

**PhD Candidate:** Luis Artavia-Mora

**Dissertation title:** Understanding and overcoming biases against marginalized groups: Behavioral and Experimental Evidence from The Netherlands and Burkina Faso

### **Summary**

The marginalization and exclusion of certain social groups remains a challenge in modern societies. Vulnerable groups often experience prominent and systematic obstacles while trying to access opportunities, rights and resources. These obstacles may emerge as a result of ethnicity, class, skin color, religion or health inequalities. These barriers to secure wellbeing may become insidious as they overlap and reinforce each other across generations. In an attempt to overcome such barriers, in the last few decades there has been growing interest in launching policies that mitigate the vicious circles of exclusion and deprivation in today's societies. For instance, the Sustainable Development Goals 2030 has dedicated Goal #10 to “*reduce inequality within and among countries*” with the purpose of establishing cost-efficient strategies to tackle historical social inequalities in low- and high-income countries.

To help achieve such outcomes the last two decades has seen pioneering work in behavioral economics/science in international development. This area of research has enhanced our understanding of the barriers to development and led to the emergence of a wider and richer theoretical and empirical framework to inform human decision making. This framework builds on fields such as sociology, anthropology, psychology, economics, and political science. Two of the last three Nobel Prizes in Economics (2017 and 2019) have been awarded to Behavioral and Experimental economists working on development-related issues. Results from this body of work have been used by academics, governments, and international organizations to design evidence-based policies in tax collection, human cooperation, healthcare, education, energy consumption and finance.

Set against this background, the present thesis provides results based on a series of small and large-scale interventions designed to understand the challenges experienced by various marginalized and excluded groups as well as to propose ways to improve their wellbeing. The various essays comprising this thesis deal with a range of issues. They make use of a variety of methods and data and are set in the context of a developed (The Netherlands) and a developing

(Burkina Faso) country. The unifying theme is the attention to and concern for typically excluded groups.

The first half of the dissertation (Chapters 2 and 3) comprises small-scale studies on human cooperation and housing discrimination in The Netherlands. The second half of this thesis (Chapters 4 to 7) relies on four-rounds of nationally representative panel data collected over two years. These data, which are from an experimental health intervention in Burkina Faso are used to examine, among other issues, whether a system of message reminders sent to People Living with HIV (PLHIV) improves their bio-physical traits and psychosocial measures of wellbeing. The succeeding paragraphs describe the various chapters in more detail.

### Promoting prosocial behavior in The Netherlands

The multicultural and tolerant nature of Dutch society offers an opportunity to test theoretical principles about human prosociality and to identify instruments that may enhance access to the housing market for ethnic minorities. Based on a field experiment, chapter 2 of the thesis shows that despite incurring costs, people engage in prosocial behavior and help strangers. The analysis shows that a shorter time span to decide whether to help or not encourages helping behavior while a longer time span reduces the probability of helping strangers. The evidence is consistent with that obtained from laboratory studies. These findings challenge the idea that humans are driven mainly by self-interest and suggests that human beings are intuitively helpful.

The third chapter implements two experiments designed to test ways of mitigating housing discrimination against ethnic minorities in Amsterdam. These experiments evaluate whether seeking housing through a secondary, less prominent, housing platform (Craigslist) is associated with less discrimination and whether a (positive) reference letter improves access to housing for Turkish and Moroccan minorities. The results show no discrimination against Turkish and/or Moroccan candidates on houses offered through Craigslist. This is in marked contrast to the literature which shows high and systematic prejudice in the Dutch labor market and in leading European housing markets. The study also finds that attaching a reference letter from a previous landlord does not influence access to housing. Hence, this study proposes that the use of similar auxiliary websites may lessen ethnic discrimination typically present in more prominent housing platforms across Europe.

## Promoting wellbeing in PLHIV in Burkina Faso

The second half of the thesis consists of four chapters which draw on information from a randomized controlled trial to improve health outcomes in PLHIV in Burkina Faso. Using information from the baseline survey, Chapter 4 examines the process of adaptation and biomedical transition in measures of subjective and objective health as patients undergo antiretroviral treatment. The findings indicate that subjective and objective measures of health capture different aspects of wellbeing. The broader subjective health measure provides an overly optimistic picture while the narrower objective measure underestimates the beneficial effects of access to ART.

Chapter 5 presents the results of the mHealth intervention. The intervention examines the effect of four message reminders that vary in content (text or image) and frequency (once or twice a week) to promote bio-physical, treatment-related, and psychosocial outcomes in PLHIV undergoing antiretroviral therapy over two years. The pooled sample results show no global impact on primary outcomes (retention, adherence, and physical health) nor within follow-up surveys. In contrast, there is evidence of a large and positive impact of the intervention on a wide range of psychosocial measures. These results extend the discussion about the cost-effectiveness of mHealth to a relatively unexplored dimension of health. The bulk of the literature focuses on a narrow set of standard bio-physical and treatment-related indicators without recognizing the deeper and important psychosocial benefits.

Chapter 7 explores the association between HIV-related stigma and subjective health of PLHIV. Based on patient-level fixed effects models, the study shows that stigma has a negative and statistically significant association with subjective health (2.3%-points,  $p$ -value=0.090). Results indicate that income, household size and sexual activity are also positive predictors of subjective health. The analysis shows that retention in care reduces experienced stigma while regular participation in PLHIV-support groups led to increased awareness of stigma. Thus, participation in HIV self-help groups presents a double-edged sword. While self-help groups support patients during their recovery and have been shown to improve their physical health in Burkina Faso (Artavia-Mora et al., 2020), participation in these groups also has negative repercussions in prompting negative social perceptions and exacerbating their experiences of stigma.

## Overview and status of chapters

Chapter 1: Introduction

*Part I: Promoting prosocial behavior in The Netherlands*

Chapter 2: Intuitive Help and Punishment in the Field (Published, *European Economic Review*)

Chapter 3: Averting housing discrimination? Evidence from Craigslist and references in Amsterdam (Unpublished)

*Part II: Promoting wellbeing in PLHIV in Burkina Faso*

Chapter 4: Protocol for a Randomized Controlled Trial Evaluating Mobile Text Messaging to Promote Retention and Adherence to Antiretroviral Therapy for People Living With HIV in Burkina Faso (Published, *JMIR Research Protocols*)

Chapter 5: Adaptation and biomedical transition of people living with HIV to antiretroviral treatment in Burkina Faso (Published, *Global Public Health*)

Chapter 6: Durability of mobile phone reminders on retention, adherence and psychosocial wellbeing in PLHIV in Burkina Faso (Unpublished)

Chapter 7: Experienced stigma as a determinant of subjective health in a large-scale and panel-data sample of PLHIV in Burkina Faso (Unpublished)

Chapter 8: Conclusion

### References

- Artavia-Mora, L., Wagner, N., Thiombiano, B.A. and Bedi, A., 2020. Adaptation and biomedical transition of people living with HIV to antiretroviral treatment in Burkina Faso. *Global Public Health*, pp.1-16.
- Artavia-Mora, L., Bedi, A.S. and Rieger, M., 2017. Intuitive help and punishment in the field. *European Economic Review*, 92, pp.133-145.
- Wagner, N., Ouedraogo, D., Artavia-Mora, L., Bedi, A. and Thiombiano, B.A., 2016. Protocol for a randomized controlled trial evaluating mobile text messaging to promote retention and adherence to antiretroviral therapy for people living with HIV in Burkina Faso. *JMIR Research Protocols*, 5(3), p.e170.