

# Principles of Interdependence

IR 379: International Political Economy

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# I. Interdependent global economy

- International economic flows lead to interdependence
- Interdependence: two states are mutually reliant upon one another
  - *i.e.* the actions of *state A* affects *state B*, vice-versa
- Example: 2008 global rice crisis



# *Rice: a story of interdependence*



# *Rice: a story of interdependence*



Philippine rice: 300% price increase (Jan – May 2008)

# *Interdependence and peace*

## *Discussion activity*

- Debate on the relationship between interdependence and conflict between states
  
- Which of the following do you most agree (and why)?
  - 1) Interdependence reduces conflict between states
  - 2) Interdependence increases conflict between states
  - 3) Interdependence is not related to conflict between states

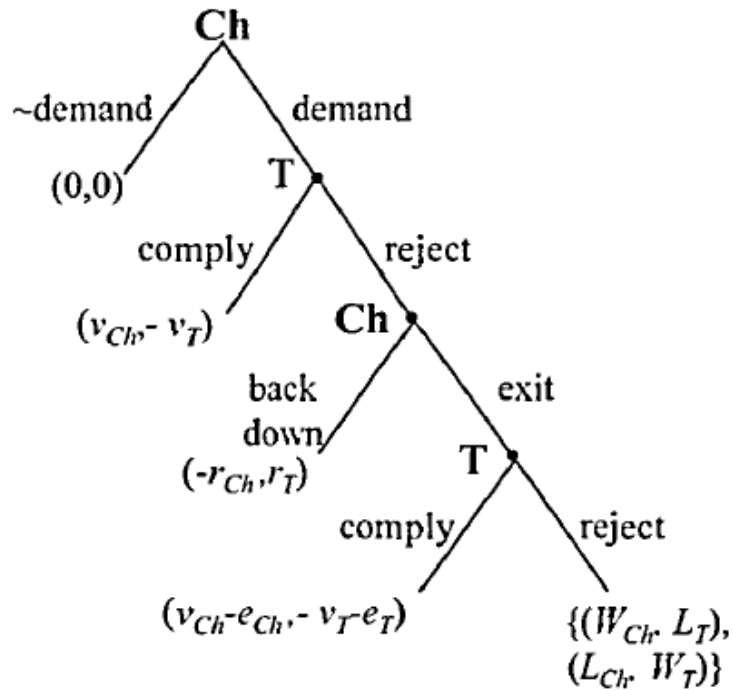
# II. Cooperation or coercion?

- Does interdependence promote cooperation or coercion between states?
- Symmetry of power determines the relationship
  - Hirschman
- Symmetries promote cooperative relations
- Asymmetries enable coercive relations
  - State A makes demand
  - State B chooses: (1) comply or (2) reject
  - State A chooses: (1) enforce threat, or (2) back down
- Does the direction of flows matter for power?
  - i.e. importer vs. exporter

# III. Exit cost

- Different ways to measure interdependence
  - e.g. bilateral trade/GDP; bilateral trade/total trade
- Cost to exit the relationship also captures interdependence
  - Crescenzi
- States are mindful of their respective exit costs
  - This impacts the *credibility* of a threat and the *pain* of executed threats

Figure 1 A Simple Bargaining Game with Exit



# *Exit cost*

## *A formal game tree*

Challenger	Target
$v_{Ch}$ = Value of Demand	$v_T$ = Value of Demand
$r_{Ch}$ = Audience Costs	$r_T$ = Audience rewards
$e_{Ch}$ = Economic Costs of Exit	$e_T$ = Economic Costs of Exit
$c_{Ch}$ = Costs for Conflict	$c_T$ = Costs for Conflict
$W_{Ch} = v_{Ch} - e_{Ch} - c_{Ch}$	$W_T = -e_T - c_T$
$L_{Ch} = -e_{Ch} - c_{Ch}$	$L_T = -v_T - e_T - c_T$

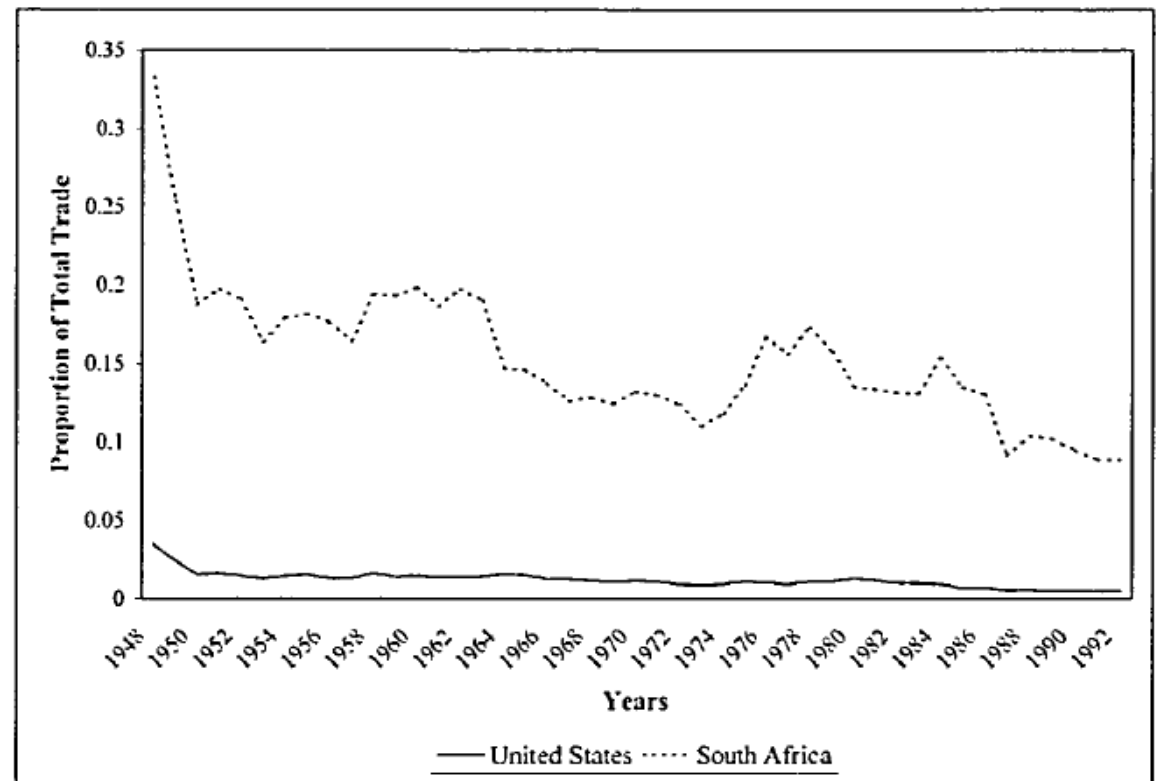


# *A case of exit costs*

## *South Africa*

- What explains why the U.S. did not fully embargo South Africa to end Apartheid?
- Trade dependence (Fig. 2) shows asymmetric interdependence
- Disaggregating the data shows the U.S. has high exit cost on trade in minerals (Fig. 3)

**Figure 2**  
Trade Between United States and South Africa  
as a Proportion of Total Trade



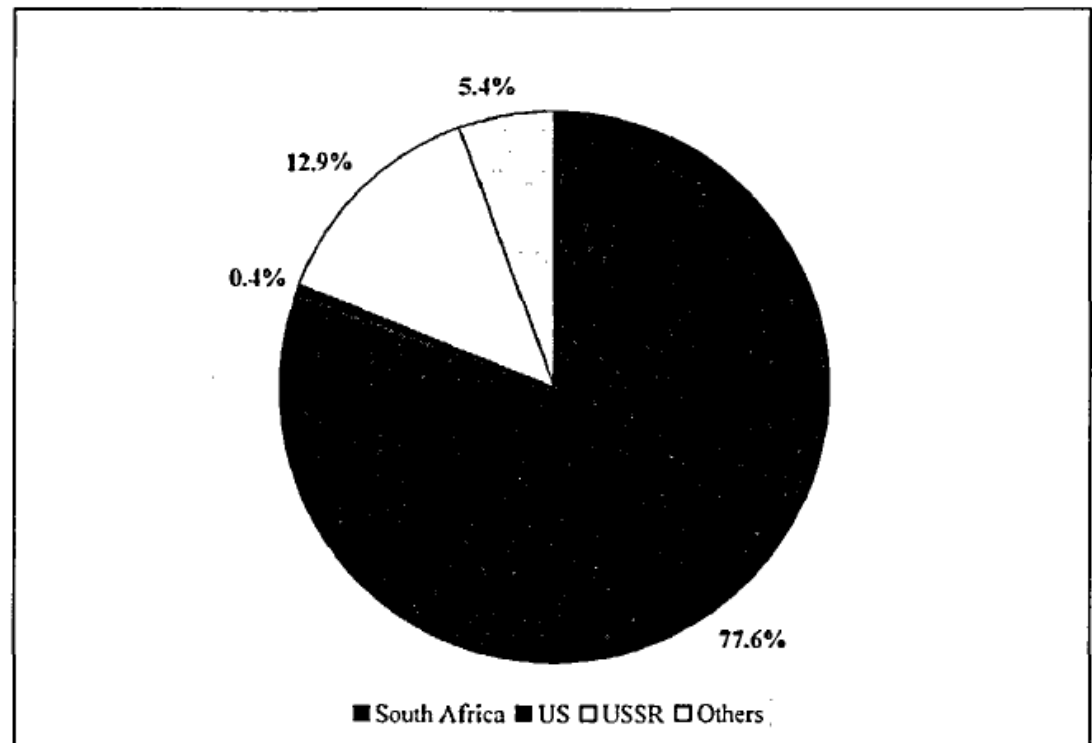
Source: (Barbieri 2002)

# *A case of exit costs*

## *South Africa*

- High cost to exit from core minerals
  - Imported from South Africa
  - Few alternative suppliers
- U.S. relied heavily upon South Africa and was not willing to bear exit costs
  - Domestic industry interests

**Figure 3**  
Mineral Reserves (1983) for Chromium, Manganese, and Platinum



Source: ("Mineral Commodity Summaries", USGS 1973-1996).

# *A case of exit costs*

## *South Africa*

- U.S. Policy change < Exit cost
- South Africa: Policy change > Exit cost
- Does exit model explain interstate relations?

# *What is a value worth?*

## *Discussion activity*

- 1) Write down one value/policy that you want a specific country to change/adopt.
  - e.g. Women's rights/protections in Saudi Arabia
- 2) Write down what percent of GDP per capita (individual annual income) you would be willing to pay for that value.
  - Share your responses with a partner
  - Discuss with the class:
    - Can values be monetized?
    - Who decides what costs citizens pay so that a value can be achieved?
    - What values, if any, are you willing to fully exit and incur war?