

Frohnweiler, Sarah; Beber, Bernd; Ebert, Cara

Working Paper

Delayed effects on migration intentions in an information provision experiment in Ghana

Ruhr Economic Papers, No. 1050

Provided in Cooperation with:

RWI – Leibniz-Institut für Wirtschaftsforschung, Essen

Suggested Citation: Frohnweiler, Sarah; Beber, Bernd; Ebert, Cara (2023) : Delayed effects on migration intentions in an information provision experiment in Ghana, Ruhr Economic Papers, No. 1050, ISBN 978-3-96973-219-9, RWI - Leibniz-Institut für Wirtschaftsforschung, Essen, <https://doi.org/10.4419/96973219>

This Version is available at:

<https://hdl.handle.net/10419/280422>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Sarah Frohnweiler

Bernd Beber

Cara Ebert

**Delayed Effects on Migration Intentions in an
Information Provision Experiment in Ghana**

Imprint

Ruhr Economic Papers

Published by

RWI – Leibniz-Institut für Wirtschaftsforschung
Hohenzollernstr. 1-3, 45128 Essen, Germany

Ruhr-Universität Bochum (RUB), Department of Economics
Universitätsstr. 150, 44801 Bochum, Germany

Technische Universität Dortmund, Department of Economic and Social Sciences
Vogelpothsweg 87, 44227 Dortmund, Germany

Universität Duisburg-Essen, Department of Economics
Universitätsstr. 12, 45117 Essen, Germany

Editors

Prof. Dr. Thomas K. Bauer

RUB, Department of Economics, Empirical Economics
Phone: +49 (0) 234/3 22 83 41, e-mail: thomas.bauer@rub.de

Prof. Dr. Ludger Linnemann

Technische Universität Dortmund, Department of Business and Economics
Economics – Applied Economics
Phone: +49 (0) 231/7 55-3102, e-mail: : Ludger.Linnemann@tu-dortmund.de

Prof. Dr. Volker Clausen

University of Duisburg-Essen, Department of Economics
International Economics
Phone: +49 (0) 201/1 83-3655, e-mail: vclausen@vwl.uni-due.de

Prof. Dr. Ronald Bachmann, Prof. Dr. Manuel Frondel, Prof. Dr. Torsten Schmidt,
Prof. Dr. Ansgar Wübker

RWI, Phone: +49 (0) 201/81 49-213, e-mail: presse@rwi-essen.de

Editorial Office

Sabine Weiler

RWI, Phone: +49 (0) 201/81 49-213, e-mail: sabine.weiler@rwi-essen.de

Ruhr Economic Papers #1050

Responsible Editor: Manuel Frondel

All rights reserved. Essen, Germany, 2023

ISSN 1864-4872 (online) – ISBN 978-3-96973-219-9

The working papers published in the series constitute work in progress circulated to stimulate discussion and critical comments. Views expressed represent exclusively the authors' own opinions and do not necessarily reflect those of the editors.

Ruhr Economic Papers #1050

Sarah Frohnweiler, Bernd Beber, and Cara Ebert

**Delayed Effects on Migration Intentions in
an Information Provision Experiment in
Ghana**

Bibliografische Informationen der Deutschen Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie;
detailed bibliographic data are available on the Internet at <http://dnb.dnb.de>

RWI is funded by the Federal Government and the federal state of North Rhine-Westphalia.

<http://dx.doi.org/10.4419/96973219>

ISSN 1864-4872 (online)

ISBN 978-3-96973-219-9

Sarah Frohnweiler, Bernd Beber, and Cara Ebert¹

Delayed Effects on Migration Intentions in an Information Provision Experiment in Ghana

Abstract

We report experimental results from Ghana, where treated subjects received information on regional income differentials. We do not see an effect on migration intentions directly after the intervention, but the effect of the treatment unfolds over time. Eighteen months later, subjects assigned to receive income information are on average significantly less likely to express enthusiasm for moving to another region, because individuals that had inaccurately high expectations about incomes elsewhere compared to their current place of residence are now more likely to want to forgo relocation. Contrary to common claims that effects observed in light-touch information experiments are likely to dissipate quickly, we suggest that some types of content in high-stakes domains such as migration can take time to reverberate and be incorporated into individuals' decision calculus. We also discuss that delayed effects may be uncommonly observed because long-term follow-ups are rare in the absence of short-term effects.

JEL-Codes: J31, O15

Keywords: Delayed effects; information provision; migration intentions

October 2023

¹ Sarah Frohnweiler, RWI and University of Göttingen; Bernd Beber, RWI; Cara Ebert, RWI. - Funding: Data collection was implemented via the ReUsSITE project, with funding from the German Federal Ministry for Economic Cooperation and Development (BMZ). - We are grateful to Peter Anti Partey and our field teams in Ghana for their excellent support. The project encompassing this paper is registered in the AEA RCT Registry (AEARCTR-0006733) and received ethics approval from the University of Ghana Ethics Committee (ECH 068/20-21) and German Institute for Global and Area Studies Ethics Committee (GIGA 03/2020). - All correspondence to: Bernd Beber, RWI Büro Berlin, Zinnowitzer Str. 1, 10115 Berlin, Germany, e-mail: bernd.beber@rwi-essen.de

1 Motivation

Many economists view internal migration as an effective strategy to improve livelihoods in low-income countries and elsewhere (Bryan and Morten, 2019; Lagakos, 2020), and a number of studies have investigated how informational barriers that stand in the way of such welfare-improving migration could be lowered (Baseler, 2023; McKenzie, 2023). We contribute one such study, an information provision experiment that we implemented in Ghana (Frohnweiler, Beber, and Ebert, 2023).

Unusually for an experiment in this research field, we are able to observe a delayed effect on migration intentions. We collect outcome data both right after treatment and in a follow-up survey a year and a half later, and we find that over time information on regional income differentials has significantly affected intentions—even though this effect had not yet manifested immediately post-treatment.

Delayed effects of information interventions on attitudinal outcomes may be genuinely uncommon, and we hypothesize that the high-stakes nature of migration decision-making could be a reason for the delay in this case. But we also note that delayed effects may simply not be observed frequently, because researchers are less likely to collect follow-up data in the absence of short-term effects.¹ More commonly short-term effects help motivate long-term data collection efforts that find dissipating effects on attitudes.

2 Study design

2.1 Context and timeline

The information provision experiment and data collection discussed here was conducted with craftspersons working in the construction sector in Ghana. While there is substantial internal labor mobility in Ghana, income differentials between regions remain stark and arguably underappreciated by workers. For this study, 1261 participants were recruited

¹For example, Coibion et al. (2023) suspect a delayed effect on non-durable goods spending if treated with inflation information, but lack long-term data. Tjaden and Dunsch (2021) and Tjaden and Gninafon (2022) note that the long-term effects of migration information interventions are generally poorly understood.

in three large metropolitan areas: Tamale in the less developed north, the business hub Kumasi in the center of the country, and the capital Accra in the south.

Subjects' first interview about their background, employment conditions, livelihoods and migration aspirations took place in November/December 2020. In this survey, half of the subjects were randomly assigned to receive information about incomes differences across regions in Ghana. We collected data on whether subjects would like to relocate within Ghana both before and after the survey segment containing this treatment content. We then collected follow-up data 18 months later in May/June 2022. A discussion of related study procedures can be found in [Frohnweiler, Beber, and Ebert \(2023\)](#), which uses large additional samples from Ghana and Uganda that are not included here to estimate other effects, in particular on destination preferences.

2.2 Sample description

Subjects joined this sample to be eligible for selection into a top-up training program implemented by the German Development Corporation (GIZ).² They were mostly recruited at work sites, with some recruitment through professional organizations and a media campaign. All are adults and on average 31 years old at baseline. They are almost all men (99%) and are almost all employed (98%), mostly in a skilled trade. Most work on their own account, with fewer than one in five dependently employed. Just over half of them (57%) are married. They are relatively well-educated, with the modal and median subject having completed senior high school, and only one in ten having completed no more than primary education. Migration aspirations are generally high at baseline, with nearly three in five subjects saying that they would very much like to relocate within Ghana.

Attrition is very low. Subjects of this type typically have to remain reachable for work or their business, as they did for us. For the follow-up, we were able to re-interview 1203 artisans (95%).

²Invitations to join the Professionalization of Artisans (ProfArts) program were assigned independently of the information treatment discussed here, and results from this separate RCT are considered in [Beber et al. \(2023b\)](#).

2.3 Treatment

The treatment consisted of a map that displayed average monthly incomes—numerically and represented as coin stacks—for each of Ghana’s then-ten regions. The income information was taken from the main report of the 2016-17 Ghana Living Standards Survey (GLSS7), which the Ghana Statistical Service published in June 2019 and contained the most recent official and regionally disaggregated details.³ Subjects had a 50% probability of being assigned to either treatment or control, and assignment is well-balanced across a range of characteristics.

2.4 Outcome measure

We focus here on domestic migration intentions. Specifically, subjects were asked to what extent, if at all, they would like to move to another region within Ghana to live, either temporarily or permanently. Responses range from 0 (“Not at all”) to 1 (“A lot”) on a four-point scale.⁴ Subjects were first asked this question several items prior to the point in the survey at which the map was presented to the treatment group, and then again just after that point, with an explanatory script that “we’ve already asked you this, but we’d like to ask you one more time.” The same question was administered during the follow-up a year and a half later.

3 Results

We report results from intent-to-treat regressions of our outcome on treatment assignment, with robust standard errors. In line with our pre-analysis plan and in order to improve efficiency, we include age, gender, marital status, indicators for employment type and education, an asset index, region indicators, and our pre-treatment outcome measurement.

³In September 2022, the Statistical Service shared with us that the GLSS7 report lists incorrect information for Ashanti. We immediately sent the correct details via text message to treated subjects. For the particular sample used in this paper, this occurred after follow-up data had been collected, which means any effect in the follow-up data is not attributable to these corrective text messages.

⁴We show effects for this ordinal variable with equispaced cutpoints, but using a binary indicator for “a lot” of interest—the modal reply—yields the same substantive result.

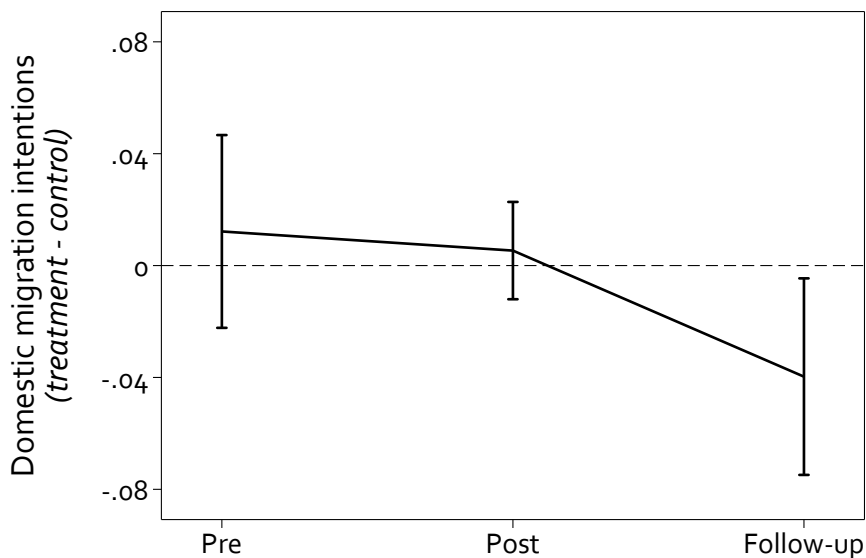


Figure 1: Effects on domestic migration intentions

Figure 1 shows regression-adjusted differences in mean domestic migration intentions prior to the intervention (pre), immediately after the intervention (post), and at the time of the 18-month re-interview (follow-up), with whiskers denoting 95% confidence intervals. We see no notable difference pre-treatment, as we would expect. The immediate post-treatment measure also shows a null effect, relatively tightly estimated because of the efficiency-enhancing inclusion of the pre-treatment measure in the regression.⁵ These efficiency gains disappear at follow-up, and yet over time the treatment has unfolded an effect: Subjects assigned to receive information on income differentials are significantly less likely to express enthusiasm for moving to another region.

This effect is negative because it is driven by those that were too sanguine about incomes elsewhere compared to their current place of residence and are now more likely to want to forgo migration. We see no sign that subjects who may have undervalued potential income benefits of relocation adjust their migration aspirations.

⁵For other outcomes and in certain theoretically relevant subsamples, Frohnweiler, Beber, and Ebert (2023) observe immediate effects.

4 Conclusion

We present delayed effects from an information provision experiment. Details concerning regional income differentials in Ghana fail to move migration intentions immediately after treatment. But the information lingers and leads to significant change in intentions 18 months later.

We conclude with two implications. First, a common critique of some information experiments, also in migration studies, is that even if they have effects while furnished details are top-of-mind, surely those effects dissipate quickly once subjects move on from the study interaction. Here we provide an example of content reverberating more with time. It may well be that for high-stakes topics, such as migration, it takes time for some subjects to process certain types of information and incorporate it into their decision calculus.

Second, it is uncommon for delayed effects such as this to be observed. This could be because they are in fact uncommon. But it could also be due to incentives researchers face: If a light-touch information treatment produced no movement in the principal attitudinal outcome of interest in the short term, a long-term follow-up is risky. Conversely follow-up work is more likely given short-term effects, so that dissipated effects have a greater chance of being seen than delayed effects. We do not suggest that therefore we need an indiscriminating proliferation of follow-ups. But for research on high-stakes decisions, an absence of short-term effects should perhaps not automatically spell the end of data collection.

References

- Baseler, Travis. 2023. “Hidden Income and the Perceived Returns to Migration.” *American Economic Journal: Applied Economics* 15(4): 321–52. <https://doi.org/10.1257/app.20210571>.
- Beber, Bernd, Sarah Frohnweiler, Tabea Lakemann, Peter Partey-Anti, and Jann Lay. 2023b. “Learning by Doing? A Multisite Randomized-Controlled Trial of Skills Trainings for Artisans in Ghana.” Working paper. Registered at <https://doi.org/10.1257/rct.6842-1.0>.
- Bryan, Gharad, and Melanie Morten. 2019. “The Aggregate Productivity Effects of Internal Migration: Evidence from Indonesia.” *Journal of Political Economy* 127(5): 2229–2268. <https://doi.org/10.1086/701810>.
- Coibion, Olivier, Dimitris Georgarakos, Yuriy Gorodnichenko, and Maarten van Rooij. 2023. “How Does Consumption Respond to News about Inflation? Field Evidence from a Randomized Control Trial.” *American Economic Journal: Macroeconomics* 15(3): 109–152. <https://doi.org/10.1257/mac.20200445>.
- Frohnweiler, Sarah, Bernd Beber, and Cara Ebert. 2023. “Information Frictions, Belief Updating and Internal Migration: Evidence from Ghana and Uganda.” *Ruhr Economic Papers* 987. <http://dx.doi.org/10.4419/96973152>.
- Lagakos, David. 2020. “Urban-Rural Gaps in the Developing World: Does Internal Migration Offer Opportunities?” *Journal of Economic Perspectives* 34(3): 174–192. <https://doi.org/10.1257/jep.34.3.174>.
- McKenzie, David. 2023. “Fears and Tears: Should More People Be Moving within and from Developing Countries, and What Stops this Movement?” *The World Bank Research Observer*. <https://doi.org/10.1093/wbro/lkac009>.
- Tjaden, Jasper, and Felipe Alexander Dunsch. 2021. “The effect of peer-to-peer risk information on potential migrants – Evidence from a randomized controlled trial in Senegal.” *World Development* 145: 105488. <https://doi.org/10.1016/j.worlddev.2021.105488>.
- Tjaden, Jasper, and Horace Gninafon. 2022. “Raising Awareness About the Risk of Irregular Migration: Quasi-Experimental Evidence from Guinea.” *Population and Development Review* 48(3): 745–766. <https://doi.org/10.1111/padr.12468>.