). The program aims to improve access to basic food, non-food items, and shelter through the provision of six months of unconditional multipurpose cash assistance valued at $77 USD per recipient household per month on average. They focused the aid on vulnerable Venezuelan migrants, Colombian returnees, and mixed-migrant host-community members. Through informational sessions and messaging, the project also works to maximize the nutritional impact of the multi-purpose cash assistance (MPCA) transfers and improve the overall protective environment by increasing awareness of locally available and legally accessible social protection (education, health, social protection, etc.) and legal services.

To estimate the impact of ADN Dignidad, we implemented a Regression Discontinuity Design (RDD) based on eligibility rules that assign scores to each applicant. The RDD establishes the program's impact by comparing outcomes of applicants who are just above and below the eligibility threshold.[4] Thus, the impacts estimated in this report apply to the pool of applicants with borderline eligibility scores – the least vulnerable applicants amongst a highly vulnerable population. We conducted the long-term impact analysis on a sample of 2,162 applicants collected 13 to 18 months after program completion, in the areas of Barranquilla, Bogota, and Nariño. These results also complement the short-term impact evaluation done on 3,189 applicants of the same cohort, one to three months after they stopped receiving the transfers.

The program exhibits a range of short- and long-term effects across different domains. Initially, ADN Dignidad positively affected participation in welfare programs, income stability, and subjective well-being, while also reducing coping strategies such as family borrowing and child labor. However, over time, some economic effects diminished, with positive but not-statistically significant impacts on income. Still, we find sustained positive effects on social integration and well-being, particularly among Venezuelan immigrants. At the same time, sustained reduction in food insecurity remains significant in the long term, indicating a lasting impact on the participants' well-being. Longer term outcomes show no significant influence on migration intentions or children's education.

[3] ADN is part of the name of the program, it represents the first letters of the names of the consortium members, Action Against Hunger, Danish Refugee Council and Norwegian Refugee Council, and is the equivalent of "DNA" in Spanish.

[4] The program assigned two scores to each applicant (Proxy Mean Test score and the Scorecard Model score). Applicants were eligible for the program if they scored above the vulnerability threshold on either score.

The cost-effectiveness analysis of the program indicates that in the short term, the cost per point reduction in coping strategies is $155.5 USD, while in the longer term, it rises to $346.5 USD. These results highlight a favorable benefit–cost ratio, with total benefits exceeding intervention costs in different scenarios and returns ranging from $1.14 to $3.35 USD for each dollar invested, depending on the discount rate and the duration of impacts considered.

BACKGROUND

Activity Overview

The Venezuelan humanitarian crisis represents one of the largest displacement crises in the world and the largest in Latin America. There are more than six million Venezuelan migrants and refugees globally, and more than 2.9 million Venezuelans live in neighboring Colombia (IGMMF 2023). These individuals have fled the country after years of economic hardships and political strife (CIC 2022). The outpouring of Venezuelans and Colombian returnees from Venezuela puts significant strain on the Government of Colombia's capacity to provide social protection and legal services. This migration process has faced challenges from all sides. Escalating growing violence, raising poverty and food insecurity, strained social systems, domestic disconnect and heightened xenophobia—all aggravated by the global pandemic and an unprecedented economic shock—have given rise to a new constellation of hardship. Furthermore, migrants who have left Venezuela for Colombia in recent years are generally poor and vulnerable, which increases competition for scarce resources and opportunities within poor neighborhoods that now host mixed migrants.

In response to the crisis, the ADN Dignidad program (led by AAH in partnership with the DRC and NRC) has provided cash assistance to more than 344,000 affected individuals since 2019, supporting household (HH) consumption and promoting social and economic integration in host communities. The target populations are vulnerable Venezuelan migrants, Colombian returnees, and mixed-migrant host-community members who reside in urban and peri-urban zones of five metropolitan areas with high concentrations of these populations.[5] The program aims to improve access to basic food, non-food items, and shelter. It provides multipurpose monthly transfers, equivalent to over $77USD[6] per month on average, to eligible HHs for a period of six months. The average amount received, which is up to $38 USD/per person per month, varies by the HH size and vulnerability analysis.

To leverage the impact of the MPCA, the project integrates targeted messaging around nutrition and food security, protection, HH economy, livelihoods, and migrant regularization with the goal of maximizing MPCA transfers' impact on these areas. The organization delivers these messages in face-to-face workshops to beneficiaries. Attendance at the workshops is a requirement for receiving assistance, and both the migrant and Colombian populations participate in them as a recognition exercise and to support network building. Participants receive the messages through pedagogical methodologies, assisting them in making decisions in hypothetical scenarios of HH economy and nutrition to address their specific needs and priorities. The main activity of the workshops is food security strategies, where nutrition professionals coach families on how to build a healthy plate, substitute certain foods according to their budget, and portion macronutrients, as well as which foods to reduce in their daily diet, among others. For instance, professionals use magnetic figures to teach participants which foods are classified as vegetables, proteins, carbohydrates, and fats, helping them eat healthier. They also teach them the proper proportion of each food category on a plate. Additionally, they show participants how to achieve this proportion with different budgets and which foods to choose according to the harvest calendar and provide them with recipe alternatives to prepare those foods. In terms of protection and regularization,

[5] Bogotá and some Cundinamarca Department municipalities, certain Valle del Cauca Department municipalities, specific Magdalena Department municipalities, Barranquilla, Capital of the Atlántico Department, Centro de Atención Integral (mixed-migrant reception center) in Maicao, Department of La Guajira, and certain Nariño Department Municipalities (Ipiales, Pasto, Tumaco)

[6] At the time of the transfer, the exchange rate was at 4,870 COP/1 USD.

participants receive information related to permanent residency permits from migration authorities and learn about the benefits and rights they have as migrants in terms of access to health care and education. Moreover, if a person needs individual counseling, the program redirects them to migrant support and protection entities. The program also strives to enhance the overall protective environment for target groups by raising their awareness of locally available and legally accessible social protection (education, health, etc.) and legal services.

A short-term impact evaluation of the program (Celhay and Martinez 2023) conducted one to three months after completion found program's effects on reduced food insecurity, greater investment in productive activities, increased informal savings, and reduced debt. The program led to raises in hours worked per week, labor force participation, and a sustained increase in income. The study also revealed that participant HHs experienced a significant decrease in reliance on negative coping mechanisms to ensure food security for all members, accompanied by substantial enhancements in overall life satisfaction. While the existing evidence supports the short-term effectiveness of the program, understanding whether improved economic conditions and social and economic integration of this vulnerable population are sustained over time remained a critical open question for determining the long term effectiveness and cost-effectiveness of the program.

Literature Review

Cash transfers, conditional and unconditional, are a well-established effective development tool when lump sums are sufficiently sized and can improve human capital outcomes among poor and vulnerable HHs (Asfaw and Davis 2018; Attanasio and Mesnard 2006; Attanasio et al. 2010; Baez and Camacho 2011; Baird et al. 2014; Daidone et al. 2019; Fisher et al. 2017; Hoddinott and Skoufias, 2004; Kabeer and Waddington 2015; Lagarde et al. 2007; Schultz 2004).

Cash transfers have been found to increase access to necessities such as housing (Hagen-Zanker et al. 2018; Aker 2017) and improve economic well-being and reduce inequality (Özler et al. 2021; Doocy and Tappis 2017; Aygün et al. 2021; Salti et al. 2022). Positive results have also been observed in human capital outcomes, such as nutrition (Özler et al. 2021; Doocy and Tappis 2017; van Daalen et al. 2022; Ecker et al. 2019; Salti et al. 2022), education (Moussa et al. 2022; Aygün et al.,2021; Salti et al. 2022), and child labor-related outcomes (Moussa et al. 2022; Aygün et al. 2021; Salti et al. 2022).

The effects of cash transfers on economic activities vary across contexts, emphasizing the importance of factors such as transfer size, regularity, timing, and local labor market characteristics (Daidone et al. 2019). While cash transfers generally increase HH consumption, reduce poverty and inequality, and promote strategic livelihood choices, their impact on long term human capital outcomes remain nuanced (Kabeer and Waddington 2015; Özler et al. 2021; Fisher et al. 2017). Most studies of MPCA find positive impacts on the well-being of participants (Haushofer and Shapiro 2016; Siu et al. 2023; MacPherson and Sterck 2021; Hagen-Zanker et al. 2018) and their children (UNICEF 2021; Altındağ and O'Connell 2023; Handa et al. 2018; Moussa et al. 2022). Studies consistently show positive effects of unconditional MPCA on HH consumption across multiple country contexts (Özler et al. 2021; Haushofer and Shapiro 2016; Siu et al. 2023; MacPherson and Sterck 2021; Krafft et al. 2022; Altındağ and O'Connell 2023; Chaaban et al. 2020; Tiwari et al. 2016).

Most studies also establish that MPCA reduces reliance on various coping strategies (Hiziroğlu Aygün et al. 2022; Özler et al. 2021). Moussa et al. (2022), Salti et al. (2022), and UNICEF (2021) observe negative impacts on child labor. Tiwari et al. (2016) find impacts on reduced coping strategies related to several food availability and hunger measures.

Regarding food security, the findings are varied. Haushofer and Shapiro (2016) and MacPherson and Sterck (2021) observed, in Kenya, that HHs significantly reduce food insecurity. Similar results were observed in Jordan (UNICEF 2021), Lebanon (Altındağ and O'Connell 2023; Chaaban et al. 2020), and Zambia (Handa et al. 2018). However, studies by Siu et al. (2023) in Kenya and Brugh et al. (2018) in Malaysia found no significant results. Finally, studies that analyze employment effects have found limited results (MacPherson and Sterck 2021; LoPalo 2019; Salti et al. 2022). Specific to conflict-affected settings, cash transfers, both conditional and unconditional, show promise in mitigating the effects of conflict exposure, improving health outcomes, and alleviating stress and anxiety among displaced populations (Ecker et al. 2019; van Daalen et al. 2022; Hagen-Zanker et al. 2018; Lagarde et al. 2007).

From the above literature, two important points are worth noting. First, fewer impact evaluations have examined cash transfers' performance in fragile contexts and for displaced populations. To our knowledge, there is no quantitative impact evaluation evidence in the context of the Venezuelan migration crisis. Cash transfers are a versatile and effective means of supporting the forcibly displaced by providing HHs with added resources to address food insecurity and other basic needs. For internal displacement scenarios, there has been evidence of cash transfers surpassing vouchers in improving welfare, purchasing power, and fostering market linkages with host economies (Aker 2017; Alloush et al. 2017).

More information must be garnered about the lasting effects on beneficiaries once the transfers cease. The few academic articles that have turned to this task conclude that, in general, the positive effects disappear. Altındağ and O'Connell (2023) find that the positive effects on recipients disappear after 6 months of the last transfer. Salti et al. (2022) and Chaaban et al. (2020) find something similar: the effects vanish when the transfers end. The only paper that finds long-lasting effects even after the end of the transfers is Özler et al. (2021), who report that the effects on schooling, education, health, and child marriage remain over time. Nevertheless, positive effects on the health of pre-primary school children do not.

Impact Evaluation Purpose

This impact evaluation aims to shed light and complement the understanding of causal mechanisms, barriers, and program operations in explaining the potential long term effects of MPCA in humanitarian assistance programs, specifically ADN Dignidad. The findings from this impact evaluation will allow the ADN Dignidad program to make informed decisions about continuing their activities and whether providing cash transfers to aid early recovery of a vulnerable migrant population can produce sustained effects on food security and economic activity and create return on investment. Specifically, the results from the proposed evaluation will inform decisions about the program's future expansion and design. This includes assessing whether expanding eligibility criteria to currently ineligible populations would yield a positive return on investment. Additionally, the evaluation will identify opportunities for strengthening pathways to sustained reduced food insecurity. For instance, integrating financial inclusion interventions with cash assistance could further enhance income-generating opportunities.

This type of evaluation allows for closing knowledge gaps, which usually prevent the increase of cost-effectiveness of humanitarian assistance programs. By closing these knowledge gaps, we can examine the effectiveness of the MPCA on improving access to basic goods and services, promoting integration into society, and mitigating the social and economic impacts of the Venezuelan social situation on vulnerable populations. Because the evaluation explores various outcomes, including resilience, the development of social networks, social cohesion, and the inclusion of migrant HHs, it provides a broad perspective and potential opportunities for improvement in relevant areas to alleviate the most pressing needs migrants face. An added benefit is that, because this is a follow-up study, it helps us understand

whether the short term effects found are sustained over time and whether there are other effects that emerge 13 to 18 months after program completion. This will complement the results of the short term impact evaluation done on the same cohort of applicants, one to three months after they stopped receiving the transfers.

Research Questions

The analysis aims to understand whether providing unconditional MPCA to immigrants from Venezuela and Colombian returnees who live in conditions of social vulnerability helps to overcome longer term financial or food insecurity stress, among other livelihood indicators. This question is important because the implementing partners can use it to make informed decisions about continuing their activities and understand whether the way the intervention's design generates sustainable effects over time. Thus, AND Dignidad can use the results to make decisions regarding the design and future expansion of the program, the components that need strengthening, and possible unintended effects. Secondary questions arising from this include if the unconditional MPCA's effect on immigrants from Venezuela and Colombian returnees:

- Increases the probability of them receiving another humanitarian assistance in the longer term.
- Increases their income and expenses in the longer term.
- Increases their employment and financial outcomes, including savings, debt, and productive investments in the longer term.
- Improves their security and subjective well-being in the longer term.
- Affects their ongoing migration status and decisions.
- Improves their social and psychological integration in the longer term.
- Improves children's enrollment in formal education.

Each of these questions helps us understand the intervention's sustained effect up to 18 months after program completion. As described in the activity overview, the ADN Dignidad program provides comprehensive delivery of MPCA, including cash assistance and workshops on HH economy and budgeting, nutrition, livelihoods, and regularization of one's migration status. With these questions, we aim to understand whether the bundle of ADN Dignidad interventions improve the sustainability of the effects on HHs in the longer term.

METHODOLOGY

Impact Evaluation Design

Our identification strategy is an RDD. To obtain a causal estimate of the effect of the cash assistance, we exploited the eligibility rule of the program that assigns a set of scores to each individual based on the characteristics of the families at the moment of application. The program assesses each family's vulnerability through a sociodemographic and economic characteristics survey, they assign two scores to each. Families do not know the computation method for the scores, so they cannot manipulate variables to change them. Based on budget constraints, the program gives cash assistance to every family with a vulnerability score of 90 or above for one of the scores (Scorecard Model score) and estimated HH expenses below 53.168 points calculated using a Proxy Means Test. For instance, if a HH scores 94 in the Scorecard Model and HH expenses are estimated at 50 calculated using the Proxy Means Test, the HH will receive the benefit. Similarly, if a HH scores 70 points on the Scoring Model and estimated

expenditures of 78 points are calculated using the Proxy Means Test, that HH will also receive the benefit.

We follow a multi-cutoff RD design approach proposed in Cattaneo et al. (2020) and Cattaneo et al. (2023) to combine two different running variables with two distinct thresholds. Each eligibility score is on a distinct scale, requiring standardization of both variables for simultaneous use. Initially, we created standardized versions of the Proxy Mean Test score and the Scorecard Model Score. Using the standardized cutoff scores, we then computed new assignment variables centered around zero. Positive values align with the eligibility range (treatment), while negative values represent the ineligibility range (control).

With these newly standardized eligibility scores, all centered at the program's selection threshold, we established the nearest eligibility boundary for everyone using a unified eligibility indicator. We determined this indicator by choosing the smallest absolute value between the standardized, zero-centered Proxy Mean Test score and the standardized, zero-centered Scorecard Model Score. This resulted in a single running variable used to estimate aggregate effects. It facilitated the application of an RDD by focusing on individuals situated close to their nearest assignment threshold. Panel (a) of Figure A.1 visually represents this assignment. This design compares outcomes of individuals who are just above and below the eligibility threshold of both scores and is the same strategy used for the impact evaluation of the program's first stage in Celhay and Martinez (2023).

Our main specification for RDD analysis takes the following form:

$$y_i = \alpha + f(Z_i) + \tau \cdot 1(Z_i \geq 0) + X_i + \epsilon_i$$

Where y_i represents an outcome (such as food insecurity post assistance) for HH *i*. X_i is a vector of control variables specific to the HH, such as sex and age of the HH head. $f(.)$ is a smooth function of the vector of running variables (i.e., the scores in this case), commonly known in the RDD literature as the control function. $(Z_i \geq 0)$ is an indicator function that takes the value 1 when the running variables are equal to or higher than their relevant threshold, making the HH eligible for the program; ϵ_i is the error term of the regression. The coefficient of interest is τ, which we interpreted as the average local effect of a HH being eligible for the program. The statistical software we used to conduct the analysis is Stata.® The syntax we employed to run these types of regressions follows the definitions from the *rdrobust* packages provided by Cattaneo et al. (2020).

Our design mimics a sharp RDD. First, we check how the probability of receiving treatment changes discontinuously at the threshold for our new pooled variable. Figure A.1 panel (b) shows that treatment compliance is such that the probability of receiving treatment changes discretely, from 0 to 1, at the threshold.

Cost-Effectiveness Design

We present measures of cost-effectiveness for both short term and longer-term measures of food security using the Reduced Coping Strategies Index (r-CSI). We additionally present a cost-benefit analysis considering the longer-term benefits observed on income and expenditures.

CUA consortium conducted a detailed cost analysis to compute project costs per participant associated with the delivery of the MPCA and services ADN Dignidad offers, including face-to-face workshops. The major cost categories included the MPCA transfers directly to program participants and administrative costs the consortium partners incurred. Administrative costs included personnel, travel, office and meeting spaces, bank fees, printing and stationery, vehicles and related maintenance, equipment

(including IT and software), communications, and costs associated to the nutrition and protection activities. Costs excluded from the costing estimate include monitoring, evaluation and studies, audit, internal training, international travel, translation, and overhead, which together accounted for approximately 3 percent of non-MPCA and service delivery costs.

The analysis considered costs incurred during the first phase of the program across all geographies in Colombia where the program operated and from which the evaluation sample was drawn. We calculated the project costs in Colombian pesos and converted to US dollars using prevailing exchange rates at the time expenses were incurred. The average transfer per participant was $463 USD, and the administrative cost per participant was $222 USD, for a total cost per participant of $686 USD. Because the comparison group was ineligible for participation in ADN Dignidad and did not receive transfers or services, we set the cost of the project for this group at zero. We also assume that private costs of participation for participants were negligible, although participants were required to invest time to complete the enrollment and attend meetings in their localities of residence. While the program organized these meetings at times that minimized interference with participant's labor activities, future extensions of this analysis could approximate the opportunity cost of this time using average hourly wages observed in the data.

Our cost-effectiveness analysis uses the Reduced Coping Strategies Index (r-CSI) as an indicator of effectiveness. The r-CSI is composed of five components and reported in points. The measure of cost-effectiveness is thus the cost in US dollars per one point reduction in r-CSI. We calculate the incremental cost-effectiveness ratio (ICER) as follows:

ICER = program cost per participant ($)/average effect on r-CSI (points)

For the cost-benefit analysis, we use our short- and longer-term estimates of program's impacts on income (positive but not statistically significant at conventional levels in the longer term) and expenditures (positive and marginally significant in the longer term) as an aggregate measure of benefits participants accrue over time. Given the impact of the program on multiple dimensions of wellbeing, this is arguably a partial and incomplete valuation of the total benefits. Given that impacts on non-monetary outcomes such as subjective life satisfaction and social integration are generally positive, the current cost-benefit analysis likely represents a lower-bound approximation of the true benefits that accrue to participants.

Because both income and expenditures decline over time, we assume a linear function and project outcomes from period t+1, where it is the last period a participant HH receives MPCA, to t+n, where n is the number of periods where income (or expenditures) remains positive. For the calculation of total benefits accrued, we count 100 percent of the MPCA received over 6 months for income; for expenditures, we assume that the HH spends 94 percent of MPCA each month (consistent with program's monitoring data). We discount post-intervention benefits at annual rates of 3, 6, 9, and 12 percent. Then, we calculated the benefit-cost ratio as the present value of benefits accrued through increased income (or expenditures) per participant divided by the present value of project costs per participant. We present benefit to cost ratios for the four discount rates mentioned previously.

Data Collection

The primary data source for this research is a HH survey collected by the firm Isegoría, employing computer-assisted telephone interviews on the sample of the long-term evaluation, consisting of 3,189 case interviews made in the first round of the evaluation (conducted between August and October 2022). Of the total sample, we ended with 2,162 completed surveys in the longer-term follow-up, corresponding to 67.8 percent of the objective sample. The survey team had two groups, each with one

supervisor and five interviewers. All interviewers had extensive experience with HH surveys. It is important to note that, in the process of selecting interviewers, we gave priority to those who participated in the data collection for the first round of the evaluation.

We conducted the collection strategy in two stages. The first took place from September 25 to December 22, 2023, and the second from January 17 to February 9, 2024. In this period, we implemented two strategies initially: (1) telephone data collection and (2) in-person visits to a portion of the sample to update contact information and subsequently, retrieve surveys. We conducted the first stage from Monday to Saturday, 8 hours per day, to achieve broader coverage, making a total of 31,000 calls to the 3,189 sample HHs. The second stage corresponded to in-person visits for a percentage of respondents who could not be contacted via phone. These visits occurred in two periods: the first from November 21 to 28, and the second from December 13 to 15, 2023.

The planned routes covered three regions: Atlántico–Barranquilla, Cundinamarca–Bogotá and municipalities, and Nariño, where 15 municipalities were visited. Despite visiting 875 HHs, only 44 contact appointments were made, resulting in 28 completed surveys. This low success rate was primarily due to the transitory condition of participants. Participants seemed to lack social networks within their places of residence, making it challenging to obtain updated contact information. Another reason was HHs relocating to high-security risk areas, which made contact difficult. One strategy implemented to improve the contact rate was to involve community leaders in the in-person search.

On top of the initial protocol and in response to a lower than forecasted response rate, we considered various technological tools to increase the response rate. Among these strategies, we implemented a WhatsApp messenger contact protocol, lot redistribution between interviewers, and social media searches. We implemented the messenger protocol as the primary recovery strategy, which involved taking the sample of participants who had not completed a survey, rejected the survey, reported migration, or were reported deceased, and sending them a message the team designed via WhatsApp. This message introduced the study, its objectives, and importance. In case of no response to the message, we made a WhatsApp call. Finally, if there was no response to the call, we sent a second message, considering possible connectivity issues. Through this protocol, we recovered 357 cases.

As a second protocol, we searched social media, particularly Facebook. As an additional step to retrieve contact information for individuals whose phone numbers were going to voicemail or were reported as inactive, we messaged them on Facebook, describing the study's purpose and providing supervisor information. We updated the contact information and conducted the survey if we received a response, resulting in conducting two interviews. The strategies we implemented to increase contact within this hard-to-reach population enabled us to overcome several obstacles and achieve re-contact more than one year after access to humanitarian aid had ended. This protocol highlights the importance of leveraging tools that are becoming increasingly relevant, especially in populations with transitional livelihoods, such as social media. Ultimately, our sample consists of Venezuelan migrants (78.3%), migrants with dual nationality (5.3%), Colombian returnees (5.9%), host population (10.4%), and pendular migrants (0.1%).

Sample Validity – External and Internal

Manipulation of the running variable: A potential risk to identification with the RDD strategy arises if HHs could manipulate scores to be included or excluded as eligible. We test our pooled variable to detect potential manipulation. Figure A.1 in panel (c) presents a non-parametric relationship between the combined score and the sample density. Notably, this analysis reveals no significant evidence of alterations in the density of scores at the threshold.

To address attrition, we estimated regression (1) using a binary indicator as the dependent variable, representing whether the observation completed the survey or not. The results reveal a statistically significant, 99-percent increase of 4 percentage points in the probability of survey response for individuals in the treatment group compared to those in the control group. This translates to a 6.1-percent increase in response rate compared to the ineligible group (66%). However, locally, around the cutoff of eligibility, there is only a 90-percent significant difference; the treated group is 5.4 percentage points more likely to respond to the survey.

Nonetheless, it is crucial to assess whether these differences in response rates exhibit any correlation with individual characteristics. We conducted tests for discontinuities in the variables used as both outcomes and covariates in our analysis. We accessed data on the HH Consumption Index; HH per capita expenditures; HH per capita income; HH members to bedrooms ratio; number of months since arriving in Colombia; HH head age, sex, and number of meals taken during the last week; number of HH members; number of HH members under 18 years old; number of HH members between 18 and 59 years old; number of HH members with primary education completed; and number of HH members without education. Figures A.2-A.4 in the Appendix display the results of estimating equation (1) for these variables measured at baseline through the screening survey. We performed this analysis on both the full sample and a subsample of applicants who responded to the survey in phases 1 and 2 (see Table A.1). We find that before the program started, HHs that are just to the right of the cutoff rule of eligibility for each assignment variable, conditional on being eligible based on the threshold of the other assignment variable, are comparable in all dimensions measured to HHs that are just to the left of the cutoff rule and hence, do not receive the program. Thus, this design suggests that we can obtain causal estimates by comparing treatment and control groups, even with differential survey response rates.

We implemented several robustness tests to validate our main findings. We show all effects in Tables A.26-A-50. First, we assessed the sensitivity of our results to bandwidth selection. Specifically, we halved the bandwidth initially chosen in the sample design, which was [-4.21; 1.75]. Despite this adjustment, our results remained robust, indicating consistency in the estimated treatment effects even with a narrower bandwidth. Next, we examined the sensitivity of our results to the functional form of the running variable. In line with the methodology outlined by Gelman and Imbens (2019), we adjusted the polynomial specification to the second degree, while keeping the original bandwidth constant. Despite this change, our findings remained reliable and robust, indicating that the choice of functional form did not significantly affect the estimated treatment effects. Additionally, we present the results obtained through an OLS estimation. Lastly, given a significant attrition rate in our study, with differing attrition levels between treated and control beneficiaries, concerns may arise regarding the possibility of selective attrition, biasing our estimates. To address this, we employed Inverse Probability Weighting (IPW) methodology (Wooldridge 2002). By calculating the likelihood of survey response based on baseline characteristics for each observation and using the inverse of those probabilities as weights, we could account for differential attrition. Our findings indicate that the observed treatment effects remained consistent and reliable even after controlling for potential attrition bias.

FINDINGS

Impact Evaluation Findings

Long term effects of ADN Dignidad on program's reception, income, and expenditures

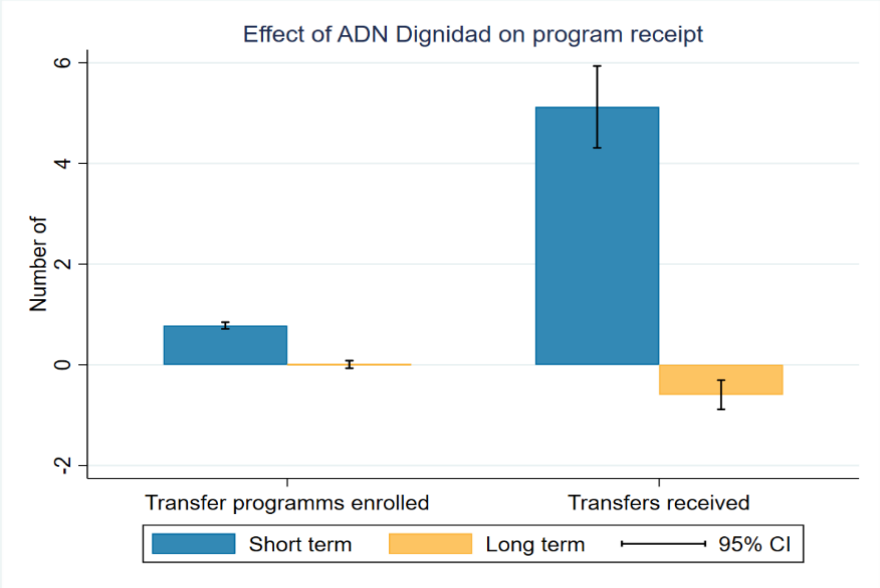
Figure 1 shows the effect of the MPCA on the reception of other welfare or social programs. The figure plots the difference between treated and untreated individuals in the short-term survey (light blue) and in the long term survey (yellow). The results demonstrate that in the short term, the difference between participants and non-participants is large. The first column shows that becoming eligible for ADN Dignidad leads to a 78-pp increase in the probability of reporting participation in these programs. Note that once a HH qualifies for the ADN program, they cannot apply to other government cash assistance programs, because their migrant condition did not allow them to apply to the governmental welfare programs. Thus, the ADN take-up explains this increase in program's reception.

Figure 1 also illustrates that, while the comparison group reports receiving approximately one transfer from any cash assistance program in the past year, becoming eligible for the ADN Dignidad program increases the number of transfers received by 5.1 among eligible HHs.

However, we do observe a small, yet statistically significant difference in the number of transfers in the long term: individuals enrolled in ADN Dignidad receive half a transfer less than those who did not enroll. This result may indicate that control HHs were more likely to enroll in cash transfer programs in the long term and could also be explained if beneficiaries became less dependent on social benefits. To examine these findings in detail, see Panel A of Table A.2 and A.6.

We present these results for the Venezuelan population in Figure A.8 and in Panel A of Tables A.14 and A.18.

Figure 1



Notes: This figure illustrates the point estimator for different outcomes of the regression (1). The dark blue bar denotes the short term effect, while the yellow bar represents the long term effect. The black line depicts the estimator's 95-percent

confidence interval. The results are the program's impact on the number of aid programs enrolled and the number of transfers received in the last 12 months.

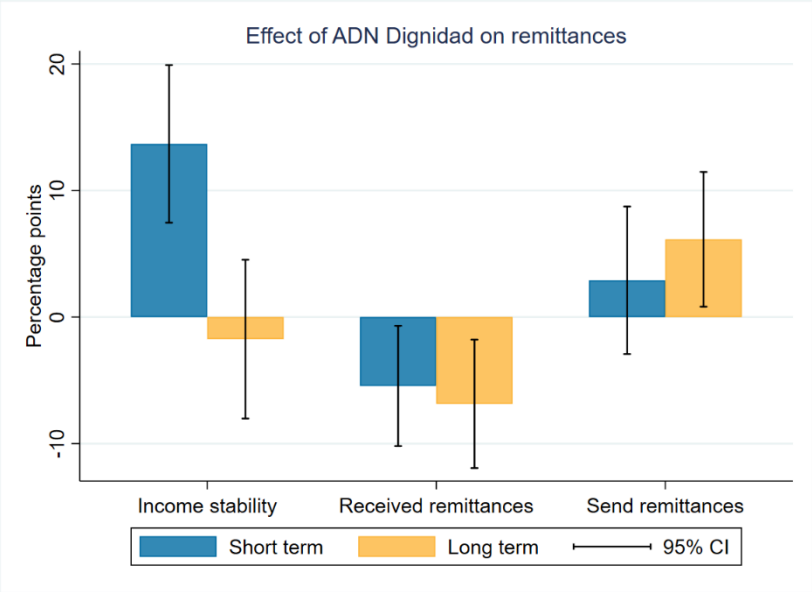
Figure 2 shows the program's impact on income and expenditure outcomes in the participants' HHs, both in the short and long term. To measure income and expenditure per capita, we divided the total monthly income and expenses by the number of household members. If an individual did not report the total monthly household expenditure but did report other expenditures, we added their expenses on food, transportation, rent, remittances, health, and others to estimate the total household expenditure. Similarly, in the few cases in which a household did not report its income[7] but did report its total expenditure, we used that reported expenditure as its income. Panel (a) shows that the intervention positively affected income stability in the short term. Beneficiaries were 14 percent more likely to report a stable HH income, equivalent to 80 percent in relative terms. They also report receiving 5.4 pp lower remittances than control group, although there are no significant differences in the sending of remittances. Over the long term, not only does the reduction in remittances persist (by 45% compared to the control group), but we also observe a favorable impact on remittances that was not evident in the short term. Beneficiaries are now 37.7 percent more likely to send remittances. Panel (b) of the same figure shows that in the same period, the effects on income and expenditures are positive; the beneficiary group increases per capita income by 14.1 percent and spending 12.8 percent more than the control group. In the longer term, the effect on income remains positive but is no longer statistically significant at conventional levels. There is a positive and significant (at the 10% level) impact on per capita expenditure in the longer term, although this result is sensitive to specification (see Table A.6 and Panel C of Table A.37). These results suggest a lasting effect on the improved economic conditions of households more than a year after completing the program. However, the impacts appear to be declining over time, and are less precisely estimated in the longer term.

Upon examination of the data for the Venezuelan subsample, the overall outcomes appear consistent in the short term (see Figure A.5 and Table A.14) and in the long term (see Table A.18). It is worth noting that the monthly per capita HH expenses estimator loses statistical significance, but we can attribute this to a smaller subsample, resulting in lower statistical power.

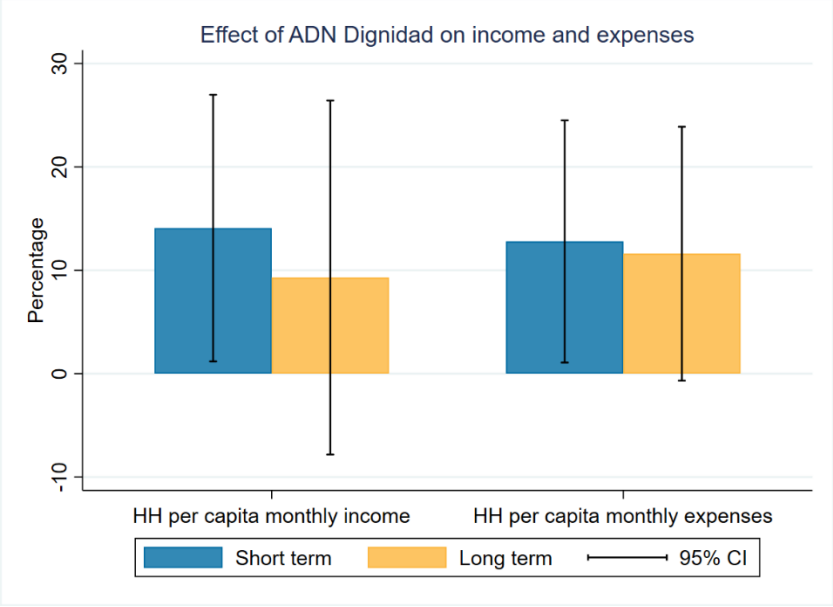
[7] This is the case for 18 HH

Figure 2:

Panel (a):



Panel (b)



Notes: This figure illustrates the point estimator for different outcomes of the regression (1), but only for Venezuelan migrants. The dark blue bar denotes the short-term effect, while the yellow bar represents the long term effect. Panel (a) shows the impact on income stability and remittance. Panel (b) shows the impact beneficiaries on beneficiaries' per capita income and per capita expenditure.

Long term effects of ADN Dignidad on employment and financial outcomes

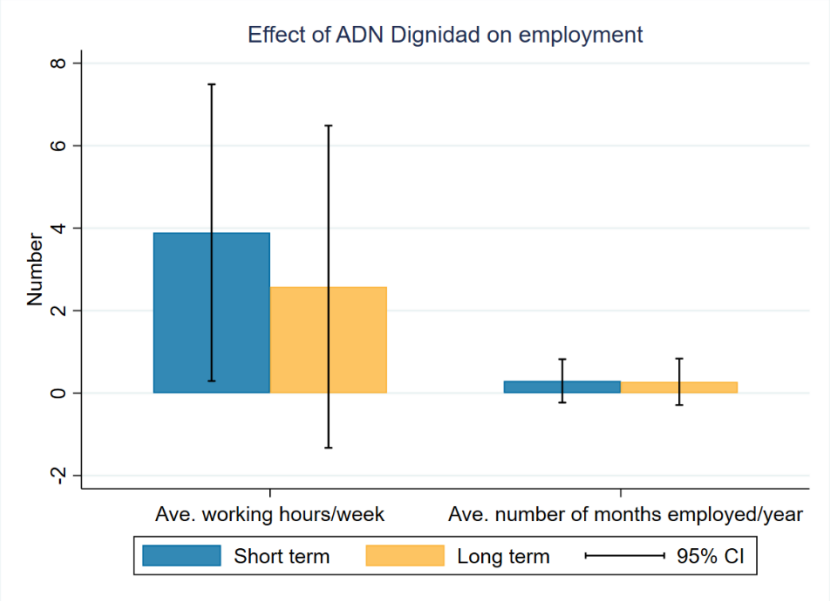
The data we present in Figure 3 illustrate the program's effects on employment and financial outcomes. The program significantly affects the number of hours worked in the short term, with the eligible group working an average of 3.8 hours more per week. Furthermore, HHs that received treatment reported a

positive impact on their savings in the short term, with an increase of 6.7 pp in reported savings and 6.9 pp in informal savings. This represents a relative increase of approximately 38 percent, which is consistent with the effects on more stable income. While treated HHs reported lower debt, this finding is only significant at a 90-percent confidence level and is not particularly robust. We do not observe any significant impacts on investment outcomes or the likelihood of owning a business (see Table A.3). In the long term, all the initial effects dissipate and are no longer statistically significant at conventional levels (see Table A.7).

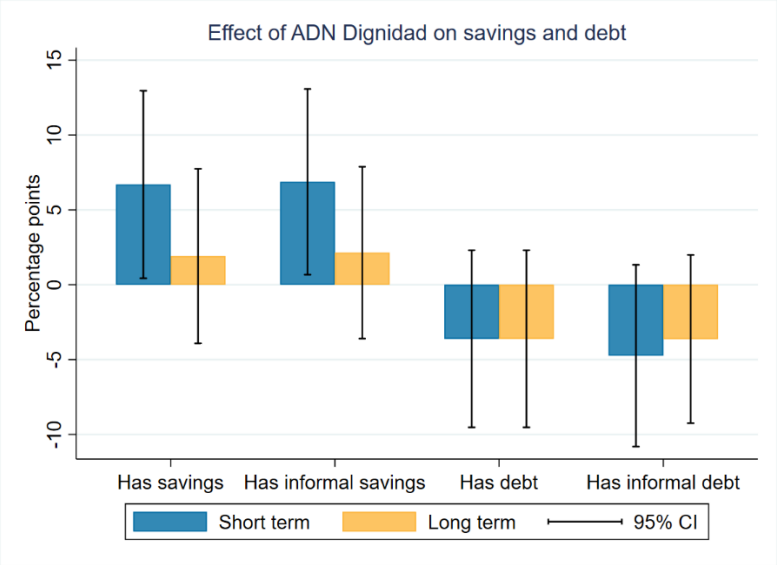
Appendix Table A.15 shows that the program has a more significant impact on the hours worked by Venezuelan migrants in the short term, and there also appears to be an increase in the number of months worked. This subgroup experienced a statistically significant increase of 6.2 hours of work per week, corresponding to an increase of 23.4 percent of their weekly hours. Unlike Colombians, Venezuelans do not enjoy the same rights and entitlements, which makes them ineligible to apply for social assistance programs and more dependent on employment to support themselves. Long term effects are positive but not significant for this group as well (Table A.19 and Figure A.6).

Figure 3:

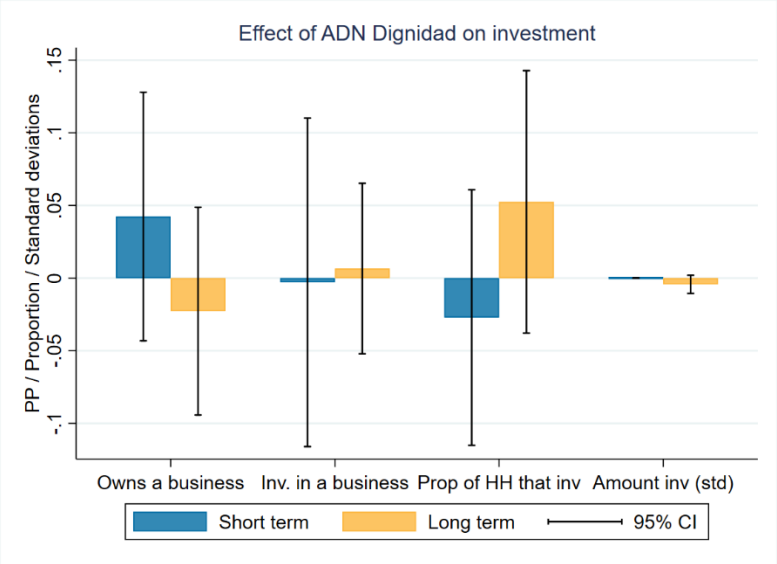
Panel (a):



Panel (b):



Panel (c):



Notes: This figure illustrates the point estimator for different outcomes of the regression (1). The dark blue bar denotes the short term effect, while the yellow bar represents the long term effect. The black line depicts the estimator's 95-percent confidence interval. Panel (a) shows the program's impact on the average number of hours in the last week and the average number of months worked last year. Panel (b) shows the impact on saving or going into debt during the last year. Panel (c) shows the effect on owning a business (percentage points), having invested in one (percentage points), the proportion of HH members that invested in a business and the investment amount (in standard deviation).

Long term effects of ADN Dignidad on insecurity and subjective well-being

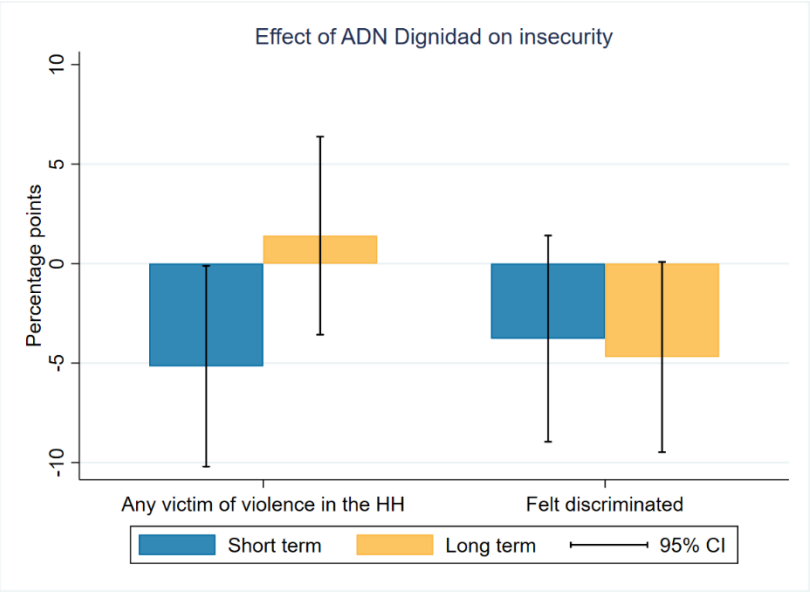
Figure 4 explores the effects of the program on subjective well-being, including participants' vulnerability to violence, exploitation, insecurity, and life satisfaction. Panel (a) shows that in the short term (see also Table A.5), ADN Dignidad decreased by 5.2 pp (37.6%) the probability that any HH member experienced violence or insecurity the month before the survey. Participants do not report

lower incidences of discrimination than HHs in the control group. Panel (b) exhibits that the program created conditions for increased overall subjective life satisfaction among participants. On a scale of 1 to 10, participants reported a higher level of life satisfaction with their own life, 0.556 points (7.9%), and in relation to others, 0.425 points compared to the control group (5.8%). This increase in life satisfaction likely reflects the aggregate improvements in economic well-being discussed earlier and is consistent with improved perceptions of security and reduced discrimination.

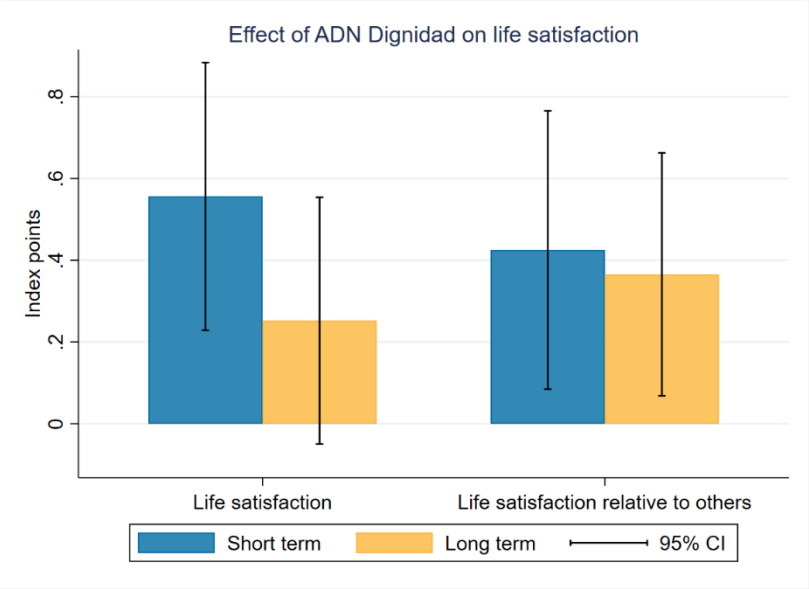
The effects persist in the long term (see also Table A.9). Although there are no statistically significant differences between the control and treated groups in violence or insecurity in the month before the survey, or in their level of life satisfaction with their own life, participants reported (with a 90%-confidence interval in the main specification, but robust in the others) lower incidences of discrimination than control HHs by 4.7 percentage points (35.9%). With a confidence level of 95 percent, participants have a higher level of life satisfaction with their own life by 0.366 points (4.6%) relative to others. The results for the Venezuelan population are stronger in both the short (see Panel (b) of Appendix Figure A.7 and Table A.17) and long term (Table A.21). Notably, we found significant positive results for this population regarding satisfaction with their own lives by 0.398 points (5.1%), indicating that the program has stronger long-term effects on the migrant population.

Figure 4:

Panel (a):



Panel (b):



Notes: This figure illustrates the point estimator for different outcomes of the regression (1). The dark blue bar denotes the short term effect, while the yellow bar represents the long term effect. The results show the impact of the program on the probability of having felt discriminated against or experienced violence in the past month and on self-reported well-being on a scale of 1 to 10.

Long term effects of ADN Dignidad on onward migration and regularization processes

Figure 5 presents the results regarding the migratory status of applicants and their intention to migrate. We did not gather this information in the first survey, so we are only able to assess the effects of the program on long term measurements of these outcomes. In Panel (a), we observe that participating in the program does not yield significant long-term effects on initiating a regularization process or achieving a successful outcome when completed. In Table A.47 and A.48, we can see that this result is stable across the robustness tests conducted. Upon careful analysis, we noted that approximately 86 percent of the entire sample has already initiated regularization processes, all of which have resulted in a successful outcome. This seems to create a ceiling effect, obscuring any variation by treatment condition. Additionally, other programs may operate to promote regularization for every migrant, potentially treating the control group through other organizations.

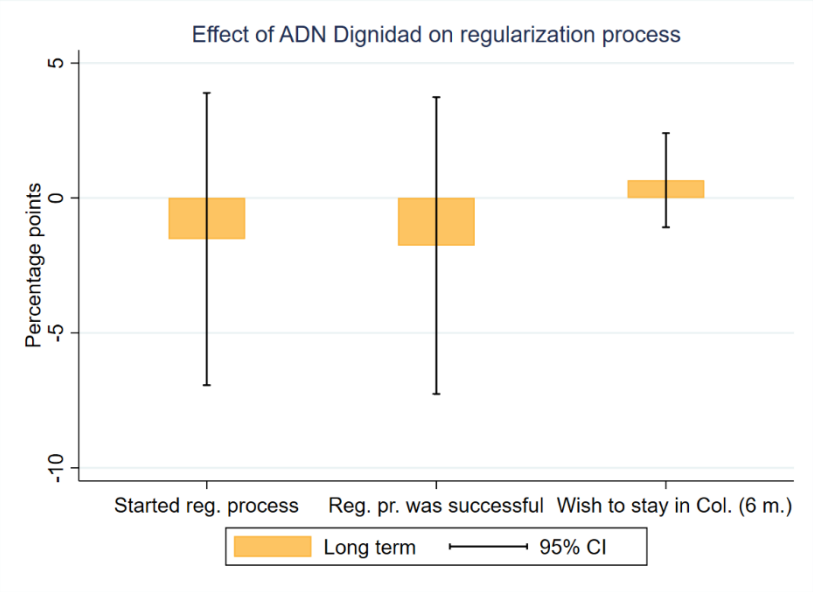
In panel (b) of Figure 5, we examine factors related to the intention to migrate. We found that there is no significant long-term effect of the program on the desire to migrate, although around 36 percent of the sample expresses a desire to eventually migrate. There are also no significant differences in the plans and preparations made to embark on this process. In this case, it appears that the average time individuals have spent in Colombia influences their intentions and plans to migrate. The average time migrants and returned population have been in Colombia is around 5 years. This suggests that they are not a transient population and have few intentions to migrate in the short to medium term. Along the same lines, there are no significant differences in the desire to stay in Colombia in the medium term. Results are robust across different specifications (see Table A.12 and A.47-A.48).

For the Venezuelan sub-sample, in Figure A.10 and Table A.24, we found equivalent results regarding migration status—there are no significant differences for participants regarding regularization processes and wishes to migrate in the short to medium term. Nevertheless, with a 90-percent confidence level, we can say that there is a 7.7 pp difference in their wishes to eventually migrate—20 percent compared

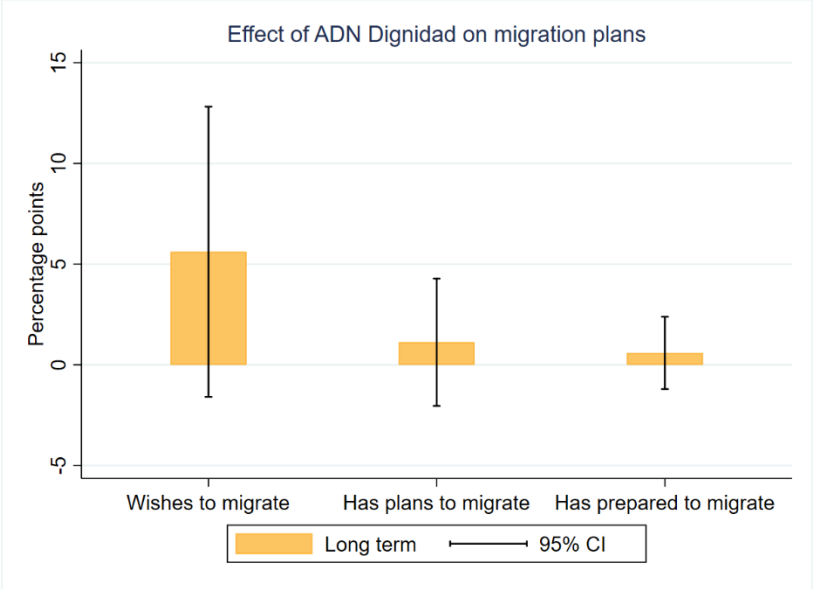
to the control group—but this does not generate significant differences in plans and preparations made to migrate. Overall, the program does not affect the migration status and intention of the participants.

Figure 5

Panel (a):



Panel (b):



Notes: This figure illustrates the point estimator for different outcomes of the regression (1). The dark blue bar denotes the short-term effect, while the yellow bar represents the long term effect. Panels (a) and (b) show the impact on initiating a regulatory process and succeeding in it and on different measures of intention to migrate.

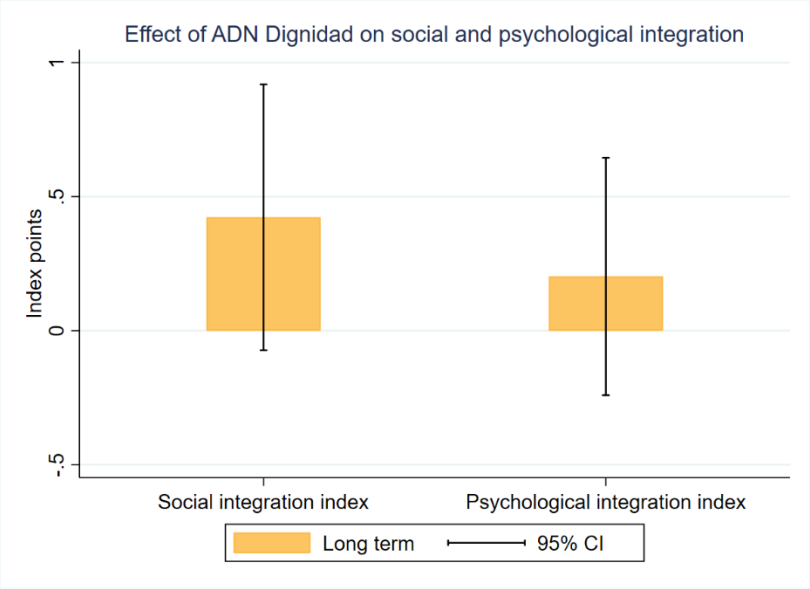
Long term effects of ADN Dignidad on social and psychological integration

To estimate the level of social and psychological integration, we use the Immigration Policy Lab's 24-item survey (IPL 24). This module measures immigrant integration in six dimensions, but we focused solely on two. Psychological integration assesses how connected respondents feel to their host country, their desire to continue living there, and their sense of belonging. Social integration, on the other hand, evaluates social connections and interactions with native individuals in the host country, as well as the development of social capital through participation in organizations with natives. Figure 6 presents the program's impact on both indices. Although it does not show significant impacts at 95 percent, a closer look at the components of each index in Table A.13 reveals that the program does impact some components.

In Panel A, we look into data regarding integration with social groups, the frequency of shared meals, favors done, and conversations shared with Colombians. We combine all these indicators into the Social Integration Index. With a 5-percent significance level, there is a positive long-term difference in the frequency of favors done for Colombians among program participants. This result is particularly robust and stable across the conducted tests, as we present it in Panel C of Table A.49. Although less robust than the previous result, with a 10-percent significance, there is a positive effect of 4 percent in the Social Integration Index relative to the control sample.

In Panel B of Table A.13, we examine questions related to the perception of migrants' connection with Colombia, their desire to stay in the country, and the frequency of feeling isolated or like a stranger in the country. We combine all these indicators into the Psychological Integration Index. In this case, there is no significant variation by treatment condition. In Panel (b) of Figure A.9 and in Table A.25, we can see the results for the Venezuelan sub-sample. With a 95-percent confidence level, we found that there is a positive difference, relative to the control sample, in the frequency of favors done for Colombians. At the same time, the program has a positive long-term effect of 5 percent on the Social Integration Index. These results are more robust and suggest that the program is successful in integrating its Venezuelan participants into society.

Figure 6



Notes: This figure illustrates the point estimator for different outcomes of the regression (1). The dark blue bar denotes the short-term effect, while the yellow bar represents the long term effect. It shows the impact of the program on social and psychological integration index.

Long term effects of ADN Dignidad on children's education

To analyze the effect of the program on the educational indicators of children within applicant HHs, we examine their enrollment in formal education and, if enrolled, whether they currently attend a formal institution. Figure 7 illustrates both outcomes. The program has no significant impacts with a 95-percent confidence level. Nevertheless, a more thorough analysis shows a reduction in the proportion of children enrolled in formal education of 0.053 standard deviations, a 6.6 percent decrease relative to the control population, with a 90-percent confidence interval (see Table A.10).

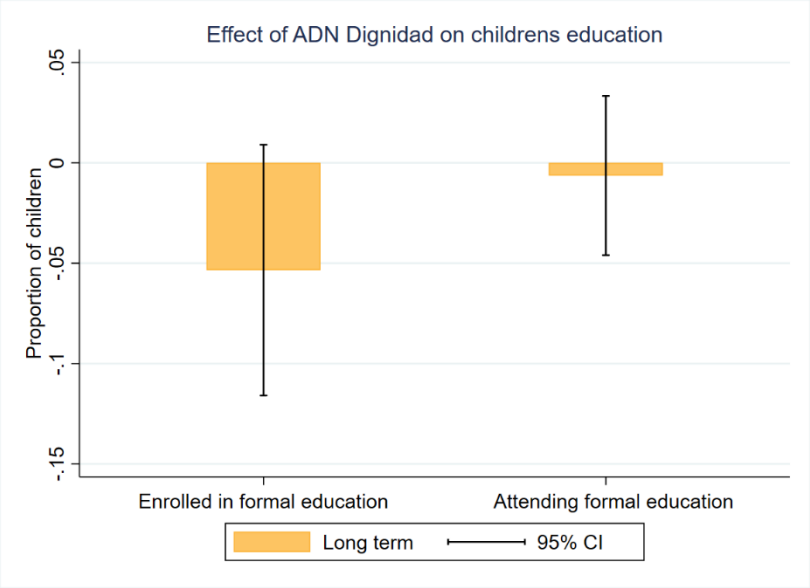
It is essential to note that this result does not hold when correcting for multiple hypotheses. Moreover, it is not a robust result (Table A.45). Despite this, we examine mechanisms that could affect this outcome. Thus, we analyze these educational outcomes for children under 15 years old, because there is a possibility that children older than 15 may leave education early to work and assist in income-generating activities for their HHs. In Panel A of Table A.10, we show educational outcomes for the population under 15 years old and find no significant long-term differences in the proportion of children enrolled in formal education or attending such education by treatment condition.

The reduction in enrollment in formal education would be especially worrisome if households were substituting education for child labor. To understand whether this substitution occurs, Panel A of Table A.11 presents outcomes of underage work, such as the proportion of children working and the proportion of children working under and over 15 years old. In this case, we observed no statistically significant differences in the first three outcomes, indicating that there is no apparent substitution effect between education and work.

For the group of Venezuelan applicants, in Panel A of Table A.22, we observed a significant 9.7-percent decrease in the proportion of children enrolled in formal education relative to the control sample. In Panel A of Table A.23, we found a significant reduction of 8.3 percent, relative to the control sample, in

the proportion of children under 15 years old enrolled in formal education. However, these results are not robust to other specifications. Panel (a) of Figure A.9 replicates Figure 7, but for the subsample.

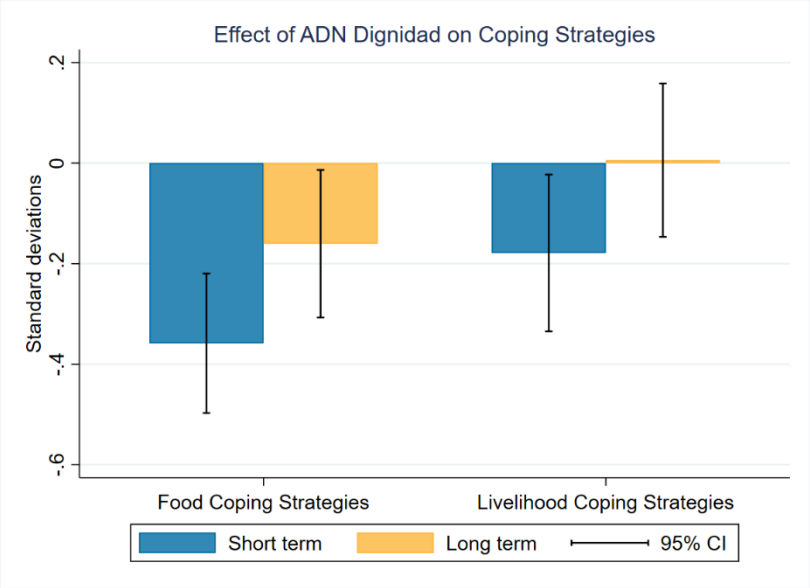
Figure 7



Notes: This figure illustrates the point estimator for different outcomes of the regression (1). The yellow bar represents the long-term effect. It shows the program's impact on formal education enrollment and assistance of the HH children.

Effects on Food Insecurity

Figure 8



Notes: This figure illustrates the point estimator for different outcomes of the regression (1). The dark blue bar denotes the short term effect, while the yellow bar represents the long term effect. The black line depicts the estimator's 95percent confidence interval. The results show the program's impact on the reduced Coping Strategies Index and on some Livelihood Coping Strategies in standard deviations.

Figure 8 summarizes Table A.4 and A.8 findings regarding the program's impact on livelihood and food coping strategies.

We use the reduced Coping Strategies Index (r-CSI) to measure food coping strategies. In comparison to the control group, in the short term, ADN Dignidad participants show a significant reduction in their dependence on cheaper or less preferred meals by 0.536 days a week (10.9%), meals donated by family and/or friends by 0.409 days (28.6%), reduced meal sizes by 0.751 days (21.7%), the number of meals taken by adults in favor of feeding the children by 0.454 days (44.7%), and the overall number of meals in the HH by 0.823 days (31.1%). Combining them into one standardized index shows that the program significantly reduces food insecurity by 0.359 standard deviations.

The effects on the aggregate persist over time. Although not all the index's components remain statistically significant, the index itself is significant in the longer term. ADN Dignidad participants show a significant reduction in their dependence on reduced meal sizes by 0.446 days (16.2%). With a 90-percent confidence interval, they reduced the overall number of meals in the HH by 0.329 days (16.5%). The reduced Coping Strategies Index shows that the program lowers food insecurity by 0.16 standard deviations in the long term.

For the Venezuelan sub-sample, the effects on the longer term are slightly higher (see Appendix Figure A.8 and Table A.20). With a 95-percent confidence level, they depend less on reduced meal size by 0.631 days (22.2%), the overall number of meals reduced in the HH by 0.430 days (21%), and similarly to the full sample decrease, treated participant depend less on cheaper meals by a relative 11 percent. Overall Venezuelan migrants reduce their Coping Strategies Index by 0.198 standard deviations, with a 5-percent significance level.

To put the size of our estimators in context, Özler (2021) finds impacts between 0.15 and 0.25 SD on r-CSI in the short term and zero impact in the long term. Güray (2021) finds a 23 percent drop in the short-term r-CSI (we find a reduction of 26% in the short term and 13.3% in the long term).

Regarding other types of coping strategies, in the short term (Table A.7), ADN Dignidad effectively reduced the likelihood of HHs resorting to family borrowing by 9.1 pp (12% in relative terms), dependence on savings by 14.4 pp (17.6%), child labor by 5.9 pp (45.4%), and selling their belongings by 9.7 pp (31.5%). With a 10-percent significance, the program reduces the likelihood of selling HH assets by 7.8 pp (17.5%) and work for food by 6.4 pp (11.1%). Although not statistically significant, other survival strategies trend toward reduced use. Combining these outcomes into a standardized index reveals an overall reduction of 0.179 standard deviations in using survival strategies. However, in the long term, we do not see significant effects on these outcomes. This result is also present in the Venezuelan population, as shown in Panel A of Table A.20 and in Figure A.8, Panel (b).

Cost-Effectiveness Findings

Table 1 summarizes the results of the program's costs per participant. Using these costs and the estimated impacts on r-CSI in points (Appendix Table A.34 and A.44), the resulting short- and longer-term cost-effectiveness estimates are summarized in Table 2. Taking total costs divided by the absolute value of the estimated r-CSI effect, we find an ICER of $155.5 USD per one point reduction in r-CSI for short term estimates, and a longer-term cost-effectiveness estimate of $346.5 USD per point reduction in r-CSI after two years from enrollment.

Table 1: ADN Dignidad project costs

Category of costs	Value (USD)
Average MPCA transfer per participant HH	$463
Average administrative cost per participant HH	$222
Average project cost per HH	$686

Note: We calculated costs for the cohorts of participants from which the study sample was drawn.

Table 2: Incremental Cost-effectiveness Ratio (ICER) for Reduced Coping Strategy Index

r-CS Impact	Short term effect (9 months from first transfer)	Longer term effect (25 months from first transfer)
r-CSI Impact	4.415 points	1.98 points
ICER r-CSI	155.5 USD/point	346.5 USD/point

We also present cost-benefit estimates using short- and longer-term effects on HH income and expenditures. While the MPCA transfers had a duration of 6 months, we observe sustained effects on both outcomes in the short term (7–9 months after the onset of treatment). In the longer term, we estimate positive but statistically insignificant effects on income and positive and marginally significant effects on expenditures 22–25 months after the onset of treatment. Evidence from the short-term impacts (Celhay and Martinez 2023) shows that participant HHs experience significant increases in employment (particularly self-employment), hours worked, and investments in business assets such as tools for their micro-enterprises. While the employment effects dissipate with the end of the MPCA transfers, a potential explanation of the sustained effects on income and expenditures comes from returns on productive capital investments made during the period of active program participation. The sustained effects on expenditures could also be explained by more permanent changes in behaviors related to budgeting and consumption encouraged through the project's information activities. We rule out other likely mechanisms, including savings and changes in employment (minors and adults), because impacts on these outcomes were not sustained in the longer-term analysis.

Table 3 presents benefit–cost ratios assuming annualized discount rates of 3, 6, 9, and 12 percent. As discussed in the cost-effectiveness design section, we model the dynamic effects over time as linear projections between our two impact estimates, which are declining over time for both income and expenditures. The linear projection for income calculates the difference between the short- and longer-term impacts (4,5290 pesos/$11.9USD and 3,3355 pesos/$8.768 USD, respectively) over an average of 16 months, resulting in a decline of 745.9 pesos per month after transfers ended. Projected benefits for income dissipate after 69 months from the onset of treatment. For expenditures, the projected decline is 76.8 pesos per month following the end of transfers (the difference between the estimated impacts of 3,9923 pesos ($10.49 USD) in the short term and 3,8694 pesos ($10.17USD) in the longer term, over a 16-months average timespan, and the period of accrual extends to 528 months. As such, we present benefit–cost ratios for both outcome indicators over the 69-month period and the full 528 months for expenditures, noting that this is likely an upper-bound of the potential duration of program's impacts. Our measure of cost is total per capita project cost, including the MPCA transfers and administrative costs. The results presented in Table 3 reveal that under all scenarios, the benefit–cost ratio exceeds 1, meaning that the total benefits participant HHs accrued exceeds the total cost of the intervention. In the most conservative scenario, with a discount rate of 12 percent, the benefits of the program from higher income generate a return of $1.14 for each dollar invested. In the least conservative scenario, with participants accruing benefits from increased expenditures over 528 months (44 years) and taking a discount rate of 3 percent, each dollar invested produces a return of 3.35. While a duration of impacts over 44 years is optimistic, returns from expenditures over 69 months in the range of 1.31 to 1.48 are plausible.

Table 3: Benefit–cost ratios

	3% discount rate	6% discount rate	9% discount rate	12% discount rate
Benefit–cost ratio for income over 69 months	1.22	1.19	1.16	1.14
Benefit–cost ratio for expenditures over 69 months	1.48	1.42	1.36	1.31
Benefit–cost ratio for expenditures over 528 months	3.35	2.62	1.62	1.33

Existing economic analysis of cash assistance in the humanitarian assistance context tends to focus on measures of cost-efficiency (non-transfer cost per dollar of transfer) or the relative cost-effectiveness of different delivery modalities (for example cash versus in-kind transfers). Moreover, rigorous impact evaluations of cash assistance programs in the humanitarian setting remain scarce, and cost-effectiveness and cost-benefit analysis even more so (Gentilini, 2016; Doocy & Tappis, 2017). For example, a review by Jeong and Trako (2002) finds only two studies that conduct cost-effectiveness or cost-benefit analysis. As such, our review of the literature did not uncover cost-effectiveness or cost-benefit analysis that are directly comparable to those presented in this section.

In what follows we summarize some notable examples of cost-effectiveness analysis in the sector. Schwab et al. (2013) analyze the short-term impact of the World Food Programme's Cash and Food Transfer program in Yemen. Although their main focus is to compare cash transfers vs. food transfers, they report cost-effectiveness estimates. They conclude that increasing the food consumption score (FCS) by 15 percent using cash requires $374.77 USD per beneficiary. Raising the dietary diversity index (DDI) costs $509.34 USD per beneficiary. Finally, increasing the Household Dietary Diversity Score (HDDS) costs $603.90 USD per beneficiary. Hidrobo et al. (2014) study a context similar to ours by analyzing an evaluation of cash, food vouchers, and food transfers among Colombian refugees and poor Ecuadorians in Carchi and Sucumbios, Ecuador. By focusing on the different types of assistance, their paper analyzes the marginal cost of each intervention and concludes that the cost of increasing household income by 15 percent is $3.79 USD. On the other hand, increasing caloric intake by 15 percent costs $7.58 USD. The marginal cost of increasing FCS, DDI, and HDDS by 15 percent is $4.13 USD, $3.25 USD, and $11.36 USD, respectively. Ahmed et al. (2009) conducted a study to assess the long-term impact of food and cash transfers on improving food security and livelihoods for the ultra poor in rural Bangladesh. The impacts measured in this program are after 25 months of program culmination, and the study focused on four interventions, but only one was an exclusive cash transfer. They estimate that the annual cost of reducing extreme poverty by 1% for all beneficiary households is 22 million taka ($0.31 USD million). The monthly cost of increasing household members' per capita daily calorie intake by 100 kilocalories is 255 taka ($3.6 USD). Additionally, the monthly cost of increasing monthly household

incomes by 100 taka per program beneficiary is 99 takas, while a monthly payment of 100 takas increases total consumption expenditures per-capita by 85 takas.

Limitations

During the research design, the first issue we identified was potential attrition due to the mobile nature of the target population. In this case, given the target population's livelihood instability, maintaining a contact source became more challenging, thus affecting the long-term evaluation sample. This contact difficulty was primarily a result of changes in the contact cellphone numbers, which made it challenging to locate the population. The attrition initially estimated in the study design was 30 percent; however, as the contact process progressed, a higher-than-expected attrition rate became evident. To address this difficulty, we employed physical search strategies at the addresses the participants reported and through social networks, such as WhatsApp. The first strategy revealed that the physical instability of the population was an obstacle; most migrant participants had changed their residence and, because they had not built strong social networks with their neighbors, it was impossible to update their contact information. The second strategy aimed to improve response rates on registered numbers through WhatsApp messages, calls, and reminders about the study's objectives, survey incentives, and program recall enhancement.

Thanks primarily to the second strategy, we managed to decrease attrition from 50 to 32 percent. The portion that we could not recover were participants who migrated, reported lost contact numbers, declined the survey, or had numbers disconnected, making it impossible to regain contact.

If we had observed selective attrition by treatment condition, the inability to improve response rates for this population could have affected the study, compromising the validity of the findings and posing a risk to empirical methodology assumptions. It could also have been a risk if it affected the statistical power of the estimates. In the case of the first threat, we conducted balance tests and do not find evidence of selective attrition. Additionally, we performed analyses on the main covariates and observed that there was no threat to the identification strategy because there were no significant differences in the distribution of the covariates around the treatment cutoff point. Furthermore, to ensure the robustness of the results, we conducted tests with different forms of regression adjustment, different bandwidths, and re-weighting of the sample according to the probability of having been selected in the program. All robustness tests were generally consistent with the main results of the study.

Discussion and Recommendations

Research has consistently shown positive impacts of providing unconditional cash assistance to migrants and refugees; however, these benefits often diminish once the aid ceases. Within the context of a no-strings-attached cash aid program in Colombia, ADN Dignidad, which targets Venezuelan migrants and displaced Colombians, the findings show the program resulted in large improvements in different welfare dimensions, including income, spending habits, food security, and overall well-being among participants. Recipients experienced increased income, better savings practices, reduced debt accumulation, and higher weekly work hours. Notably, there was a decrease in the reliance on negative coping strategies, such as borrowing money or engaging in exploitative labor practices. The program also brought about notable improvements in food security. The results show that participants shift away from relying in cheaper meals or reduction of meals in the HH. Participants reported feeling safer and experienced greater life satisfaction as a result of the program, indicating that the immediate goals of the program were met, and quality of life was significantly enhanced, particularly for Venezuelan beneficiaries.

This study followed beneficiaries and non-beneficiaries of the program 13 to 18 months after concluding the program and collected a second survey to study longer term benefits. The research uncovered enduring impacts, notably in the domain of food security, which persisted even 2 years after the program started. This sustained effect was likely linked to factors such as investments made during the program, enhanced savings habits, and the inclusion of practical training in healthy eating and budget management within the program's framework. The study also shed light on novel long-term effects that were not immediately evident. Participants exhibited a heightened propensity to send money abroad while receiving fewer remittances, which is indicative of a shifting financial dynamic. Furthermore, the research identified significant positive outcomes related to well-being and social integration, with participants consistently reporting increased life satisfaction, reduced experiences of discrimination, and a heightened inclination to support their Colombian peers. Venezuelan beneficiaries experienced these positive effects more strongly, underlining the program's tailored success for this specific group and emphasizing its ability to foster goodwill and mutual support within recipient communities.

The findings from the study of ADN Dignidad offer valuable policy implications for practitioners and policymakers. Temporary cash assistance coupled with education on healthy eating habits, budget management, and legal assistance can achieve sustained impacts. Moreover, cash transfer programs can serve as a tool for social integration by fostering kindness, reducing discrimination, and enhancing overall well-being among beneficiaries, thereby contributing to community building and social cohesion. Tailoring support services to the specific needs of diverse beneficiary groups, including for example emphasizing financial literacy, promoting savings, and making productive investments, may further enhance program’s effectiveness.

It is important to note that long-term impacts on most economic indicators appear to be declining over time. The patterns observed in the data between the short- and long-term observations suggest that the magnitude of effects for many key outcomes are fading over time and that the conditions of the treatment and comparison groups may eventually converge. Nevertheless, we show sustained effects at least 18 months post-intervention, and a cost-benefit analysis suggests that the economic gains participating households accrue outweigh the costs by a factor of 1.14 to 3.35, depending on the duration of impacts and assumed discount rate. These findings support the continued investment in temporary cash assistance as an effective tool to support vulnerable mixed migrants.

The findings also have implications for the optimal coverage of ADN Dignidad. Impact estimates from an RDD reflect the effects of the program on the segment of ADN Dignidad participants with the lowest vulnerability scores. If impacts increase with vulnerability, the results presented here represent lower bound estimates of the average effects on the full population of ADN beneficiaries. These results suggest that the program could continue to be expanded to even less vulnerable populations and likely remain effective.

Lastly, this study stresses the critical importance of continuous monitoring and evaluation in program implementation. By regularly assessing and refining program design, identifying areas for improvement, and ensuring alignment with overarching policy objectives, NGOs and policymakers can optimize outcomes for recipients and enhance the overall effectiveness of their interventions. By heeding these policy implications, stakeholders can work to create more sustainable and effective interventions that address the complex needs of marginalized migrant and refugee communities.

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