



Evidence on the Poverty Stoplight

March 26, 2020

1. Overview

The Poverty Stoplight program was created based on Fundación Paraguaya's experiences in the fields of microfinance, entrepreneurship, and trainings. From the beginning, it has been both theory- and evidence-driven: the way of conceptualizing multidimensional well-being was informed by a broad base of literature, and the method of working with families on overcoming poverty is inspired by theories and research from authors such as Amartya Sen, Paulo Freire, Albert Bandura, and Joseph Grenny.

Details: Martin Burt, *Who owns poverty?* (Dorset, UK: Red Press Ltd, 2019); Martin Burt, "The 'Poverty Stoplight' Approach to Eliminating Multidimensional Poverty: Business, Civil Society, and Government Working Together in Paraguay (Innovations Case Narrative: Fundación Paraguaya)," *Innovations: Technology, Governance, Globalization* 8, no. 1-2 (January 1, 2013): 55-75, https://doi.org/10.1162/INOV_a_00165; Katharina Hammler and Juan Carlos Pane Solis, "Enhancing Empowerment in Multidimensional Poverty Interventions through Self-Assessment and Mentoring," in *Proceedings of the Human Development and Capabilities Association (HDCA) Conference 2018 (Human Development and Capabilities Association (HDCA) Conference, Buenos Aires, Argentina, 2018)*.

Recently, this body of theories and experiences has been formalized and condensed into a new Theory of Change that describes how the program is aiming to eliminate poverty. While "poverty elimination" remains the goal, the enhancement of critical agency, collective agency, and the fostering of systems change were established as outcomes of the Poverty Stoplight that will eventually lead to poverty elimination. The research strategy on the Poverty Stoplight was adjusted accordingly. This document summarizes the body of evidence available for different aspects of the Poverty Stoplight:

1. Evidence at the goal level of the theory of change, on whether the Poverty Stoplight contributes to poverty elimination (section 2)
2. Evidence at the outcome level of the theory of change, on whether the Poverty Stoplight enhances critical agency, collective agency, and fosters systems change (section 3)
3. Evidence about technical characteristics and robustness of the metric, on whether the metric is reliable, valid, and practical (section 4)
4. Evidence guiding the most effective implementation processes, especially as on the importance of specific program components such as mentoring (section 5)
5. Evidence on secondary effects, such as the benefits arising from the program implementation to the implementing organization (section 6)



2. Evidence at the Goal Level: Poverty Elimination

A growing number of studies shows that those participating in the Poverty Stoplight program are more likely to decrease their deprivations.

Evidence from Paraguay's microfinance sector

An early evaluation of the program was done by EA Consultants, who analyzed administrative data from the Poverty Stoplight application in Fundación Paraguaya's microfinance program. Comparing baseline and follow-up surveys of 409 clients in two program cohorts (2012 and 2013), the analysis concludes that clients in both cohorts made clear and significant progress in moving the Poverty Stoplight indicators from red or yellow to green (10.1 and 5.1 more greens at the follow-up, respectively).

Details: Laura Budzyna and Barbara Magnoni, "Measuring the Social Impact of Fundación Paraguaya" (EA Consultants, December 20, 2013)

A year later, another study based on administrative data from the Poverty Stoplight program in microfinance was carried out, which contrasted the changes in the poverty level of 282 program participants with 190 similar microfinance clients who did not participate in the Poverty Stoplight program. A so-called difference-in-differences analysis shows that those participating in the program are more likely to close their financial poverty gap, and are likely to reduce more of their multidimensional deprivations, than those not participating in the program.

Details: Martin Burt and Katharina Hammler, "The Poverty Stoplight: Does Personalized Coaching in Microfinance Help Clients Overcome Poverty?," Internal Report (Asunción, Paraguay: Fundación Paraguaya, July 2014).

Overcome Poverty?," Internal Report (Asunción, Paraguay: Fundación Paraguaya, July 2014).

The big drawback of these two early studies is that program participants were selected by Fundación Paraguaya's field workers, which makes it impossible to know whether those chosen to participate were simply most likely to succeed in the first place. To rule out the possibility that the positive program effect can be fully explained by the characteristics of those participating, Fundación Paraguaya started randomly selecting program participants from the entire pool of microfinance clients. The first study to analyze the resulting data used a pipeline design: across four semesters, it compared data from (randomly selected) program entrants to data from participants who had been randomly selected at an earlier time. The study, which is based on data from over 8,000 participants, shows that the Poverty Stoplight allows participants to reduce their deprivations up to three times faster, compared to if they would not participate. This study has still a shortcoming, which is the lack of a real control group: a comparison can only be made with more recent program entrants.



Details: Katharina Hammler and Martin Burt, "Changing Aspirations Through Poverty Measurement: The Poverty Stoplight Approach," Working Paper (Fundación Paraguaya, April 15, 2018).

Since 2018 a new study is underway where microfinance clients are randomly selected for either one of three program arms (which differ in the intensity of follow-up that participants receive), or a control group. The endline survey will take place approximately in April 2020, and we expect to have preliminary results of this randomized controlled trial by mid-2020.

Evidence from outside Paraguay's microfinance sector

While no formal evaluation studies have been completed yet outside of the Paraguayan microfinance context, there is evidence that the Poverty Stoplight is helping participants move their indicators to green in other contexts, too:

A research report analyzing the Poverty Stoplight implementation in the Argentinean Chaco, commissioned by our partner organization Fundación Irradia, indicates that the overall percentage of "reds" decreased while the overall percentage of "greens" increased between the two survey rounds, even though the report finds large heterogeneities and is not able to establish causality.

Details: Estela Cosentino, "Implementación Del Poverty Stoplight - Semáforo Para El Desarrollo Comunitario - En Argentina: Un Estudio de Caso" (Buenos Aires, Argentina: Fundación Irradia, December 2019).

Internal reports of our South African partner organization, the Poverty Stoplight Office of South Africa, indicate that their participants manage to substantially reduce their yellows and red and increase their greens.

Details: Please contact the Poverty Stoplight team.

Employees of private companies who participate in the Poverty Stoplight program through the Companies Without Poverty program in Paraguay are likely to see a reduction in their deprivations.

Details: Please contact the Poverty Stoplight team.

An ongoing, multi-year community development program in Cerrito, Paraguay, uses the Poverty Stoplight to measure poverty of all families in the community. An internal mid-term evaluation in 2018 has revealed an average 6% increase in "green" indicators for the 626 families for whom data from two survey rounds was available. Interestingly, positive effects were observed on average only for the indigenous population, while the non-indigenous families in fact decreased their number of green indicators (possibly because the program has focused in its first year on the indigenous population). A comparison community where the Poverty Stoplight program is not rolled out also reduced their greens during that time frame. This mid-term evaluation does not allow to



establish causal effects, but a further follow-up survey round is being carried out in February and March 2020, with results expected in mid-2020.

Details: Please contact the Poverty Stoplight team.

3. Evidence at the Outcome Level: Critical Agency, Collective Agency, and Systems Change

There are other studies underway that try to understand how the Poverty Stoplight leads to change. In particular, we are interested in whether the Poverty Stoplight in fact, as the program theory suggests, empowers participants by increasing their critical and collective agency and facilitates systems change.

Results based on participatory, qualitative research with Fundación Paraguay's microfinance clients suggest that the Poverty Stoplight indeed increases participants' agency: the Poverty Stoplight helps to enhance aspirations, and empowers participants to work towards a better future for themselves.

Details: Juan Carlos Pane Solis et al., "Mapa de Trayectoria: Un Nuevo Método Para Explorar Empoderamiento En Un Programa de Mentoría de Pobreza Multidimensional," in Proceedings of the VII Conferencia de La Asociación Latinoamericana y Del Caribe Para El Desarrollo Humano y El Enfoque de Las Capacidades (ALCADECA) (VII Conferencia de la Asociación Latinoamericana y del Caribe para el Desarrollo Humano y el Enfoque de las Capacidades (ALCADECA), Puebla, Mexico, 2019).

A qualitative study based on journey mapping and focus groups finds that participants in the Cerrito Initiative, the community development program of the Poverty Stoplight, report increased agency, especially collective agency. The results indicate that the Poverty Stoplight mentoring process is crucial for this.

Detalles: Noe Tellez, Nancy Ramos, and Katharina Hammler, "El Efecto Del Semáforo En La Agencia de Las Familias de La Comunidad de Cerrito Benjamín Aceval" (Asunción, Paraguay: Fundación Paraguaya, March 2020).

Further studies on the empowerment effect of the Poverty Stoplight are ongoing among Fundación Paraguaya's microfinance clients, among them a quantitative, randomized controlled trial and a qualitative study based on client journey mappings, group dramas, and SenseMaker surveys. These studies are part of a PhD dissertation being carried out by Juan Carlos Pane Solis at the Institute for Development Studies of the University of Sussex.

Details: Please contact the Poverty Stoplight team.



4. Evidence about Technical Characteristics of the Metric

The Poverty Stoplight aims to measure multidimensional poverty in a participatory way, empowering those whose well-being is being measured to take ownership of the results and, together with the implementing partner, work on solutions to the problems that were identified. The data generated through the survey is meant to inform the program participants and the implementing partners about strengths and weaknesses, identify needs and priorities, and to serve as a basis to track progress. A key requirement for this is that the data produced through the survey is of high quality: the indicators need to accurately measure what they are supposed to measure (they need to really capture the aspects of well-being that are relevant), and they need to do so in a precise way (the data needs to be reliable).

An initial study on the Poverty Stoplight survey's validity, reliability, and practicality was carried out as part of a PhD dissertation. The study revealed that the survey has some limitations to its robustness, especially with regards to generalizability, internal consistency reliability and construct validity. The results of this study were used as a basis for a complete review of the Poverty Stoplight tool, resulting in the publication of a revised Poverty Stoplight survey 2.0 in 2017, which is, among other improvements, aligned with the Global Multidimensional Poverty Index.

Details: Martin Burt, "The Poverty Stoplight: A New Metric For Microfinance" (Doctoral Dissertation, New Orleans, LA, Tulane University, 2016), <https://digitalibrary.tulane.edu/islandora/object/tulane%3A50721>.

The reliability and validity of the updated Poverty Stoplight survey was tested in 2019 in a setup that allowed for test the test-retest reliability, inter-rater reliability, and construct validity. Around 450 households were interviewed for this study, being randomly assigned to the different testing groups. Preliminary results suggest overall a good level of reliability, but some limitations at the level of individual indicators. Furthermore, there are important heterogeneities between indicators. The results of the study are scheduled to be published in early 2020.

Details: Forthcoming; please contact the Poverty Stoplight team.

While little formal evidence on the metric's reliability and validity in contexts outside of Paraguay is available at this point, all implementing partners field-test their locally adapted indicators through focus groups or cognitive interviews. Worth mentioning in this context is furthermore the above-cited study commissioned by Fundación Irradia in Argentina, which suggested that the Argentinean Poverty Stoplight indicators are more valid in the urban than in the rural context.



5. Evidence on implementation processes (mentoring)

For organizations interested in implementing the Poverty Stoplight, an important question relates to effective program design. Of particular interest is here the question on the role that mentoring (or coaching) plays for the Poverty Stoplight. Overall, available evidence from around the world indicates that this relationship-based work is a key component to achieve the desired goals.

The research report analyzing the Poverty Stoplight implementation in the Argentinean Chaco, commissioned by our partner organization Fundación Irradia (see above), finds, using qualitative research, that mentoring is a key component to support participants on their pathways out of poverty.

Details: Cosentino, "Implementación Del Poverty Stoplight - Semáforo Para El Desarrollo Comunitario - En Argentina: Un Estudio de Caso."

An action-research project carried out by our British partner organization Signal UK finds, based on several rounds of feedback from different implementers, that building rapport between program staff and participants is crucial. The report includes indications for best practice to establish such rapport.

Details: Reporte en proceso. Favor contacta al equipo del Semáforo.

Within Paraguay, two quantitative, randomized studies are going on that aim to learn more about the importance of mentoring and about effective mentoring designs. These studies are part of the ongoing formal evaluations of Fundación Paraguaya's community development program in Cerrito and the evaluation study of the Poverty Stoplight application in Fundación Paraguaya's microfinance program, both described above.

Details: Please contact the Poverty Stoplight team.

6. Evidence on secondary effects

A final type of research evidence relates to potential secondary effects that may arise from the program. Secondary effects are defined as those that are not experienced by participants or their communities, but by the implementing organization as a result of carrying out the program. Evidence in this group of research is still anecdotal, though some formal research is underway.

A review of administrative data, again from Fundación Paraguaya's microfinance program, shows that key indicators of microfinance operations improved when the Poverty Stoplight was introduced (for instance, an increased credit portfolio and decreased default rates). The program also stimulated the development of new credit



lines. These are merely correlations that are observed, and we cannot make claims of causality.

Details: Please contact the Poverty Stoplight team.

Further anecdotal evidence that has been gathered from Paraguayan companies in the Companies Without Poverty program suggests that the program might help these companies increase employee satisfaction and through that, productivity. We have developed a template that helps companies track productivity indicators over time, and link the results with the times that the Poverty Stoplight was introduced. This template will be part of a formal study on productivity effects in companies that will be launched later in 2020.

Details: Please contact the Poverty Stoplight team.

A qualitative study is currently underway that uses data from focus group interviews among company executives and employees in Paraguay and Mexico to understand the effects of the program on the company. Results of that study are expected by mid-2020.

Detalles: Favor comunicarse con el equipo del Semáforo.

7. Overview of References

Budzyna, Laura, and Barbara Magnoni. "Measuring the Social Impact of Fundación Paraguaya." EA Consultants, December 20, 2013.

Burt, Martin. "The Poverty Stoplight: A New Metric For Microfinance." Doctoral Dissertation, Tulane University, 2016. <https://digitallibrary.tulane.edu/islandora/object/tulane%3A50721>.

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Cosentino, Estela. "Implementación Del Poverty Stoplight - Semáforo Para El Desarrollo Comunitario - En Argentina: Un Estudio de Caso." Buenos Aires, Argentina: Fundación Irradia, December 2019.



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Pane Solis, Juan Carlos, Marie Claire Burt, Nancy Ramos, and Katharina Hammler. "Mapa de Trayectoria: Un Nuevo Método Para Explorar Empoderamiento En Un Programa de Mentoría de Pobreza Multidimensional." In *Proceedings of the VII Conferencia de La Asociación Latinoamericana y Del Caribe Para El Desarrollo Humano y El Enfoque de Las Capacidades (ALCADECA)*. Puebla, Mexico, 2019.

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