

# **Trade Facilitation and Poverty Issues, Methods, and Examples**

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# The Research Question

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- Main Focus: How do trade costs affect the livelihood of the poor? How can we make trade facilitation reach the poor?
  - Provide a motivation for my research agenda (on how to make trade facilitation work for the poor)
  - Give some examples based on previous research
  - Discuss forthcoming projects

# 1. The Target Population

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- coffee farmers in Uganda
- cotton farmers in Zambia
- tobacco farmers in Malawi
- vanilla farmers in Madagascar
  
- agro-manufacturing workers in Moldova
- steel workers in India
- exporters in Argentina

## 2. What are Trade Costs?

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- Trade Costs: trade facilitation and domestic costs related to trade
- Traditional costs:
  - Customs procedures, transportation costs, infrastructure
- Broader definition
  - Costs associated with access to credit, access to inputs, and access to output markets
  - Knowledge
  - Imperfect competition: marketing of inputs and outputs

### 3. Linking Trade Costs with the Poor

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- Trade costs affect prices received by producers
  - cash crop prices: cotton, coffee, tea, cocoa, tobacco
  - manufactured exports and imports: processed food, textiles, capital
  - inputs
- Effects on agricultural profits, employment, wages
- Trade costs affect prices paid by consumers
  - food crops, foodstuffs
  - services
- Effects on the cost of living

### 3. Linking Trade Costs with the Poor

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- Trade costs affect quantities produced and consumed
  - how do agents (people, firms) respond?
- Spillovers
  - intrahousehold: input choices, investment, hours worked
  - interhousehold: employment opportunities

## 4. What Questions Can We Answer?

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- Some Examples:
  - informal export barriers and poverty in Moldova
  - tobacco clubs in Malawi
  - export market availability and poverty in Uganda
  - value chains in export crops in Africa (Zambia, Mozambique, Madagascar, Malawi, Tanzania)
  - barriers to more profitable export markets
- Econometrics and household/firm surveys

## Example I: Informal Export Barriers and Poverty in Moldova

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- Formal trade is fairly liberalized
- Moldova is a very open economy
- Informal Barriers are widespread and pervasive
- Almost half of the population lived in poverty in 2002

# Channels

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- Firms hire workers to produce an exportable good
- Firms purchase agricultural inputs supplied by hhs  
eg: to produce wine, firms hire workers and purchase grapes
- High export barriers lead to low net export prices
  - Derived demand for factors is lower: leads to lower wages and agricultural income (sales of grapes, apples)
  - Consumer prices are higher

# A Basic Framework

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- Ex-Ante Analysis: two-step methodology
  - from trade costs to prices
  - from prices to households/firms
- household/firm surveys
- supplementary data
  - Use data on export costs to simulate price changes

# Trade Costs

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- Importer and Exporter Survey: 161 firms
- Type of firm (exporter, importer), form of ownership (private, joint venture) product line, employment
- Questions on impediments to trade
  - A. Customs and Tax Administration
  - B. Transportation, Shipping and Distribution
  - C. Testing and Conformity Assessment
  - D. Export and Import Financing
  - E. Export Barriers
  - F. Duty Preferences in Overseas Markets
  - G. Import Barriers
- I focus on items B and E

## Transportation and Shipping

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(transport costs as a percentage of export shipment)

Destination of exports	Transport Cost	Unofficial Fees	Shipping Hazards	Total
CIS	13.7	1.3	0.5	15.5
EU	7.7	0.1	0.1	7.9
Other	11.3	0.2	-	11.5
Total	11.6	0.7	0.3	12.6

Transport Costs: freight, handling & insurance

Unofficial Fees: bribes paid on transit

Shipping Hazards: damaged or stolen in transit

## Informal Export Barriers

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The Cost of Informal Barriers: % of export shipment

	Domestic	Ukraine	Total
Tax Administration	2.78	0.00	2.78
Customs Officers	0.44	1.17	1.61
Road Authority	0.50	0.77	1.27
Veterinary Control	1.13	0.11	1.24
Standards Certification	0.83	0.36	1.19
Sanitary Control	0.76	0.23	0.99
Border Troops	0.38	0.48	0.84
Border Police	0.46	0.18	0.64
Ecological Control	0.09	0.09	0.18
Other	0.21	0.79	1.00
Total Average Cost	7.57	4.34	11.91

# Poverty Impacts

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	Initial HC	Price Change	Barrier Effect	Population Involved
TOTAL EFFECT	48.3	15.10	43.300	180000
Transport & Shipping	48.3	6.93	45.676	94457
Informal Barriers	48.3	6.56	45.795	90164

## Example II: Constraints to Tobacco Production Faced by Farmers in Malawi

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- Fact: High poverty rates
  - National: 52.6%
  - Urban: 24.1%
  - Rural: 56.2%
- Fact: Low agricultural export participation
  - Tobacco: 5%
  - Cotton: 1%
  - Food: 92%
- True in most of Africa (Zambia: poverty, 50-70%, cotton, 10%)

## Low Export Crop Adoption due to Trade Costs

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- Establish income gains from commodity exports
  - Tobacco vs. subsistence: 15,965 MK ; 18.3%
  - Tobacco & cotton vs. subsistence: 12,468 MK; 14.3%
- Given the observed income gains in export crops, why don't farmers adopt?
  - part of it is returns to skills, ability, risk
  - part of it is because of constraints to participation
    - Lack of markets: output and input prices
    - Lack of credit: seeds, fertilizers
    - Lack of know-how: technology adoption

## Malawi Tobacco Clubs

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- Tobacco Clubs: organizations that facilitate access to markets, credit and inputs, provide transportation, and fetch higher prices at auction floors
- How can we quantify the impacts of the tobacco clubs?
- With supplementary surveys: the Tobacco Club Survey (TCS)

# Malawi Tobacco Clubs: Benefits

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	Tobacco Clubs Survey	
	Yes	No
<i>A) INSTITUTIONAL ACCESS</i>		
- Higher prices	33	67
- Better and more extension advice	90	10
<i>B) COLLECTIVE ACTIONS</i>		
- Lower prices for inputs	11	89
- Better input quality	66	34
<i>C) ECONOMIES OF SCALE</i>		
- Lower transport cost to auction floors	5	95
<i>D) SUPPORTING NETWORK</i>		
- Enhanced farming ability due to fellow advice	98	2
- Provision of labor assistance to club members	65	35
- Assistance on farming activities from club members	44	56
- Advice on non-farm activities from club members	49	51
- Motivation to work harder	96	4

# Tobacco Clubs: Impacts

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- What are the effects of receiving these benefits?
- Causality: participation in clubs is endogenous (for example, only the smarter farmers participate in clubs and, at the same time, make better farming decisions)
  - Matching (based on observables)
  - Instrumental Variables: How to find a good instrument?
- Use the Tobacco Club Survey!

# Tobacco Clubs: Constitutions

Most tobacco clubs have "constitutions" that prevent young unmarried women to be members (due to risk of default): We can use this condition as an instrument

2FEBRUARY B. CLUB (2021/22)	ya KADU.
MALAMUKO B. KALABU	
① Membala Kalabu yonse yiyenela Kumakumata kawini Pa Sabata (Machitatu ndi pachiwiri)	① Ngati mwasizi wamukalabu apezeka ndi mabwoto a ma kusomala odwala, malin ndim enz ofele utamii yate fof olimunda, kalabu yonse im kukamuthandiza kuwunda ku
② Membala aliyense amayenera kumakhalapa pa musonkhano uliyense ndipo chiticheonse chochitika mukalabu chiyenera kumaziwika ndi membala aliyense	② Membala Okana kukalhandi kumunda wo membala ar wapzeka ndi Niti- amatebi kuchokera ku phindu tchoko kumunda kuwika, chimedzimad amane amaledgera- ledgera nti yamisonkhano yakalabu.
③ Membala akalephera kutika ku Msonkhano umodzi popanda chiphukwa amapititsizwa KSO.	③ Membala Okanda phukoso, r kutukwanza, kuledgera kwa ts kilonse Safunika mkalabu.
④ Membala amene wakhalo kopitira kopitira kasona ndipo amakhana kulipira ndalamo zomwe ustohatehidwa chipukwa choloko kumisonkhano chiphukwa popanda chiphukwa ayenera kuchosetwa mukalabu.	④ Mukazi amene alimusinkhu wobeleka ndipo ali pa tem Safunika kuopa kuti angand banja ndikhukwizwa otayamb
⑤ Membala wafuna kulowa m'kalabu ayenera kulipira fizi	

## Tobacco Clubs: IV Results

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	Model 2	Model 4	OLS
A) First Stage	-0.551*** (0.132) 0.23	-0.549*** (0.132) 0.23	
B) Second Stage			
Output per acre	0.716* (0.383) 0.35	0.739** (0.369) 0.39	0.188*** (0.065) 0.42
Sales per acre	1.468** (0.734) 0.20	0.890** (0.452) 0.35	0.177** (0.077) 0.40

## Tobacco Clubs: Impacts

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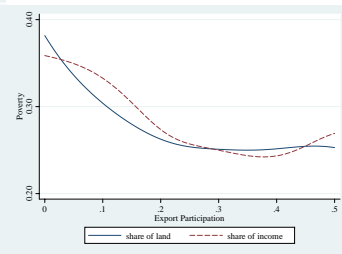
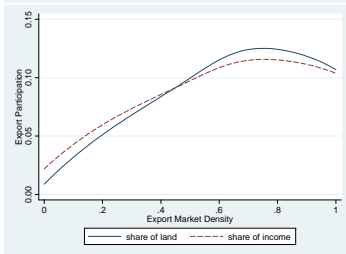
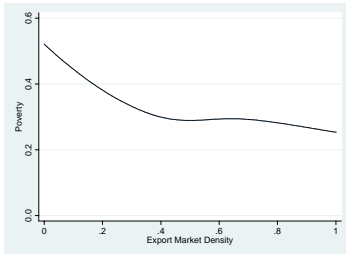
- What does this imply?
- Higher yields: 74% higher
- Sales: 89% higher
- What type of increase in tobacco prices would we need to generate those impacts?
- Price Increases: 54%!

## Example III: Uganda and Export Markets

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- Similar context: high poverty, low export crop adoption
  - Poverty Rate: 35.2%
  - Export Crop Adoption (coffee, tea, cotton, tobacco, pineapples): 7%
- The Hypothesis: export market availability leads to lower poverty by inducing export crop adoption
  - Rural markets. Stalls
  - Intermediaries. Pick-ups, trucks
  - Commercial plantations (usually foreign)

# Example 9: Uganda and Export Markets



## Export Costs: Impacts

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- What does this imply?
- What type of increase in tobacco prices would we need to generate those impacts?
- Price Increases: 10-30%

## Agenda I: Africa continued...

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- Explore other sources of trade costs: competition policies
- Explore other impacts on households: adjustment and spillovers
- Gender Issues: female-headed farms
- Forthcoming work: Imperfect competitions in export value chain and interrelationship with local infrastructure in Zambia, Malawi, Mozambique, Tanzania, Madagascar
- Methodology: Game theory model of value chains, coupled with simulations of poverty impacts of price changes
- Supplementary Data: parameters of the game theory model (elasticities, number of firms, degree of competition)

## Agenda II: Latin America

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- Explore other sources of trade costs: export barriers to firms in middle-income countries
- Explore impacts on wages, employment
- Forthcoming work: panel of Argentine firms with export destinations
- Why some firms export to high income countries and others not?
- What is the role of trade costs?
  
- Supplementary Data: Survey to provide evidence on competition theories: quality, profit sharing

## Concluding Remarks

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- There are potentially important gains from trade
- Some of these gains may dissipate in the presence of high trade costs
- Need low trade costs, more trade facilitation
  - Informal barriers matter
  - Costs closer to the grassroots matter: tobacco clubs (credit, output markets, transportation, inputs), export market availability (FDI plantations, outgrower schemes), imperfect competition (value chains in export agriculture), technology (quality)

## Concluding Remarks

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- The link between trade costs and poverty is conceptually clear
- But it is analytically very difficult to establish this link convincingly
- We need data to describe the target population (farmers, workers, firms)
- More often than not, we also need supplementary data (like the Importer/Exporter Survey in Moldova or the Tobacco Clubs Survey in Malawi)

Thank you!