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## **The Bitter Taste of Brazil's Import Ban on Robusta Coffee**

**Hanifi Otgun, John Beghin, and Fernando Maximiliano**

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# The Bitter Taste of Brazil's Import Ban on Robusta Coffee

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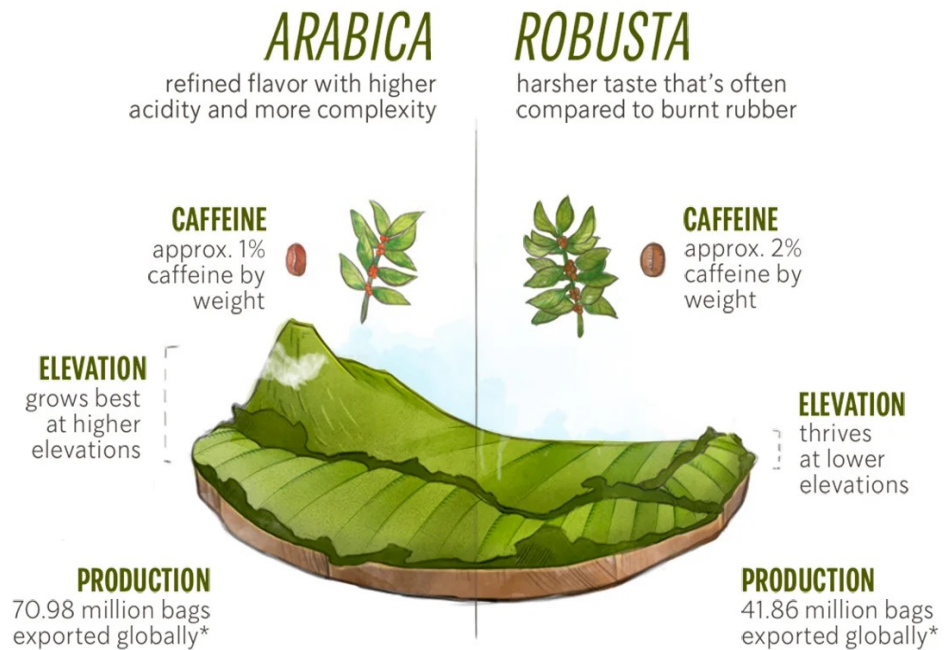
# Introduction

- **Brazil:**

- Prominent global supplier of Robusta coffee
- Often subjected to droughts
- Switches its role from exporter to importer when exposed to drought
- Government imposes restrictions on the imports of Robusta coffee

## Robusta Coffee

- Global coffee share:
  - 1990: 27.5%, 2020: 40%
- Largest producers:
  - Vietnam, Brazil, Indonesia, Uganda, and India
- It is used in soluble coffee industry



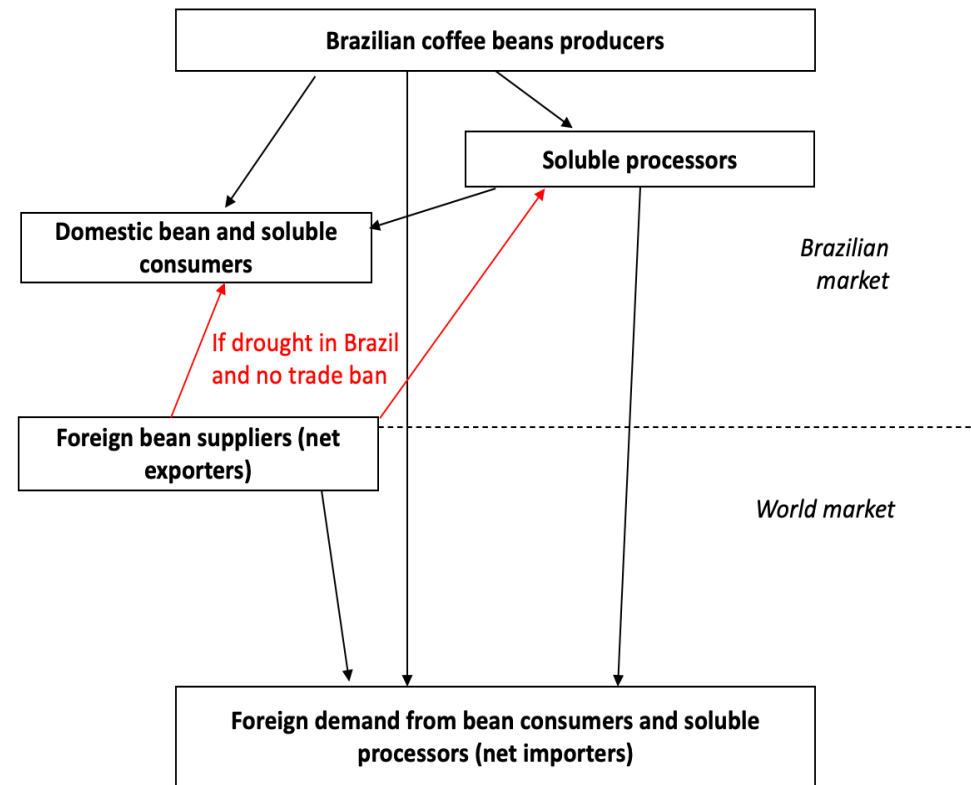
\*Source: International Coffee Organization  
Range: Feb. 2015 - Feb. 2016

# Objectives

- Analyze the welfare and trade implications of the 2016/17 drought episode and import ban
  - for Brazil and RoW
  - Robusta and soluble market participants

# Modeling Approach

- We develop a multi-market partial equilibrium model that allows us to solve for endogenous Robusta bean price
- We assume:
  - Very low substitution elasticity for Robusta beans in soluble coffee
  - CRS in domestic soluble production
  - Very inelastic Robusta bean supply
- Then, we model the **trade reversal** by putting constraint on trade



# Data

## Green Bean Production & Soluble Consumption Data

- Sourced from: USDA Foreign Agricultural Service

## Domestic & World Price of Green Beans

- Domestic prices from: CEPEA
- World prices from: ICO

## Export Data

- Green beans: Sourced from CECAFE
- Soluble coffee: Sourced from CECAFE



## Price and Quantity Changes (in USD and 60-kg million bags)

Variable	Calibration Drought & Ban	Scenario 1 w/ $\eta_{gn_e}=5$	Scenario 1 w/ $\eta_{gn_e}=10$	Scenario 2 w/ $\eta_{gn_e}=5$	Scenario 2 w/ $\eta_{gn_e}=10$
Local price green bean	138.45	121.7	111.87	96.19	97.64
World price green bean	124.25	136.3	125.3	107.73	109.36
Price soluble coffee	177.68	161.18	151.54	136.1	137.53
Cost share of beans in soluble	0.77	0.75	0.74	0.71	0.71
Derived demand green bean	4.84	5.28	5.59	6.19	6.12
Final demand green bean	5.39	5.45	5.5	5.58	5.58
Total demand green bean	10.23	10.745	11.1	11.78	11.71
Exports (imports) green bean	0	-0.325	-0.69	3.44	3.51
Green bean production in Brazil	10.5	10.42	10.41	15.22	15.22
Local demand soluble	1.09	1.1	1.1	1.11	1.11
Export demand soluble	3.75	4.17	4.46	5.02	4.97
Production soluble	4.84	5.27	5.57	6.14	6.08

## Welfare Changes from Removal of the Ban (in million USD)

Scenarios		Green bean markets	
		$ \eta_{gn_e}  = 5$	$ \eta_{gn_e}  = 10$
<b>Ban removal</b>			
Consumer Surplus from removal of the ban	Domestic	90.85	144.74
	RoW net importers	-540.29	-46.89
Producer Surplus change from removal the ban	Domestic	-174.66	-277
	RoW net exporters	544.21	47.61

## Welfare Changes from Removal of the Ban (in million USD)

Scenarios		Soluble coffee markets	
		$ \eta_{gn_e}  = 5$	$ \eta_{gn_e}  = 10$
Consumer Surplus change from removing the ban	Brazilian consumers	18.07	28.71
	foreign buyers	65.25	106.88
Processing cost change from removing the ban	Brazilian processors cost change	-84.75	-138.6
	RoW	N/A	N/A

## Welfare Changes from Removal of the Drought for Green Bean Markets

Consumer Surplus change from removing the drought	Brazilian consumers	140.87	78.87
	net importers in RoW	1,330.15	739.78
Producer Surplus change from removing the drought	Brazilian producers	194	318.47
	Net exporters in RoW	-1,241.15	-694.82

# Conclusions

## ■ **The import ban:**

- Taxes buyers of Brazilian Robusta beans but suppresses the world price effect which would happen without the ban.
- An effective way to transfer surplus from buyers/consumers to Brazilian coffee farmers (with DWL of around 1 million)
- Has large transfer effects in RoW. Benefited Robusta buyers in the RoW at the expense of Robusta exporters

## ■ **The drought**

- Benefited ROW exporters and penalized foreign buyers in RoW
- Detrimental to Brazilian consumers/users and producers

Thank you