

The effect of a policy-induced cocoa price increase on school enrollment in Côte d'Ivoire

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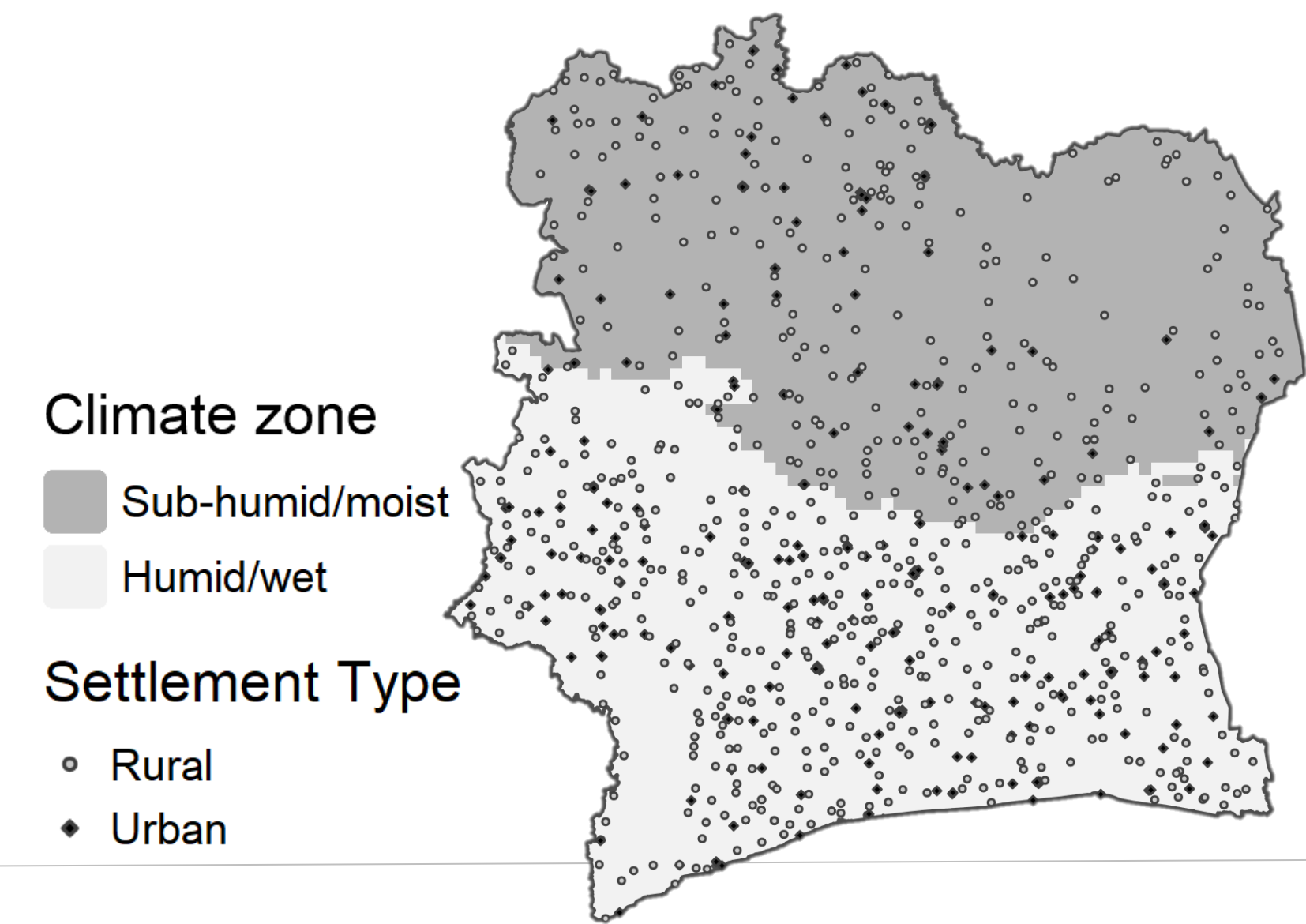
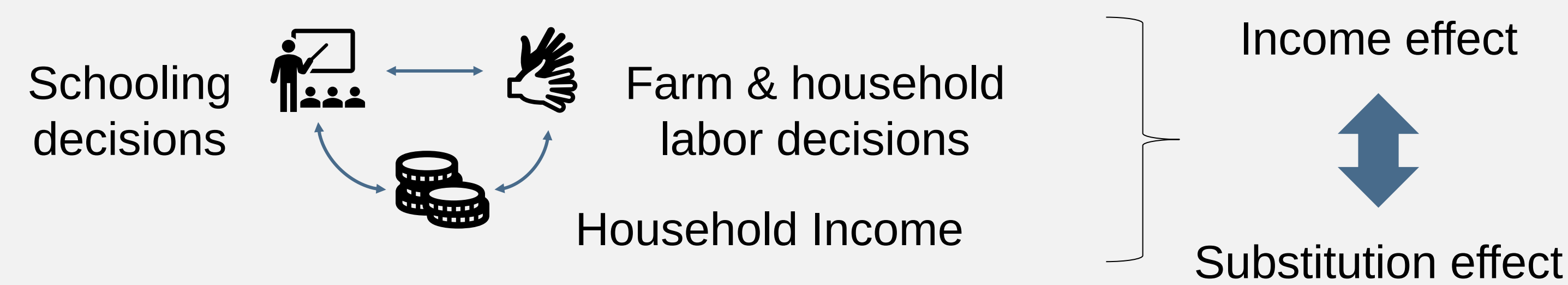


Figure 1: Geographical location of crop-farming households

Introduction

- In 2021/22, Ivorian women and men ages 25 and older went on average 4.7 years and 5.7 years to school, respectively
- Cocoa is important export crop and income source for farmers
- Cocoa makes up a large share of farmers' incomes, creating a high dependence on cocoa prices
- Cocoa price changes create income and substitution effects on school enrollment decisions



Data

- Enquête Harmonisée des Conditions de Vie des Menages (EHCVM) collected in 2018/19 (**wave 1**) and 2021/22 (**wave 2**)
- **2-year child-level school enrollment panel data per wave**
- Selected descriptive data for **crop-farming households** of wave 2
 - 9,714 children ages 6-15 in 4,381 households
 - 39% of children live in cocoa-selling households
 - 62% and 69% are enrolled in the baseline (2019/20) in non-cocoa and cocoa-selling crop-farming households, respectively

Policy

2018: Cooperation between Côte d'Ivoire and Ghana on cocoa commercialization: **Living Income Differential (LID) policy** from 2020/21 leads to a nominal cocoa price increase of **+21%**

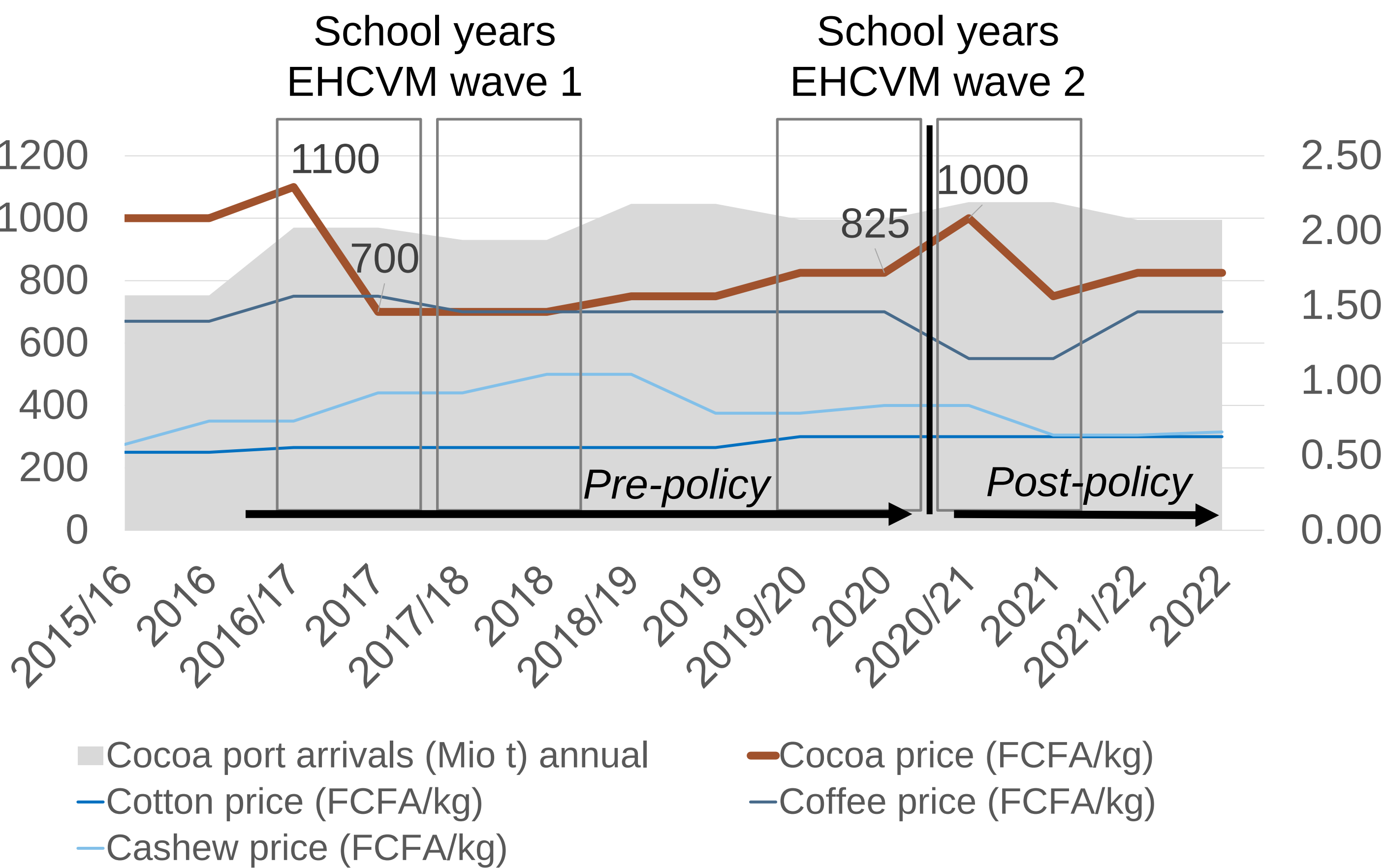


Figure 2: Nominal minimum farmgate price in FCFA/kg (left axis) and annual cocoa port arrivals in Mio t (right axis) in Côte d'Ivoire

RQ: What is the effect of a policy-induced cocoa price increase on school enrollment of farm children in the recent context in Côte d'Ivoire?

Difference-in-Differences setup (2x2)

- 2 Periods: pre- and post-policy price increase (wave 2)
- 2 Groups
 - Control group (*Non-cocoa*): crop-farming households not selling cocoa
 - Treatment group (*Cocoa*): crop-farming households selling cocoa

$$ATT = \Delta S_{Cocoa} - \Delta S_{Control} \quad (1)$$

ATT Average Treatment Effect on the Treated
 ΔS Change in school enrollment over time of child i of household j and community c

- Doubly robust estimator

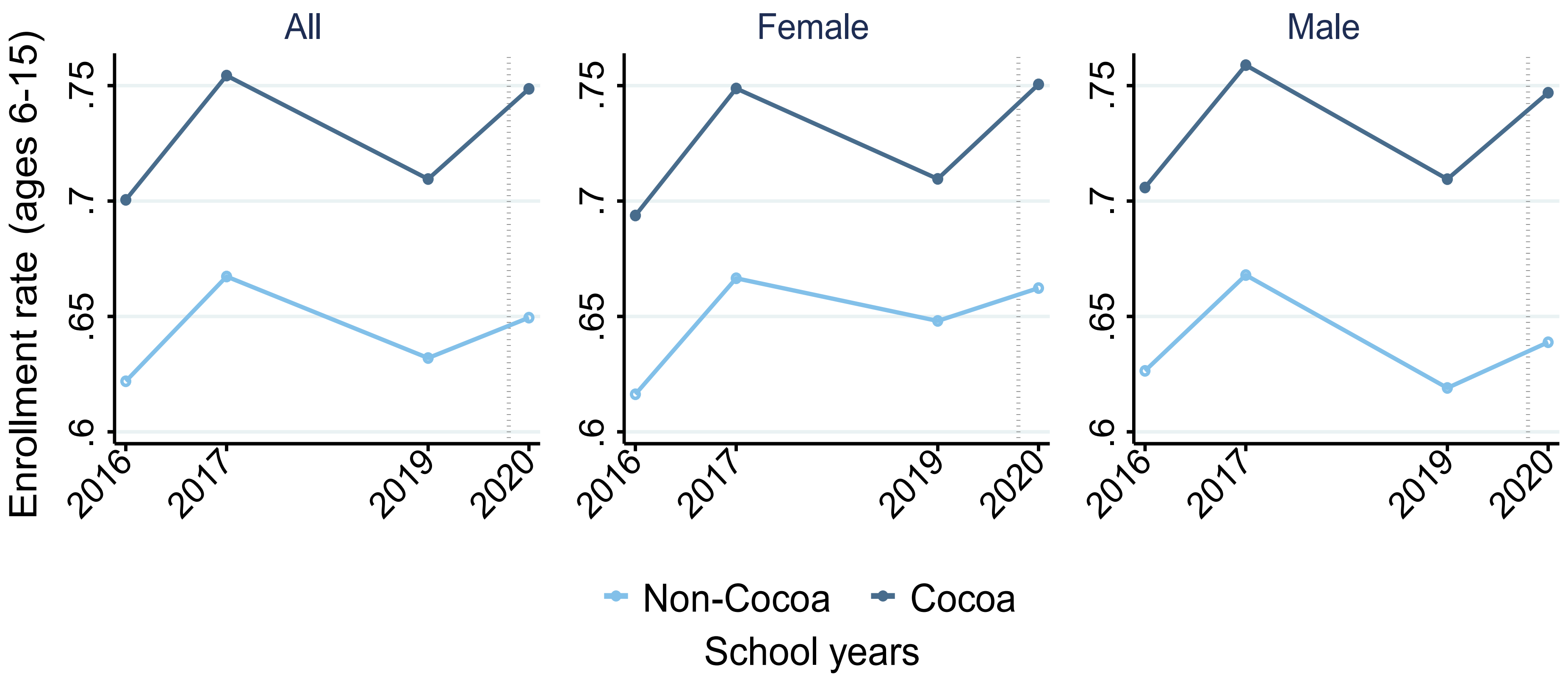


Figure 3: Mean enrollment rate ages 6-15 (all, girls, and boys), pooled sample over 4 years (wave 1 & 2)

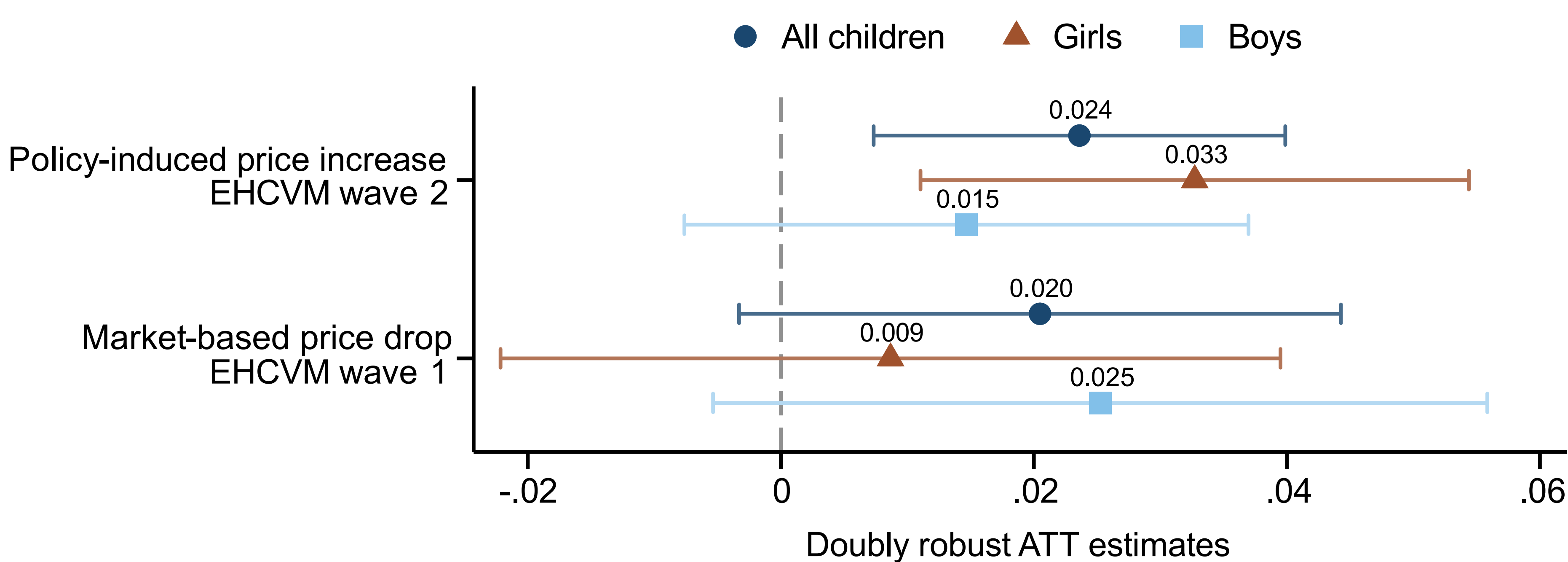


Figure 4: ATT estimates and 95%-confidence intervals of price shocks on enrollment of children ages 6-15, 2x2 setup by wave

Conclusion

- Small, positive net effect (2.4 percentage points) of policy-induced price increase on children's enrollment
- Income effect prevails: school enrollment seems to be constrained by limited economic resources
- Many children are never enrolled
- Younger girls' schooling is more vulnerable to price changes