

## ECON 523: Program Evaluation for International Development

### Empirical Exercise 4

In this exercise, we're going to be replicating specifications from "Does a ban on informal health providers save lives? Evidence from Malawi" by Professor Susan Godlonton and Dr. Edward Okeke. The data set `E5-GodlontonOkeke-data.dta` contains information (from the 2010 Malawi Demographic and Health Survey) on 19,680 live births between July 2005 and September 2010. Each observation represents a birth.

Before getting started, you will need to download the data set onto your laptop. Use your answers to the in-class activity to extend the do file below by generating and labeling the `high_exposure` and `highxpost` variables needed for analysis.

```
clear all
set more off
set scheme s1mono
set seed 123456

cd "C:\Users\pj\Dropbox\ECON-523\topics\4-DD2\stata"
use "data\E4-GodlontonOkeke-data.dta"
```

Extend your do file as you answer the following questions:

#### 1. Replicating Column 1 from Tables 5 and 6.

- (a) Estimate a difference-in-differences specification that replicates Table 5, Panel A, Column 1. Store your results using the `eststo` command.
- (b) Now replicate Table 5, Panel B, Column 1 (the same specification with the `sba` dummy as the outcome variable) and store your results.
- (c) Recode the `m3h` variable to generate a dummy for having a friend or relative as the birth attendant. Use this variable to replicate Table 6, Panel A, Column 1. Store your results.
- (d) Now generate a variable `alone` that is equal to one minus the maximum of the `tba`, `sba`, and `friend` variables. Use this variable to replicate Table 6, Panel B, Column 1. Store your results.
- (e) Now export your results to word as a nicely formatted table. Report the R-squared for each specification, and do not report coefficients on the district and time fixed effects (use the `indicate` option to report which columns include fixed effects, or indicate which fixed effects are used in the table notes). Report standard errors rather than t-statistics. Make sure all variables and columns are clearly labeled, and that your labels are not cut off (because they are too long).

#### 2. Assessing the Common Trends Assumption

Next, assess the validity of the common trends assumption by replicating the first two columns of Table 2 (we don't have the outcome data needed to replicate Columns 3 and 4).

- (a) Drop the observations from after the ban was in place. Then generate a **trend** variable by using the **egen** command's **group** option (with the **time** variable). Interact the **trend** variable with the **high\_exposure** variable, and label all of your variables.
- (b) Replicate columns 1 and 2 to the best of your ability (note: they will not replicate perfectly). Store your coefficient estimates.
- (c) Export your results to word as a nicely formatted table (all of the guidance from Question 1 still applies).

### 3. Interpretation.

How does your replication of Columns 1 and 2 of Table 2 compare to the version that is published in the paper? Looking at the published version, what might you have noticed about the coefficient(s) that would have suggested that a(n inconsequential) part of the table wouldn't replicate?

### 4. Totally Optional Additional Activities.

If you are looking for ways to expand your program evaluation skills further, extend your answer to Question 1 by including district-specific time trends, as Professor Godlonton and Dr. Okeke do in Columns 4 through 6 of Tables 5 and 6. Alternatively, you can replicate the main analysis using a continuous measure of treatment intensity: the interaction between the level of TBA use prior to the ban and the **post** dummy. Generate this new treatment variable using your existing **meantba** variable (which, unfortunately, is missing for all observations in the post-ban period), and then estimate regressions that control for DHS cluster and time fixed effects (warning: this will give your computer a bit of a workout). How do the results from these alternative specifications compare to those reported in the paper?