

# Trade in Appliances, Household Production, and Labor Force Participation

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# This Paper: Effect of Trade in Appliances on LFP

- Trade reduces price of appliances, freeing up domestic labor
- Increases FLFP, esp. for young and married

Estimate causal effect of appliance imports on FLFP

- IV for appliance ownership: price decline interacted with district's access to electricity and water in 1993
- Price-decline-induced appliance ownership increases HH's probability of market work by 27 pp for W; half for M
- Individual and district level controls

GE model to assess aggregate effect

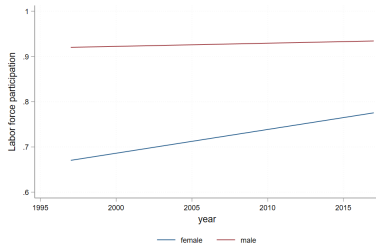
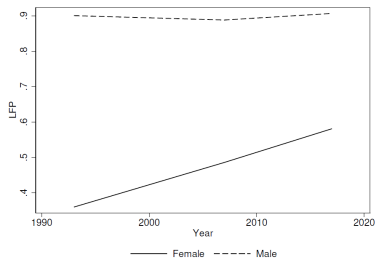
- GE in consumption: home and market goods are substitutes
- GE in wages: men and women are imperfect substitutes

- Very nice paper on important topic
- Growing literature on the role of gender for growth
- Rich empirics and quantitative model

This Discussion:

1. Data sources: census and ENAHO survey
2. Empirical part: characteristics of compliers
3. Model: transition dynamics and GE effects in wages

# Data: FLFP differs in census and ENAHO



- Census data (left): lower level of FLFP, steeper increase
- ENAHO survey (right): higher level of FLFP, less increase

# Comment on Empirical Section

Access to electricity and water is a choice variable

- Individuals can move towards areas/places with utilities
- More attractive as appliances become cheaper
- Panel dimension of ENAHO allows excluding these individuals (census?)

Household's willingness to pay depends on income and educ.

- Micro-data can show which HHs are early/late adopters
  - Budget constraint: Can HHs borrow? How does the appliance price compare to points of inc distribution?
- Financial constraints can affect transition dynamics
- Heterogeneity in "compliant" households matters for GE effects in labor market and wages

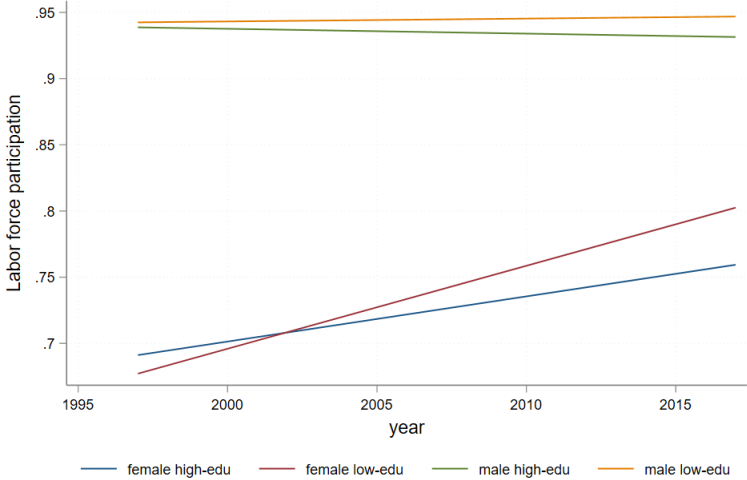
# Comment 1 on Model: Transition and Heterogeneity

- Paper simulates transition dynamics
    - Simulate permanent 50% appliance price reduction
    - Transition takes time due to age effects and shocks
    - Young more likely to adopt: higher lifetime expected value
    - Adoption increases as current older generations are replaced
    - Exogenous preference and depreciation shocks
  - For poorer households, financial constraints can matter
    - Price of appliance likely substantial compared to income
    - Limited ability to borrow
- Heterogeneity in which households respond to price decline by purchasing appliance and entering the labor force

## Comment 2 on Model: GE Effects in Wages

- Model incorporates GE effects in wages
  - Only heterogeneity across workers is gender (not skill)
  - Men & women imperfect substitutes in production (CES)
  - In GE, wages of men and women respond to relative supply
  - Gender wage gap widens due to higher FLFP
- Heterogeneity of new entrants matters for wage responses
  - Gender substitutability in production not policy-invariant
  - Captures gender differences in characteristics (educ./skills) or tasks (occup/industry) which can change with policies
- Change in gender wage gap also depends on:
  - Characteristics of new female entrants
  - Potential shifts in occupation-industry demand for women (substitution of childcare from home to market)

# Changes in Female Labor Supply by Education





# Wrapping up

- Very nice paper on an important topic!
- Empirical work identifies causal effect of appliance trade
  - Could use rich micro-data even more to trace out heterogeneous impact across households
- Rich dynamic GE model with heterogeneity in age, appliance ownership, female work, and electricity access
  - Heterogeneity in income/education of labor market entrants can be important for GE effects in wages and changes in gender wage gaps
  - Could leverage model even more to explore other policies, e.g., expanding electricity access
- Looking forward to the next version!