

## **A conversation with Dr. James Habyarimana and Dr. William Jack, March 14, 2016**

### **Participants**

- Dr. William Jack – Professor of Economics, Georgetown University
- Dr. James Habyarimana – Associate Professor, McCourt School of Public Policy, Georgetown University
- Catherine Hollander – Outreach Associate, GiveWell
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**Note:** These notes were compiled by GiveWell and give an overview of the major points made by Drs. Jack and Habyarimana.

### **Summary**

GiveWell spoke with Drs. Jack and Habyarimana of Georgetown University as part of its investigation into road safety interventions in low- and middle-income countries. Conversation topics included the status of road safety campaigns in East Africa, current funding and funding needs, and potential expansion opportunities.

### **Background and status of current projects**

The Georgetown University Initiative on Innovation, Development, and Evaluation (gui<sup>2</sup>de), co-directed by Drs. Jack and Habyarimana, is managing the Zusha! Road Safety Campaign in East Africa. Zusha! aims to prevent traffic accidents by placing stickers on minibuses encouraging passengers to speak up against dangerous driving.

gui<sup>2</sup>de employs three full-time staff members, one of whom works full time on road safety. gui<sup>2</sup>de is now implementing the campaign in four countries, three of which are still in the experimental phase and one where the program is currently scaling up.

#### **Kenya**

The Zusha! campaign currently reaches approximately 25,000 minibuses and larger buses in Kenya. Though it is difficult to determine how many minibuses operate in Kenya due to unreliable registration records, Dr. Jack estimates that another 15,000 minibuses in the country remain to be reached. In experiments, the intervention reached approximately 12,000 minibuses, which means reach has roughly doubled in the past year. gui<sup>2</sup>de is scaling up the program in Kenya with support from an insurance company and the National Transport and Safety Authority, and with funding from USAID. gui<sup>2</sup>de employs one project manager and two project assistants in Kenya and plans to open an office there for continued work on Zusha! and other research projects.

#### **Tanzania**

gui<sup>2</sup>de launched the experimental phase of the campaign in Tanzania in early 2016. It has placed stickers in approximately 1,600 vehicles in Tanzania (and following about 1,650 vehicles in the control group) and will be measuring their impact in the next six to 12 months. gui<sup>2</sup>de is working in Tanzania with the national bus owners' association and the government regulatory body in charge of transportation. gui<sup>2</sup>de employs one project manager and one assistant in Tanzania, and also occasionally uses between 10 and 20 enumerators, who recruit vehicles and collect data in the field.

## **Rwanda**

In Rwanda, gui<sup>2</sup>de has been operating the road safety campaign since late 2015, working with the University of Rwanda and the Ministry of Health. After a slow start, the collaboration is making steady progress towards the launch of the experimental phase. gui<sup>2</sup>de employs one project manager in Rwanda.

## **Uganda**

gui<sup>2</sup>de has personnel in Uganda as of approximately two weeks prior to this conversation and will soon be launching the campaign there, working with the Ministry of Works and Transport. gui<sup>2</sup>de employs one project manager and one project assistant in Uganda.

## **Strategic approach**

### **Message testing**

gui<sup>2</sup>de's strategy in East Africa has been to show several different messages to the local population to get initial feedback. However, it also needs to gather evidence that its chosen message works. One concern is that the efficacy of messaging could depend so heavily on local culture that a message's success will vary greatly from one country to another.

In Kenya, gui<sup>2</sup>de has already invested significant effort in testing a variety of messages. Elsewhere in East Africa, it plans to reduce its focus on multiple message testing and conduct simpler experiments with treatment and control groups, though on a large enough scale to be statistically significant. In Nairobi, for instance, gui<sup>2</sup>de's partnering insurance company runs a weekly lottery offering a chance for drivers of treated vehicles to win a prize if they are found to have retained the stickers; because the lottery itself could have induced drivers to operate more carefully, in an earlier experiment gui<sup>2</sup>de set up a placebo arm to test whether the stickers were the motivating factor behind safer driving, or if it was the lottery itself. gui<sup>2</sup>de concluded that the stickers were in fact the motivating factor, so it will not set up a placebo arm in the other countries.

### **Randomized controlled trials (RCTs)**

gui<sup>2</sup>de believes it is important to test the intervention in new countries to (a) confirm its effectiveness, and (b) provide convincing evidence to policymakers and other stakeholders to adopt the approach at scale.

From its experience in Kenya, gui<sup>2</sup>de has drawn some basic conclusions that it believes may be generalizable to other settings. For instance, messages with pictures are more effective than those with text only, and messages encouraging collective action seem to improve outcomes. The RCTs in other countries could be two- or three-arm studies that would test the language used to motivate action, as opposed to the more general questions of whether to use pictures or motivate collective action. Recruiting for larger studies than this would be challenging, as it is difficult to generate a large enough sample size for each arm.

### *Study outcomes*

The primary outcomes gui<sup>2</sup>de hopes to observe in its studies are rates of accidents, deaths, and injuries. To some extent, this depends on its access to administrative data on crashes, costs, and similar information. In Kenya, insurance companies were able to provide extensive data on accidents, claims, and associated costs. In Tanzania, Rwanda and Uganda, gui<sup>2</sup>de is working with police to obtain these data.

Another outcome gui<sup>2</sup>de hopes to learn more about is behavior inside the buses. Dr. Jack considers this a less important goal than preventing accidents and deaths. However, in its last study, gui<sup>2</sup>de's enumerators collected data on the maximum speeds of vehicles and found slower speeds in the treatment group.

### *Expected timeline of results*

gui<sup>2</sup>de will have results from its experimental intervention in Tanzania in one and a half years. It hopes to have results from Uganda and Rwanda in that time frame as well, though this depends on how quickly it can establish its programs there.

Once the program has been scaled and transitioned out of the experimental phase, it is more difficult to measure its impact. This means that in Kenya, the measure of gui<sup>2</sup>de's success will be how many minibuses it can reach and the degree to which the intervention is adopted by local institutions. However, gui<sup>2</sup>de aspires to exploit trends in insurance claims data to speak to potential benefits of the scale-up.

### **Long-term effects**

gui<sup>2</sup>de hopes to eventually begin observing the effects of this intervention in the long term (i.e., after several years), but it has not yet reached that point in any setting.

One possible challenge that may arise in the long term is that people may grow accustomed to the stickers and start to ignore them. After the program has been established in one setting for three to four years, it might be appropriate for gui<sup>2</sup>de to conduct another experiment that tests the existing message against a new one. gui<sup>2</sup>de believes that innovation in finding new ways to communicate its message will likely be important to the program's success.

### **Challenges**

#### **Identifying relevant institutions**

In most countries, the primary obstacle is learning what institutions gui<sup>2</sup>de needs to work with. Although gui<sup>2</sup>de carried out its first experimental study independently in Nairobi, such an approach is not efficient at this stage. gui<sup>2</sup>de must partner with institutions such as government agencies or ministries, private-sector insurance agencies, media companies, or bus companies.

## **Funding**

### **Existing funding**

gui<sup>2</sup>de has received stage 3 funding from Development Innovation Ventures (DIV) to transition the Zusha! program out of the experimental phase in Kenya and begin scale-up. This will fund activities for another one and a half years. After that point, gui<sup>2</sup>de must be able to show results from its experiments in other countries.

gui<sup>2</sup>de previously received a stage 2 grant from DIV in the amount of approximately \$300,000 to conduct message testing, plus \$65,000 from the National Bureau of Economic Research through the Gates Foundation and a small amount from Kenyan mobile provider Safaricom and from Georgetown. In total, gui<sup>2</sup>de received about \$400,000 for message testing prior to winning the current DIV grant.

### **Other funding sources**

gui<sup>2</sup>de has no additional sources of funding and is actively seeking out more.

In India, gui<sup>2</sup>de was approached by a potential corporate funder and sent a student to Maharashtra to investigate possible models for a campaign there. The student was able to learn more about where in the country it might conduct a campaign based on access to data or vehicles. However, funding is still being sought.

gui<sup>2</sup>de is also looking into funding opportunities following interest from a potential research partner and government agencies in Peru.

### **Priority funding areas**

gui<sup>2</sup>de would like to have enough funding to be able to enter countries decisively, but also take the time to study the environment and ensure that the intervention not only is right for the setting but also will not be harmful. In addition, Drs. Jack and Habyarimana would like core funding for support staff in the US to help them run the programs, which will be necessary in order to successfully scale.

### **Scale of funding needs**

Drs. Jack and Habyarimana are not yet certain of their funding needs. They would like to test a number of different methods before scaling the program in any country, so the budget should ideally allow room for experimentation. They have also tried to get support and participation from private-sector actors in the countries where the program is under way, given these actors' potential to gain from the success of the intervention, so budget needs could vary considerably from place to place depending on the extent of those partnerships. However, Drs. Jack and Habyarimana estimate that \$10 million over five years would be a good start. Of the

\$10 million, an estimated 10% per year would go toward core funding or overhead, including staffing at headquarters. The remainder, approximately \$1.8 million per year over five years, would go toward programs. This would potentially allow gui<sup>2</sup>de to work in five countries. To fund scale-up and monitor ongoing impact in the four countries where it is already working, gui<sup>2</sup>de estimates it would need approximately \$1–1.5 million per year.

### *Program maintenance costs*

gui<sup>2</sup>de's program will require ongoing funding to replace the stickers, which deteriorate after approximately six months. Apart from this, gui<sup>2</sup>de attempts to incentivize vehicle owners and drivers to keep the stickers by conducting a weekly lottery for treated vehicles, which also incurs a cost. If a government passed a law requiring the stickers in vehicles, that would remove the need for monitoring by gui<sup>2</sup>de, though the government would then incur additional costs of policing.

### **Potential expansion into other regions**

gui<sup>2</sup>de believes it is important to expand into new and culturally different regions, and that it has learned enough from its work in East Africa to warrant this expansion. It is not clear whether the approach that has worked in Kenya will be effective in South Asia, for instance, or in Latin America. However, the intervention could be transformative in a substantial number of developing countries. gui<sup>2</sup>de does not want to start working in all of them, but would benefit from having the administrative capacity and other resources to begin experimenting in many of them.

gui<sup>2</sup>de has been approached (by potential partners, not funders) about the possibility of doing work in the Andean region in South America, and has also been exploring possible work in India. gui<sup>2</sup>de has seen interest from Peru in particular, and the other Andean countries also have data on road accidents that suggest their accident rates could be improved. Brazil and South Africa have also expressed interest in working with gui<sup>2</sup>de. The original proposal gui<sup>2</sup>de submitted to DIV included Nigeria and South Africa as countries where the intervention could have a significant impact, although these were removed in negotiations with the funder.

Dr. Jack believes that it may be particularly effective to target larger countries, such as India, because a program shown to be successful in one state may then spread to other parts of the country, and potentially across borders into other countries.

### **Transferring program management**

gui<sup>2</sup>de is not yet certain whether it will run these programs on a continuing basis, or start them, demonstrate their efficacy, and then transfer them to another entity to manage. Dr. Jack believes this will likely depend on the setting, and this variance will in turn affect how much funding is needed. In some countries, gui<sup>2</sup>de may continue to run the program. In others, an insurance company or other third-party organization may assume management of the program, or the government may decide to adopt the stickers as regulation. In the latter cases, gui<sup>2</sup>de would need to

establish an infrastructure so these third parties may maintain a full range of activities, and it can accomplish this more effectively given more resources. In any case, gui<sup>2</sup>de believes it is possible that it will continue to play an active role in the program in each country, but the intensity of that involvement will likely vary.

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