TRADE POLICY IN DEVELOPING COUNTRIES

→ until the 1970s trade policy in developing countries influenced by belief that key to economic development was the creation of a strong manufacturing sector

→ why did developing countries believe that they needed to create a strong manufacturing sector? AND why did they use protectionist trade policy in an attempt to achieve that goal?

DORNBUSCH: it was generally assumed that the relative price of commodities (which developing countries exported) would fall + ToT would worsen

~~[illegible]~~

- need to shift production out of commodities and into manufactures
- sought shift through protection of "infant" manufacturing industry

KRUGMAN: Infant Industry Argument — developing countries have potential comp adv in manuf. but new industries in developing countries cannot compete with well-established manufacturing in developed countries

- need for temporary support for new industries until they're strong enough to meet international competition

IMPORT-SUBSTITUTING INDUSTRIALIZATION (ISI)

→ ISI strategy was to develop industries oriented to the domestic market by using trade restrictions to encourage the replacement of imported manufactures by domestic products

→ but tariff that reduces exports also reduces imports (resources drawn away from export sector)

→ developing countries initially began by protecting final goods industries (e.g. assembly) + then began protecting intermediate goods (e.g. auto body, steel, petrochemicals) Note that by protecting intermediate goods, they effectively ~~[illegible]~~ ~~export~~ hindered ability to export because intermediate inputs cost more total cost of final goods production rises

→ ISI worked as a strategy for promoting manufacturing ~~[illegible]~~ developing countries in Latin America had same share of manufacturing in output as advanced nations — but ~~the~~ has it raised level of economic development? NO

PROBLEMS w/ the INFANT-INDUSTRY JUSTIFICATION FOR ISI

→ even tho developing countries may have potential comp adv in manufacturing, that potential does not need to be realized immediately

NOW: country is labor-abundant
accumulate ~~[illegible]~~ physical + human capital
THEN: gradually move into production of capital-intensive goods

→ protecting manufacturing sector does no good if the protection doesn't make the sector more competitive on int'l mkts

Dornbusch points out that protection fosters oligopoly + inefficiency

→ in the absence of market failure, the fact that it is costly + time-consuming to build an industry is not a good rationale for government intervention

- often argued that investors only interested in current returns, not future prospects
- but in advanced countries they do

possible sources of market failure

- imperfect capital mkts — lack of financial institutions to allocate savings from traditional sectors (like agri) to new sectors (like manuf)

  but first-best policy is to create better capital markets

- appropriability — "pioneering firms" incur start up costs (e.g. adapting techno to local circumstances or opening up new mkts), other firms are able to avoid those start-up costs by copying the pioneer, thus the pioneer creates social benefits that it is unable to capture

  but first-best policy is to compensate the pioneer

→ How DO YOU KNOW WHICH INDUSTRIES WARRANT SPECIAL TREATMENT?

→ HIGH RISK of CAPTURE BY SPECIAL INTERESTS

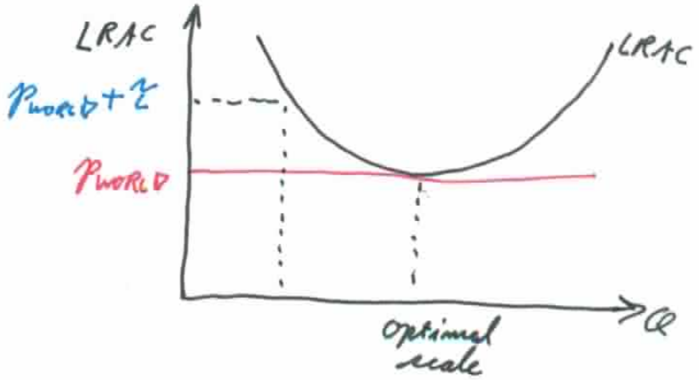
WHY ISI a MISERABLE FAILURE

KRUGMAN Infant industry argument not universally valid

protection will not create viable manuf sector if there are fundamental reason why the country lacks a comp adv in manuf

→ high rates of effective protection [redacted] (which take into account the complexity of the trade restrictions – quotas, exchange controls, domestic content rules in addition to tariffs) enable industries to exist even when cost of production three-to-four times higher than the price of imports replaced

→ import restrictions promote production at an inefficiently small scale instead of trying to build own industry that operates at inefficient scale, small countries should specialize in the production of products in which it has comp advantage and import the rest



DORNBUSCH

→ consumers lose purchasing power due to high prices

→ scarce resources used to produce goods that could be imported at a lower price

→ lack of product variety

- only a narrow range of specialized intermediate goods or capital goods can be profitably produced in a restricted economy
- full range of technological possibilities cannot be effectively exploited
- greater variety of inputs does more for production than a greater quantity of a narrow range of inputs Romer (1989)
- without appropriate intermediate inputs a country cannot become exporter of labor intensive tasks such as assembly services

→ markets in protected economies lack competitors leading to oligopoly + inefficiency

→ free trade associated w/ transfer of "know-how"

multinationals may bring FDI, but if the technology that they bring is not incorporated into the MNCs global operations, then there is no incentive for the MNC to keep bringing in new knowledge

- In 1963, Ford shipped the dies for the Ford Falcon to Argentina, but didn't bother to change Argentina's product line for almost 30 years

→ Schumpeterian "creative destruction"

- change is the source of increased productivity
  - → intro of new good
  - → new supply of raw materials
  - → opening new mkt
  - → new supply of half-manufactured goods
  - → new organization of the industry
- firm may have new technique or idea sitting on the shelf, but if it is not forced to implement them it won't
- to induce firm to implement productivity improvements it must face competition
- opening to trade introduces the necessary competition, old methods of production are destroyed + new methods take their place
- Chenery et al. (1986) found that periods of trade liberalization also tend to be periods of unusually high productivity growth

→ At this point Dornbusch notes that theory is "highly plausible" but is "hard to document in a clear cut way." He cites Havrylish (1990) as providing "systematic evidence in support of the theory," but says that "it is not overwhelming." Dornbusch then says that the "most plausible evidence comes from case studies." (p.76)

→ Earlier in his paper, Dornbusch notes that:

"most observers believe firmly that trade reform is beneficial, yet systematic attempts at quantification fail to single out trade policy as a major factor in economic growth." (p. 73)

Here's where I believe the problem lies:

→ Dornbusch would like to work with some kind of index of protection, some kind of average effective rate of protection, etc. Given the complexity of the trade regimes however, this is almost impossible.

→ A somewhat decent measure however might be:

$$\text{openness} \equiv \frac{X+M}{Y}$$

the volume of trade as a fraction of output, which would be negatively correlated with any measure of protection

→ the trouble with such a measure of course is that countries with large domestic markets will have smaller $(X+M)/Y$ than countries with small domestic markets. Trade is more important to an island nation than it is to the US

→ Since Dornbusch is interested in growth he would probably want to run a regression with the countries' saving rates

$$s \equiv \frac{S}{Y} \equiv \frac{Y-C-G}{Y} = \frac{I+X-M}{Y}$$

→ Notice however that because X/Y enters both the saving rate and the measure of "openness" the saving rate and the measure of openness will be positively correlated with each other

→ Consequently any growth regression with those two variables will run into a multicollinearity problem — i.e. it will have large standard errors.

→ Look at the two variables again

$$\text{saving rate} \equiv \frac{I+X-M}{Y} \quad \text{and} \quad \frac{X+M}{Y} \equiv \text{measure of openness}$$

→ so what we really need to do is examine the relationship between I/Y and M/Y

→ Using data from the Penn World Table and averaging I/Y, M/Y, $\ln(\text{pop})$, saving rate + $(X+M)/Y$ over the period 1990–2004, we get:

$$\text{corr}(\text{saving rate, openness}) = 0{,}262$$

$$\text{corr}\left(\frac{I}{Y}, \frac{M}{Y}\right) = 0{,}179$$

remember: we need to control for country size

$$\frac{I}{Y} = \underset{(5{,}94)}{2{,}53} + \underset{(0{,}037)}{0{,}095}\,\frac{M}{Y} + \underset{(0{,}54)}{1{,}24}\,\ln(\text{pop})$$

stat sig stat sig

no. obs.: 76 countries $R^2 = 0{,}098$ F-stat = 3,95

prob(F=0) ≐ 0,023

→ what this tells us is that countries that import more invest more, countries that are more open to trade save more

→ saving + investment are of course key to capital accumulation

→ therefore countries that are more open to trade will have higher levels of economic development than countries that hide behind tariff walls

* * *

DUAL ECONOMY

→ relatively modern, capital-intensive high-wage industrial sector exists in same country as a very poor traditional agri sector

- inefficient when vastly different wages in different sectors
- ISI policies may have created dual economy or at least aggravated the symptoms

→ SYMPTOMS

- value of output per worker much higher in modern sector
- accompanying high value of output per worker is higher wage rate
- returns on capital not necessarily higher

- high value of output per worker in modern sector partly due to higher capital intensity
  Note that in advanced countries agri is also capital-intensive, whereas in developing countries agri is labor intensive

- persistent unemployment in urban areas coexists w/ relatively well-paid industrial workers

INDIA as a CASE STUDY

→ population: 700 million

manufacturing employment: 6 million (0,9%)

manuf as a share of GNP: 15%

wage in manuf 6 times higher than wage in agri

→ WHY? subsidies & ISI encouraged investment in manufacturing; also because unions & labor laws have helped organised workers to win large wage increases even tho millions would be willing to take their jobs at lower wages

Dual Labor Mkt justification for ISI

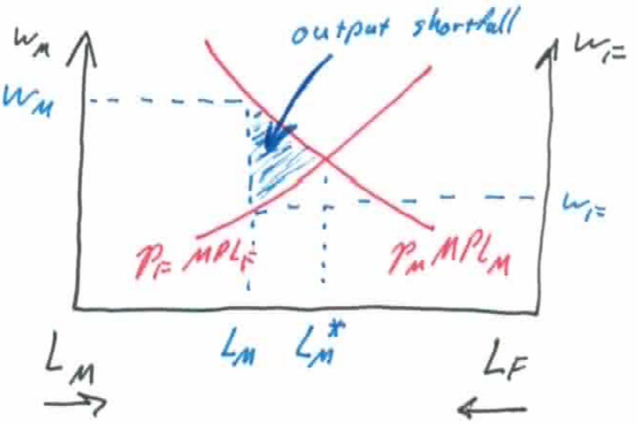
→ if an equivalent worker receives higher wage in manufacturing than in agri

→ ~~then~~ when manufacturing firm hires an additional worker away from agri sector then the firm generates a social benefit (the worker's wage increase) for which it receives no reward (market failure)

→ if manuf MUST pay higher wage than agri

→ then labor employment in manuf is less than the optimal amt

→ and labor employment in agri is more than the optimal amt



→ gov't policy to induce manuf firms to hire more workers can raise national welfare (by the amt of the output shortfall)

→ first-best policy is to target employment directly

→ second-best is subsidy to manuf. It's second-best because it encourages BOTH K+L into manuf, but capital doesn't receive high rate of return in manuf

→ tariff or import quota third-best because it also distorts demand

PROBLEMS with the DUAL ECONOMY JUSTIFICATION FOR PROTECTIONISM

→ Harris & Todaro observed that despite high urban unemployment rural-to-urban migration continued

→ rural workers took risk of unemployment in return for chance of getting high paying industrial jobs, but chance depends on the number of jobs available so additional employment in manufacturing sector attracts more labor from rural areas than the increase in employment

→ so expansion of manufacturing employment increases unemployment in urban areas

→ ISI as cause of DUALISM

- if wage differentials reflect monopoly bargaining power of unions in protected industries, then free trade would lower industrial wages & raise agricultural wages
- relatively high wages in manuf sector encourage substitution from labor to capital
- if capital goods are not subject to trade barriers, then "selective import control" further encourages capital-intensive techniques & reinforces the dual economy

EXPORT-ORIENTED INDUSTRIALIZATION EAST ASIA

→ rapid econ growth in

- Japan after WWII
- 1960s — HK, Taiwan, S. Korea & Singapore
- 1970s & 80s — Malaysia, Thailand, Indonesia & China

High Performance
Asian Economies
(HPAEs)

HPAEs very open to international trade

→ not exactly free trade, but nonetheless leave trade much freer than in developing countries that embraced ISI

→ HPAEs have very high (X+M)/Y

→ Krugman writes that the high trade ratios are "as much an effect as a cause of their economic success" because Multinational Corps generate most of new exports using imports as raw materials

→ Krugman concludes that there is correlation between rapid growth in exports & rapid overall economic growth but correlation doesn't imply casuality

→ some HPAEs pursued industrial policies that included tariffs, import restrictions, export subsidies, low-interest loans and gov't support for R+D

→ skeptical about importance of industrial policies

- HPAEs followed variety of policies
  some laissez-faire, some interventionist
- impact on industrial structure small
  World Bank compared how fast countries moved into the target industries + found ~~that~~ no difference betw/n the countries that pursued industrialization those that didn't
- some notable failures of industrial policies

→ HPAEs all had high saving rates and made great strides in public education i.e. they accumulated physical + human capital

→ Krugman concludes that trade policy permitted rapid growth, but didn't cause rapid growth