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Using Social Science Theories to Design and Evaluate Development Programs

May 20, 2020

12:45 – 14:00 GMT

A 50 minute lecture followed by a 25 minute Q&A session

About me

- Transition economist → development economist
- Academic → practitioner/analyst/researcher
- FHI 360 is an international NGO that conducts grant- and contract-funded research and implements human development programs in low- and middle-income countries and the United States.
- My focus now is research and evidence-based programming.



Bring Back Theory to Theory of Change

What is a “theory of change”?

- “A theory of change explains how activities are understood to produce a series of results that contribute to achieving the final intended impacts.”
(Rogers 2014)
- “Theory of Change is essentially a comprehensive description and illustration of how and why a desired change is expected to happen in a particular context.” (Center for Theory of Change)

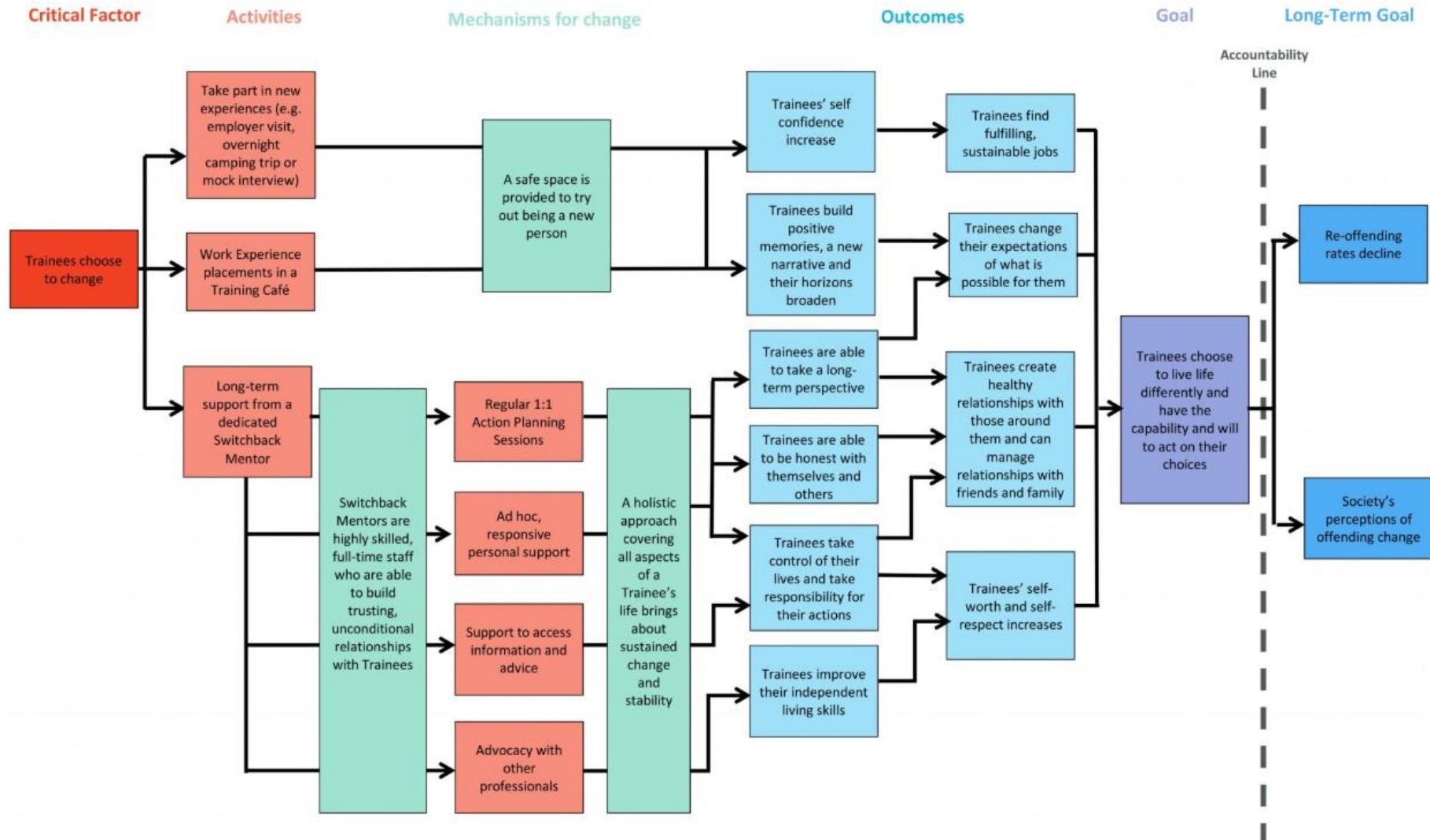
What is “theory of change”?

Center for Theory of Change explains:

“TOC maps out your initiative through 6 stages:

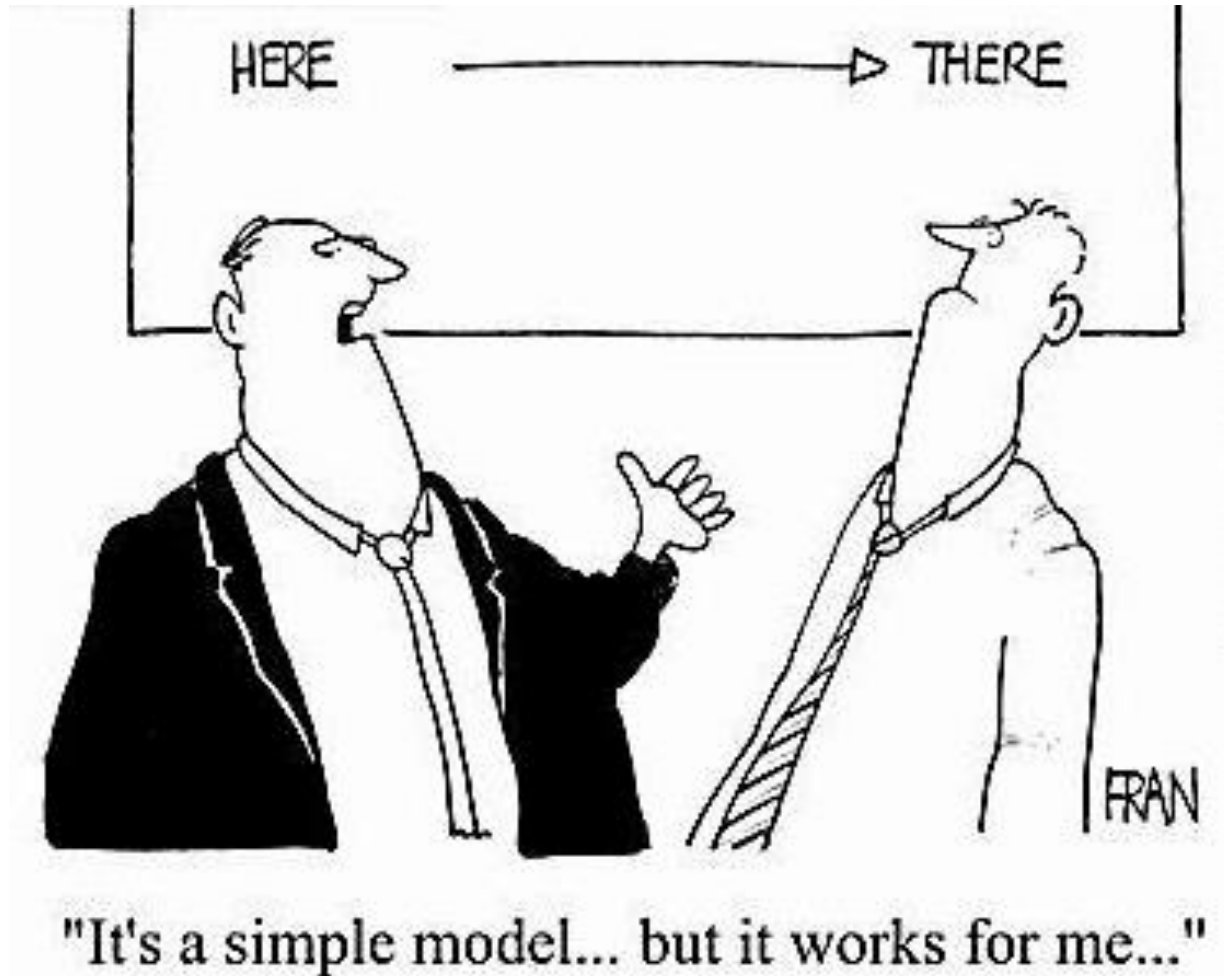
- Identifying long-term goals
- Backwards mapping and connecting the preconditions or requirements necessary to achieve that goal and explaining why these preconditions are necessary and sufficient.
- Identifying your basic assumptions about the context.
- Identifying the interventions that your initiative will perform to create your desired change.
- Developing indicators to measure your outcomes to assess the performance of your initiative.
- Writing a narrative to explain the logic of your initiative.”

An example of a comprehensive illustration...

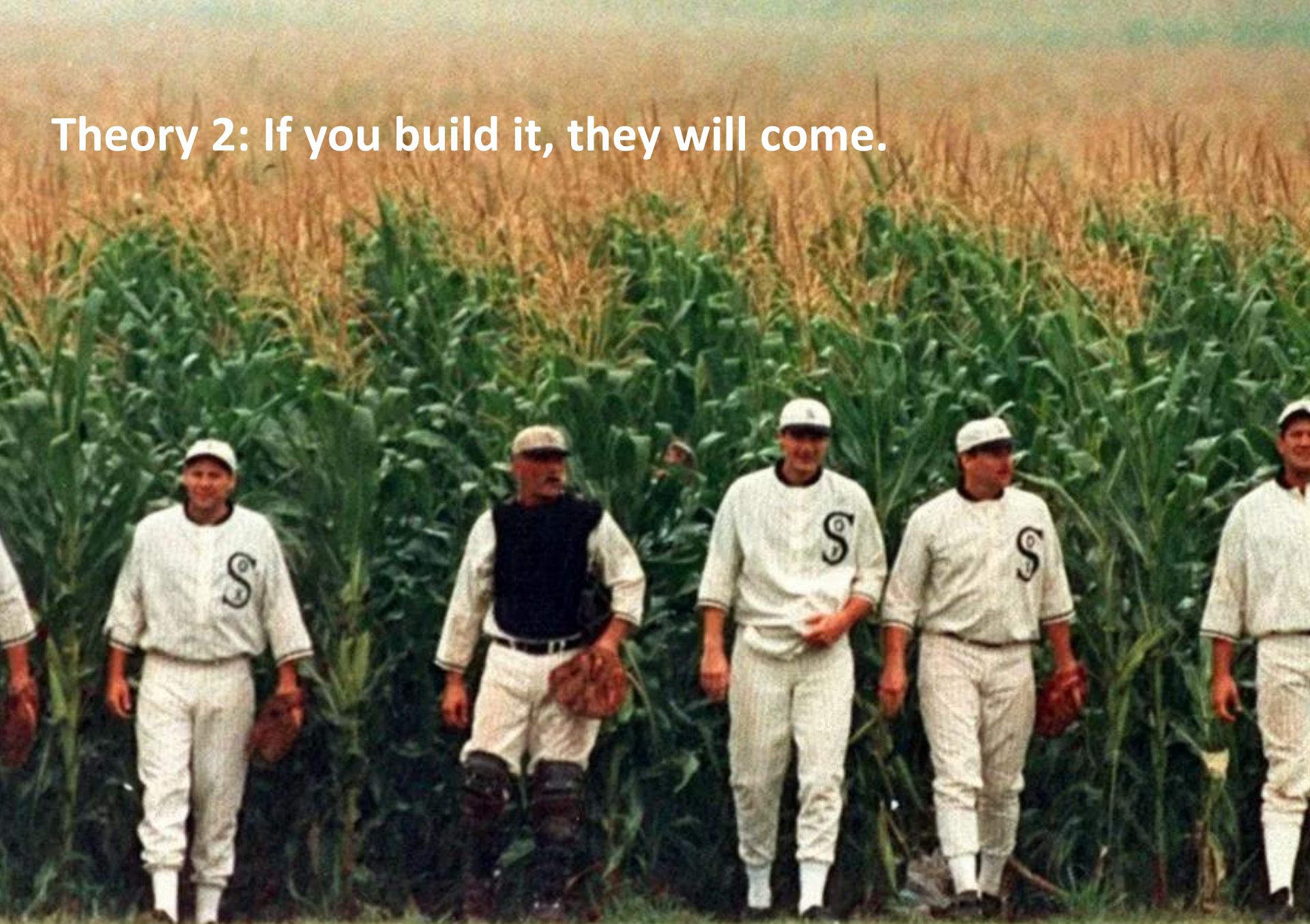


What happens when theories are
not made explicit?

Theory 1: Good things cause good things to happen.



Theory 2: If you build it, they will come.



Field of Dreams: Universal Pictures Home Entertainment

**Theory 3: If you tell them what to do,
they will do it.**

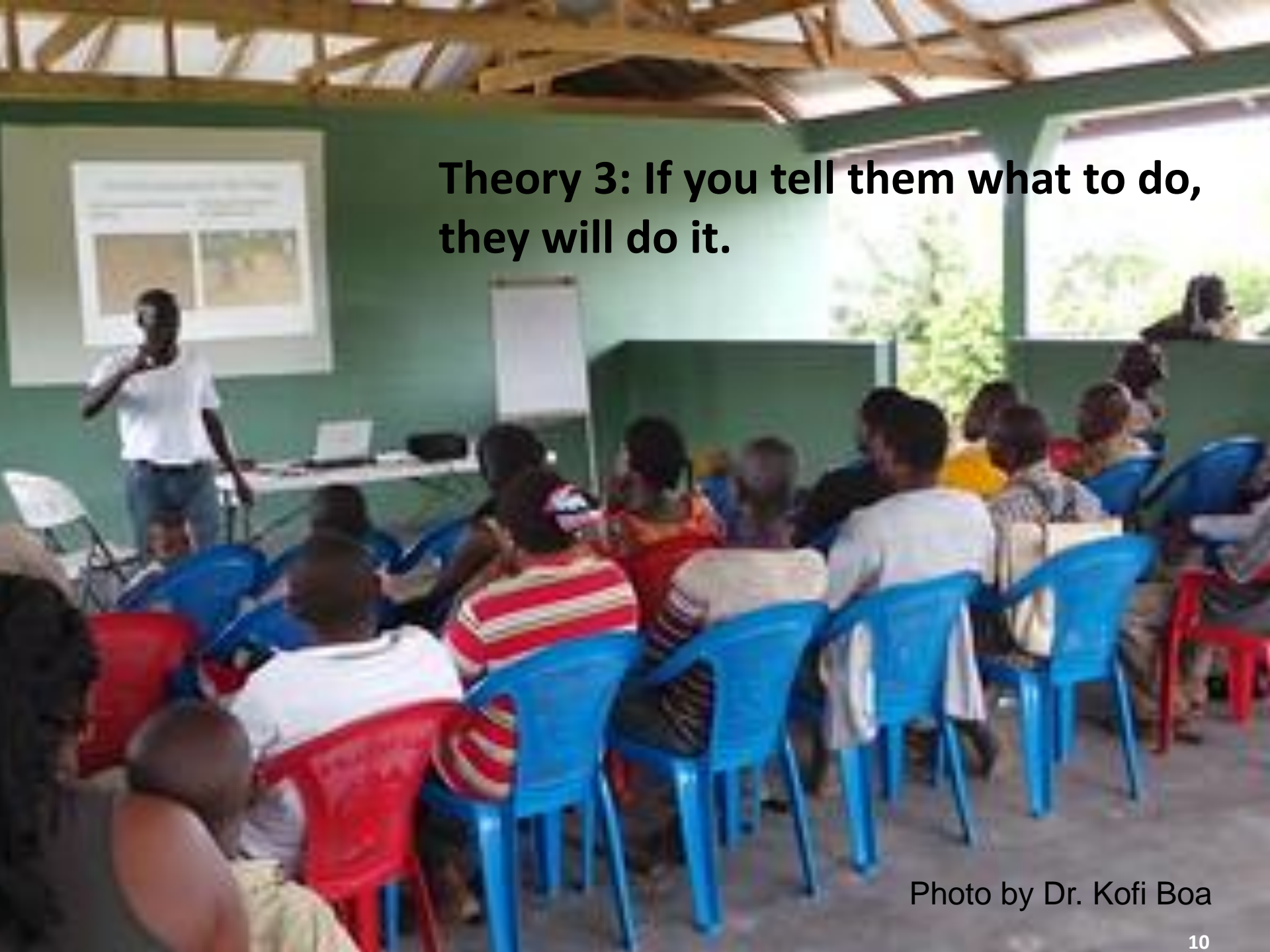
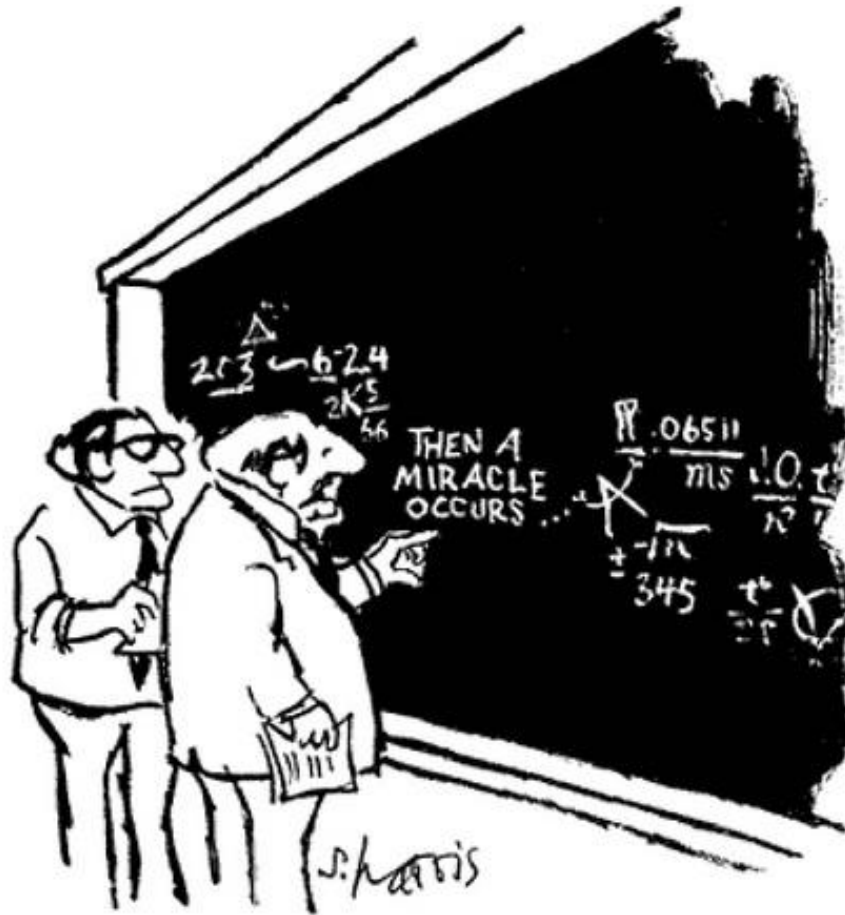


Photo by Dr. Kofi Boa

We need better theories



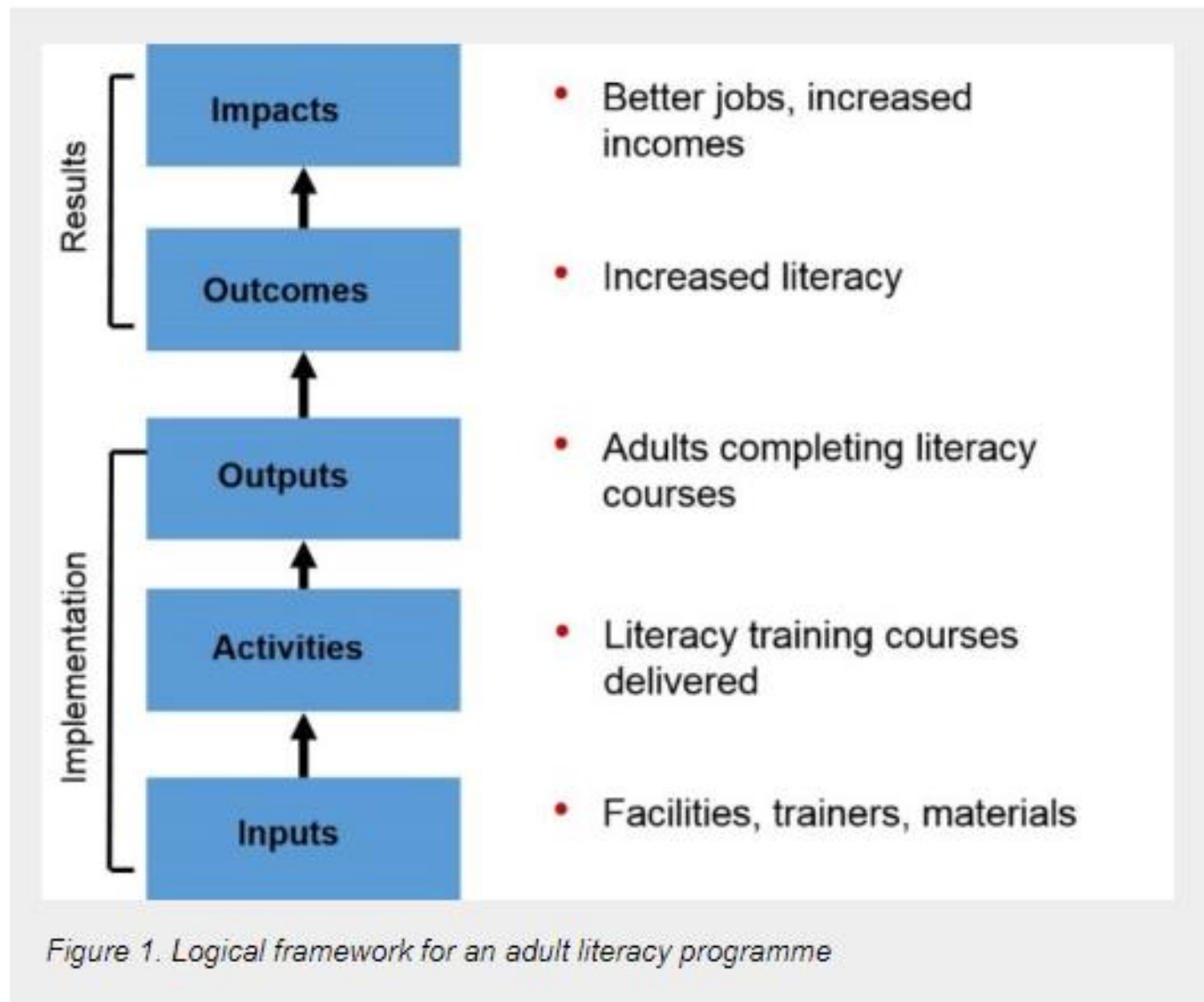
"I think you should be more explicit here in step two."

What is theory?

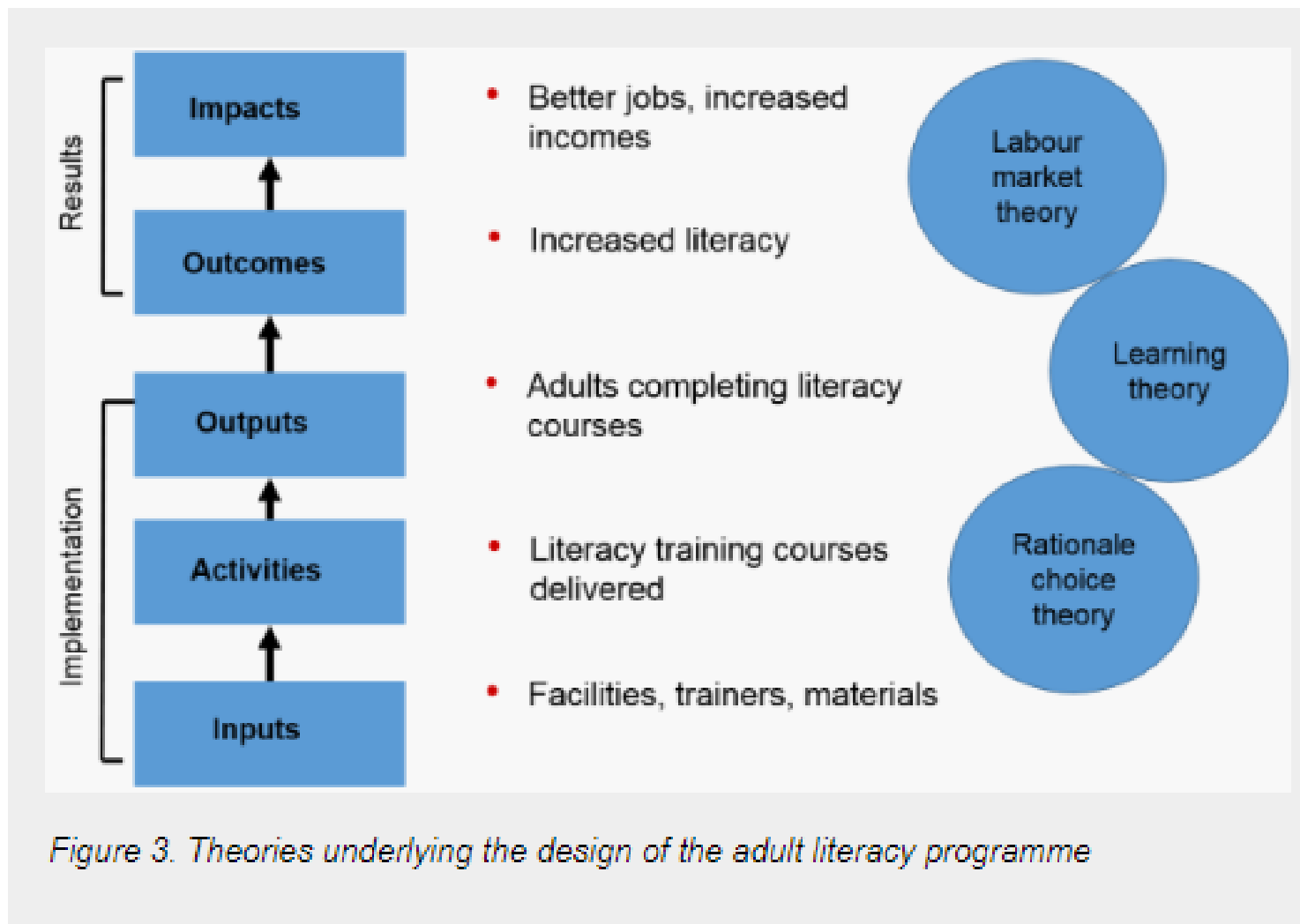
The term "theory" refers to "a well-substantiated explanation of some aspect of the world, based on a body of facts that have been **repeatedly confirmed through observation and experiment.**"^{[14][15]} The strength of a theory is related to the diversity of phenomena it can explain, which is measured by its ability to make **falsifiable predictions** with respect to those phenomena. Theories are improved (or replaced by better theories) as more evidence is gathered, so that accuracy in prediction improves over time; this increased accuracy corresponds to an increase in knowledge.

Adapted from Wikipedia “Theory” 10/20/2014

Example



What theories? What assumptions?



What about assumptions?



The “if” of a theory prediction, not the if-then!
You shouldn’t assume the prediction or assume the mechanism.



Description of a state of being or a situation,
ideally that can be observed or validated.

My thesis in context



Treatise vs. theory vs. mechanism: Not treatises but more than mechanisms



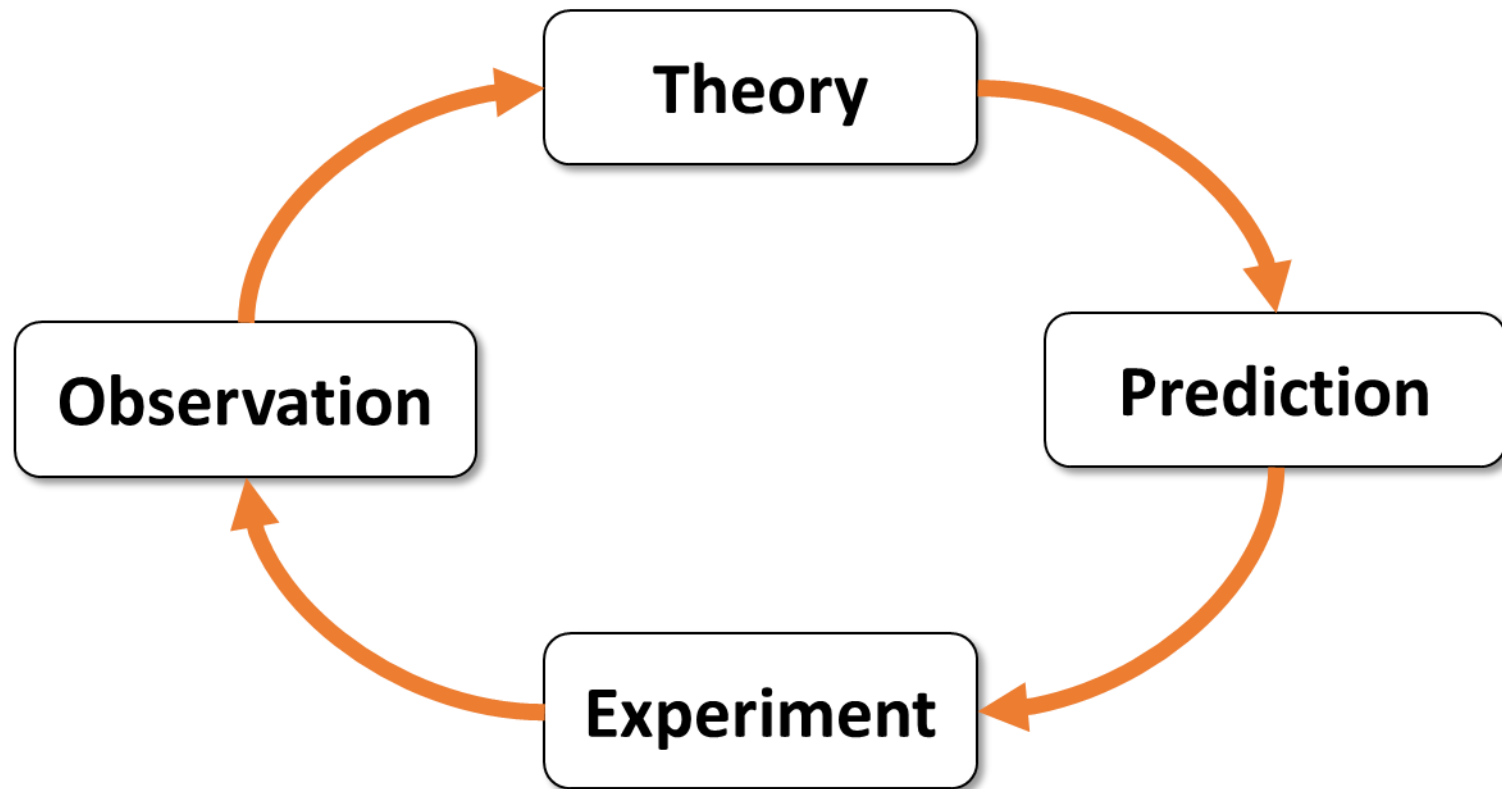
Middle-level? The level that makes the relevant prediction for program design and evaluation



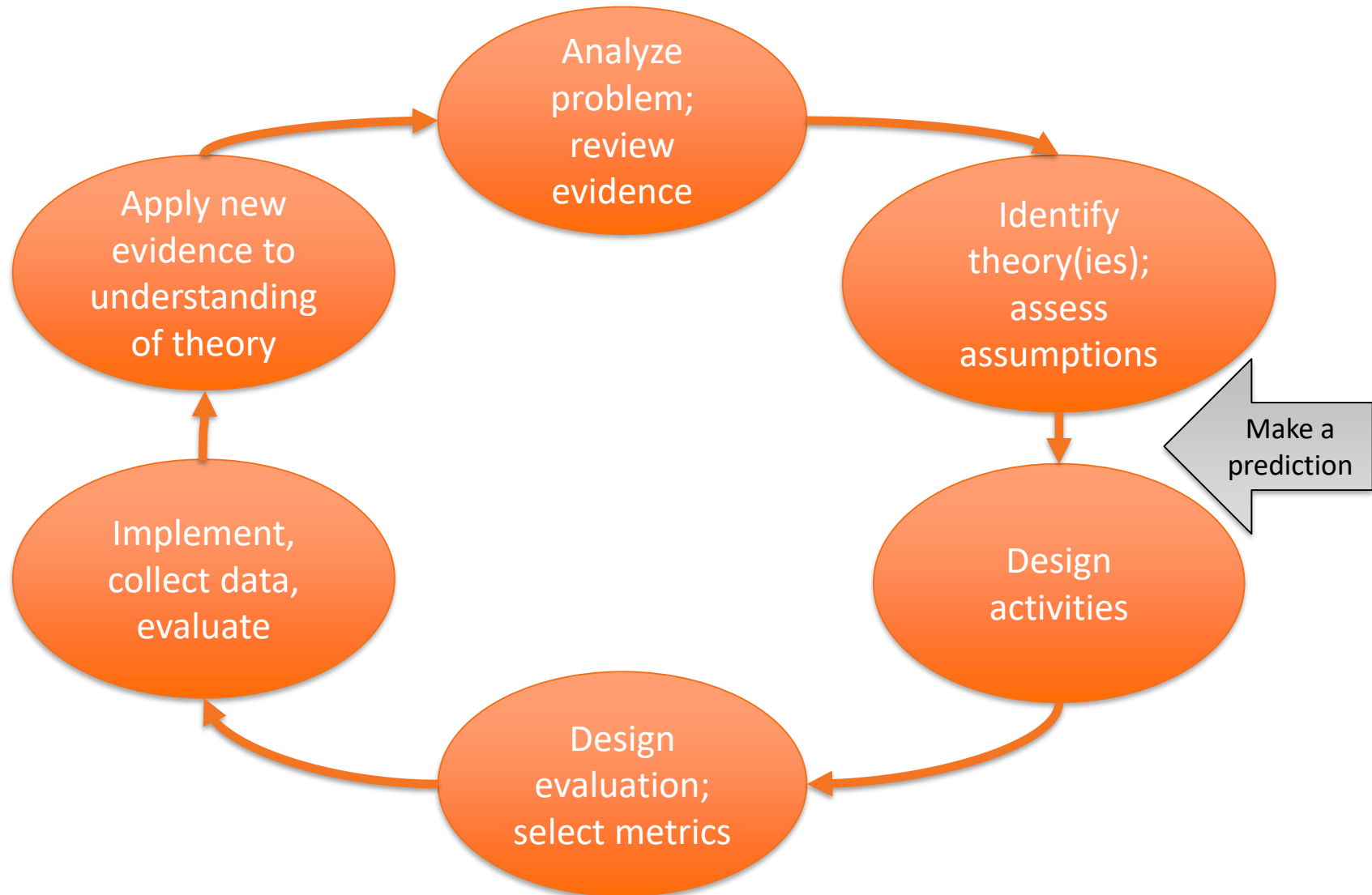
Use existing theories and evidence and contribute new evidence to those theories

How should we use theory?

The scientific process



The program design and evaluation process



What does theory give us?

- For program design
 - A prediction for how to achieve the desired outcome
 - The assumptions, or conditions, of the prediction
 - A map for finding relevant existing evidence
- For evaluation design
 - A causal chain
 - A framework for selecting or designing outcome measures
 - A way to contribute new evidence to improve theory and application of theory



Commonly used unattributed image.

Without theory

- Ineffective program design
- Multiple outcome measurement
- Post hoc explanations

“Without an overarching theoretical framework, empirical programs spawn and grow from personal intuitions and culturally-biased folk theories.”

Muthukrishna, M. and Henrich, J. (2019) A problem in theory. *Nature Human Behaviour*, Vol. 3, March, pp. 221-229

Psychology: social norms theory

Social norms theory

Social norms influence individual behavior. In particular, people will change their behavior to be more consistent with perceived social norms.

- Social norms are “perceptions of what is typical or desirable in a group or in a situation”
- People learn norms from reference groups or social referents

Social norms vs. other theories

- “Adherence to a perceived norm...is a more complex psychological phenomenon than simple observational learning (Bandura, 1971) or behavioral mimicry (Chartrand & Bargh, 1999).” p. 183
- “Distinguishing attitude change from norm change is critical, because they involve different strategies and have different results. ... “...individuals’ normative perceptions can be more malleable than their attitudes.” p. 183

Assumptions

- Attention to message
- Relevance to self
- Consistency with personal experience
- Ability to produce the behavior

Electricity use example

H. Allcott / Journal of Public Economics 95 (2011) 1082–1095

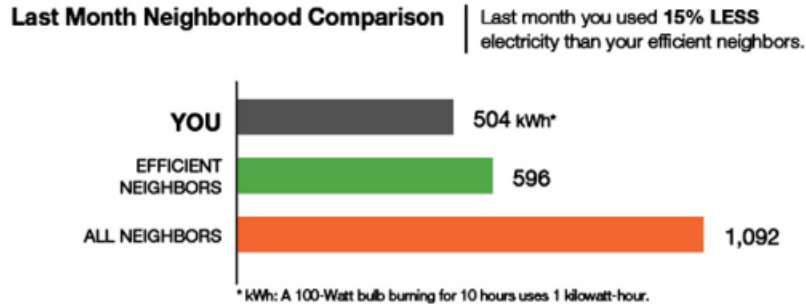


Fig. 1. Home energy reports: social comparison module.



Action Steps | Personalized tips chosen for you based on your energy use and housing profile

Quick Fixes

Things you can do right now

- ☐ **Adjust the display on your TV**
New televisions are originally configured to look best on the showroom floor—at a setting that's generally unnecessary for your home.

Changing your TV's display settings can reduce its power use by up to 50% without compromising picture quality. Use the "display" or "picture" menus on your TV: adjusting the "contrast" and "brightness" settings have the most impact on energy use.

Dimming the display can also extend the life of your television.

SAVE UP TO
\$40 PER TV PER YEAR

Smart Purchases

Save a lot by spending a little

- ☐ **Install occupancy sensors**
Have trouble remembering to turn the lights off? Occupancy sensors automatically switch them off once you leave a room—saving you worry and money.

Sensors are ideal for rooms people enter and leave frequently (such as a family room) and also areas where a light would not be seen (such as a storage area).

Wall-mounted models replace standard light switches and they are available at most hardware stores.

SAVE UP TO
\$30 PER YEAR

Great Investments

Big ideas for big savings

- ☐ **Save money with a new clothes washer**
Washing your clothes in a machine uses significant energy, especially if you use warm or hot water cycles.

In fact, when using warm or hot cycles, up to 90% of the total energy used for washing clothes goes towards water heating.

Some premium-efficiency clothes washers use about half the water of older models, which means you save money. SMUD offers a rebate on certain washers—visit our website for more details.

SAVE UP TO
\$30 PER YEAR

Fig. 2. Home energy reports: action steps module.

Radio drama example



Photo by Jos Verhoogen (CC BY-NC-ND 2.0)

- Reconciliation radio in Rwanda: New Dawn
- Soap opera
- Designed to influence beliefs and to influence perceptions of social norms and thus influence behavior
- Portrayed characters and situations common to Rwanda
- Demonstrate cooperation and reconciliation behaviors

Table 2

Reconciliation Program Effects on Beliefs, Social Norms, and Empathy

Category	Predicted direction	Reconciliation radio	SE	p
Belief				
Violence is a continuum	+	0.04	0.05	.85
Violence comes suddenly	–	–0.004	0.06	.92
Bystanders to violence are responsible	+	–0.010	0.11	.38
Intermarriage brings peace	+	–0.12	0.11	.47
Traumatized are “crazy”	–	–0.004	0.06	.99
Perpetrators can be traumatized	+	0.08	0.09	.62
Trauma recovery is possible	+	–0.15	0.08	.05
Pregnant women with AIDS can have healthy babies	–	0.06	0.05	.87
I can share with AIDS patients	–	0.10	0.16	.77
Social norm				
Intermarriage should be allowed in my family	+	0.28	0.04	.01
It is not naive to trust	+	0.14	0.07	.04
There is mistrust	–	–0.1	0.07	.52
I should dissent	+	0.29	0.07	.01
I should talk about trauma	+	0.22	0.03	.04
Pregnant women should be tested for AIDS	–	–0.56	0.18	.002
Empathy for other Rwandans	+	0.17	0.08	.04

Note. Each line is a separate ordered probit regression that analyzes individual-level data and accounts for clustering at the listener group level. The reconciliation radio program is scored as 1 (vs. health program = 0) in each regression, thus predictions for health messages are in the reverse direction. Social norms include both prescriptive and descriptive norms. Refer to the text for the full item wording.

Kenya counts on celebrity influence to combat NCDs

devex.com/news/kenya-counts-on-celebrity-influence-to-combat-ncds-95754

Sara Jerving

devex
Do Good. Do It Well.™



Kate Campana, CEO of Access Challenge, with the judges of East Africa's Got Talent and the winners, singing duo Esther and Ezekiel. Photo by: Access Challenge

NAIROBI — Singers, dancers, and acrobats descended on a stage in Nairobi each Sunday night since August for the "East Africa's Got Talent" competition — the region's inaugural version of "America's Got Talent" — which wrapped up last weekend.

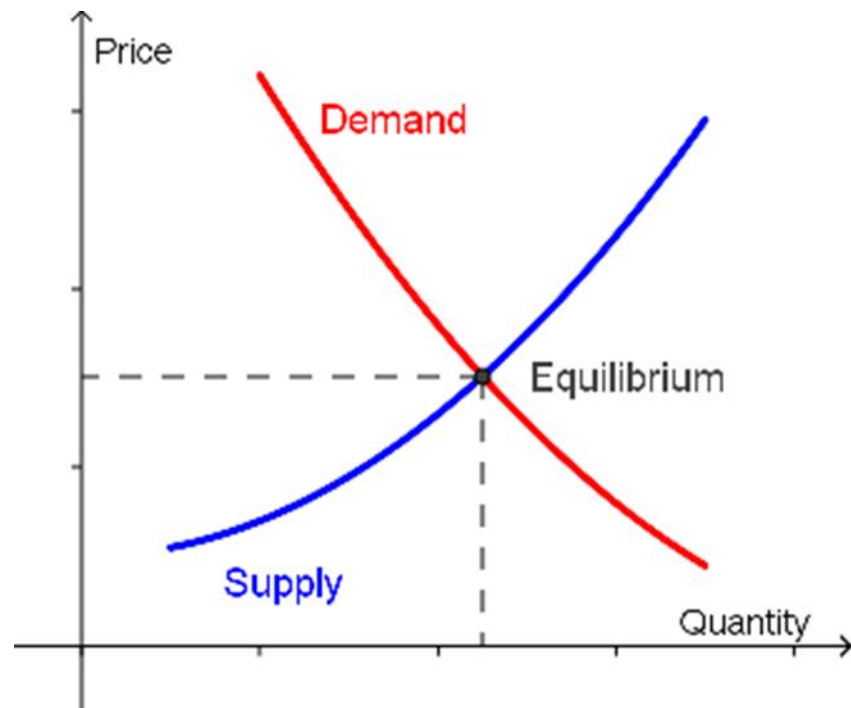
While viewers at home were entertained by performers from the region, the Kenyan government also hoped to capitalize on the show's millions of viewers by taking the opportunity to promote tips on healthy living.

Economics: market theory

Market theory

Perfectly competitive markets produce allocative efficiency.

Allocative efficiency means productive resources go to their highest valued uses.



Assumptions required for perfect competition

- Many buyers and sellers
- Free entry and exit
- Prices move easily up and down
- Homogeneous products
- Perfect information
- Perfectly mobile factors of production
- Rational behavior
- (No transactions costs)

Photo by Spixey (CC BY 2.0)

Market failures

- Non-excludability
- Externalities
- Market power
- Asymmetric information

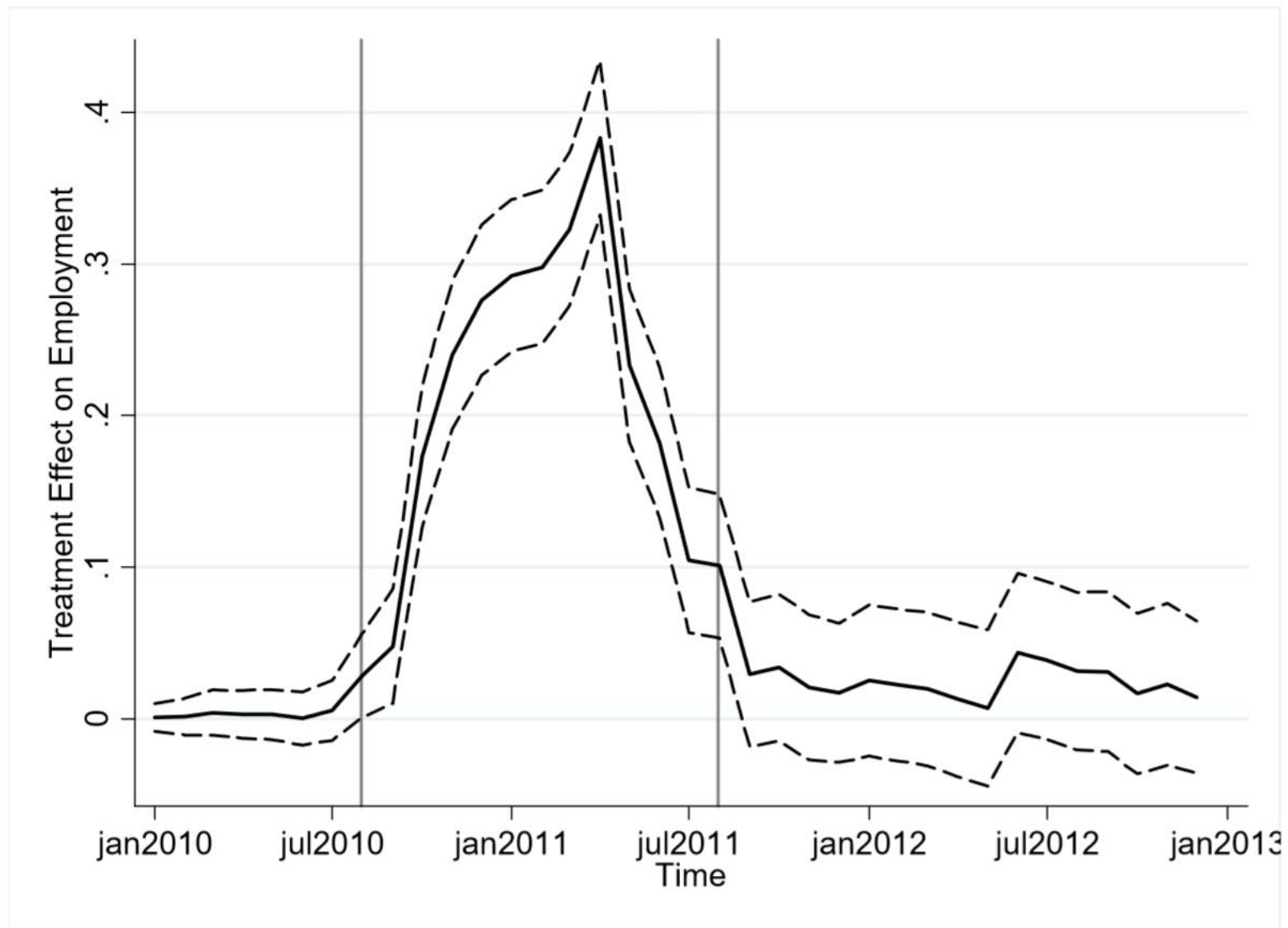
Instead of asking the question, how can we make this happen, ask the question, why isn't the market making this happen?

Active labor market policies example

- Vocational training
- Wage subsidies
- Search and matching assistance

“How effective are active labor market policies in developing countries? A critical review of recent evidence” David McKenzie, World Bank Policy Research Working Paper No. 8011, March 2017.

Figure 1: Trajectory of Impact from a **Wage Subsidy Program** in Jordan



Source: Groh et al. (2016a). Figure shows month by month impacts of a wage subsidy on employment, along with 95 percent confidence intervals. The two vertical lines shows the start and end of the subsidy period.

McKenzie's conclusion

One reason for this lack of effectiveness is a positive one: labor markets (at least in urban areas) in developing countries actually appear to work a lot better than is sometimes thought.

Price information example

- Agricultural price information through mobile phones
 - Information push to small farmers about current prices for several agricultural products
- Price information given to some farmers and not others

Effects of price information

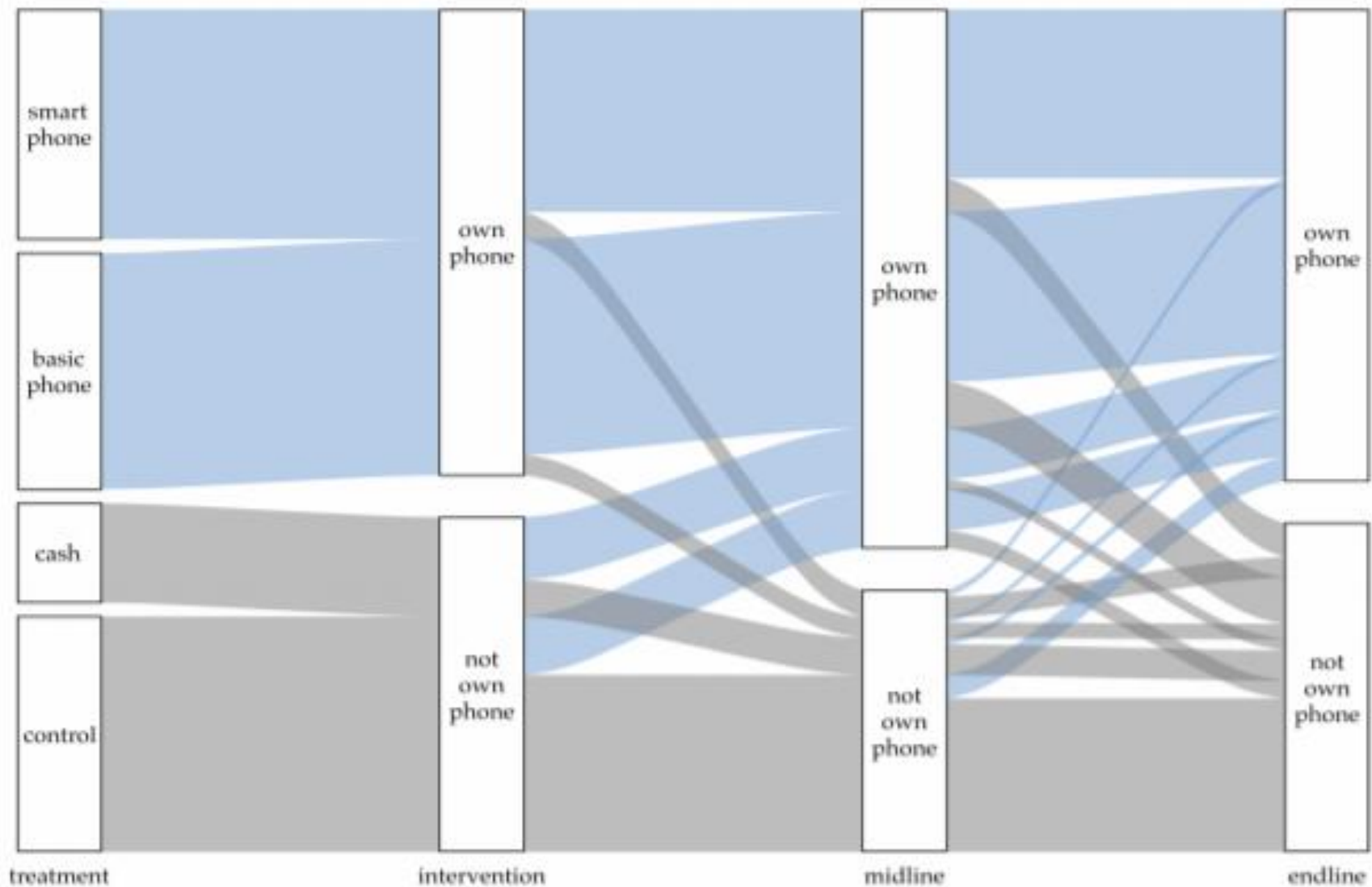
The Role of Price Information in Agricultural Markets: Experimental Evidence from Rural Peru

Nakasone, Eduardo

This paper presents new experimental evidence on the role of price information in agricultural markets. For this purpose, I set up a Randomized Control Trial (RCT) in the central highlands of Peru. A group of farmers in randomly selected villages got access to detailed price information for the most relevant local crops in six regional markets through cell phone SMS. The information was delivered throughout the four-month period immediately after harvest, where they sell most of their production. I find that the beneficiaries got higher sales prices for their products, compared to households in the control group. The effect is robust to different specifications. I also find that this effect was mostly driven by increases in the prices for relatively more perishable crops, for which information could be more valuable. Additionally, information made farmers more likely to sell their production (extensive margin). Albeit not statistically significant, the estimate for sales on the intensive margin are positive and quite large. Finally, I also investigate the possibility of information spillovers by examining marketing outcomes of households who did not receive the information but lived in villages where others did. I do not find any significant effects among households in this group.



Photo by David Stanley (CC BY 2.0)



Roessler, et al. (2020) An experimental analysis of mobile phone ownership on poverty reduction. Under review. http://danielnielson.com/wp-content/uploads/2020/02/Roessler-et-al.2020.Experimental-Analysis-of-Mobile-Phones-on-Poverty.Ms_.pdf

Why don't more
program designers
use theory?

AREWA 24 example



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How to bring back theory?

Resources for theory

- 101 textbooks
- Review papers
- Experimental studies
- Researchers
- Multidisciplinary teams

Resources for assumptions

- Country studies
- Country data
- Formative research

Getting to intent: Are social norms influencing intentions to use modern contraception in the DRC?

Elizabeth Costenbader^{1*}, Seth Zisette¹, Andres Martinez¹, Katherine LeMasters^{1,2}, Nana Apenem Dagadu³, Prabu Deepan⁴, Bryan Shaw³

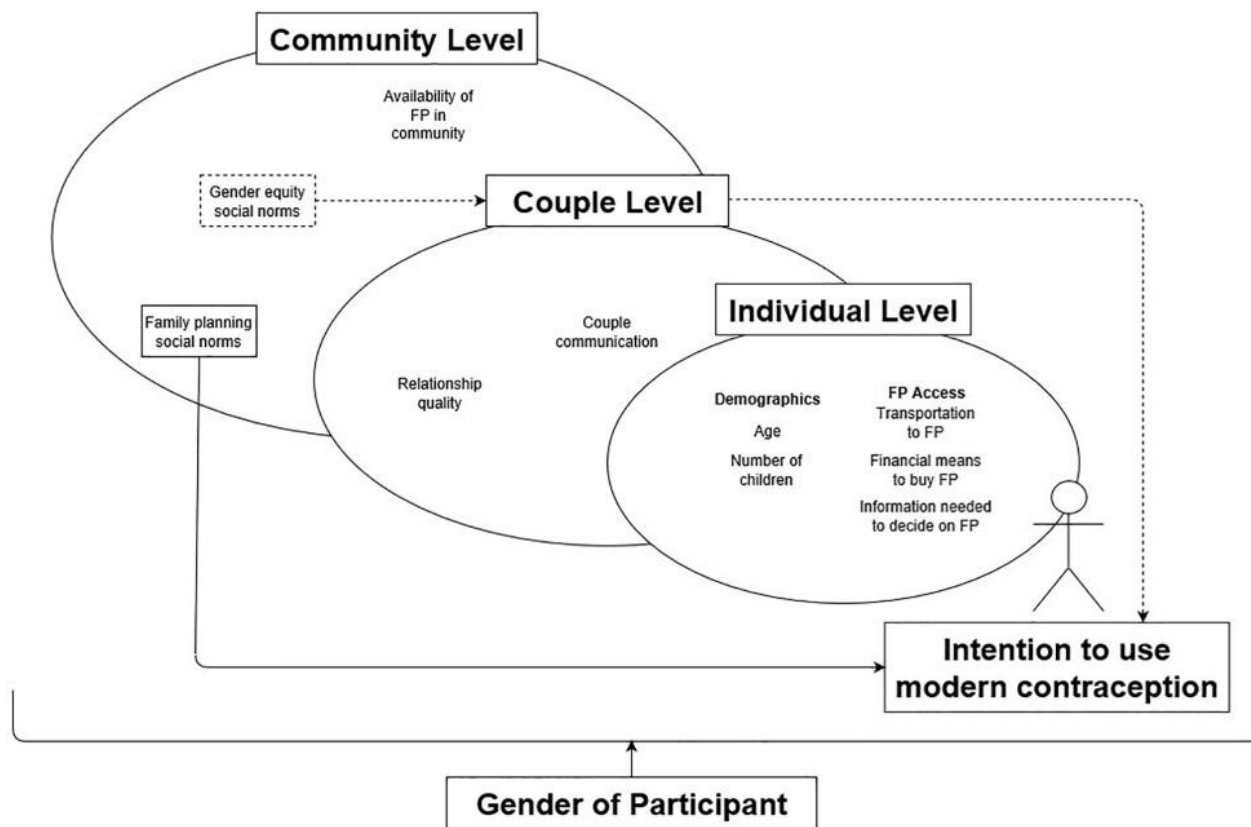


Fig 1. Conceptual model of factors theorized to affect use of modern contraception in Kinshasa, DRC.

<https://doi.org/10.1371/journal.pone.0219617.g001>

Bring back theory:
it's not just for
academics


www.cedilprogramme.org

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