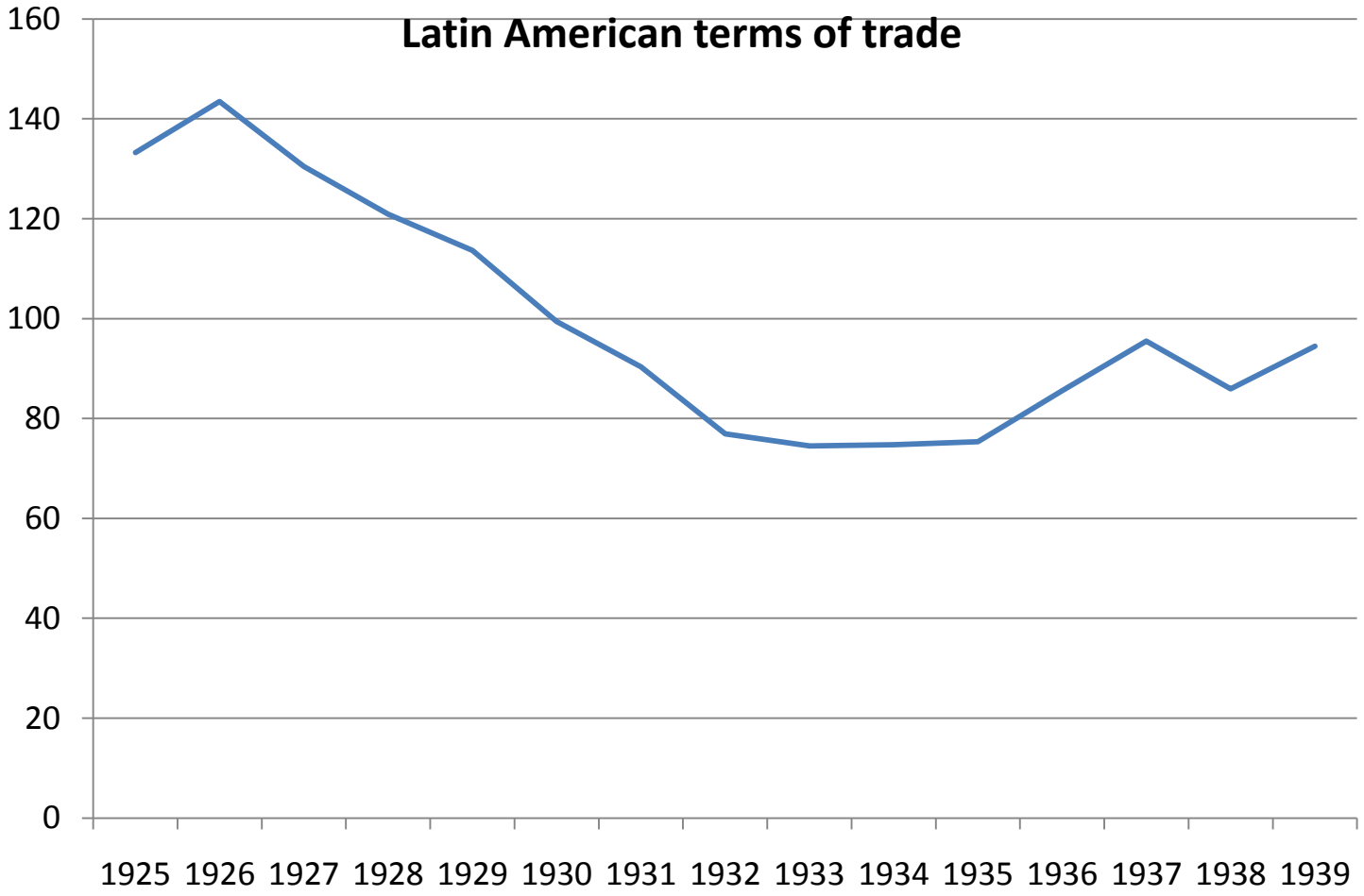
Import-substituting industrialization

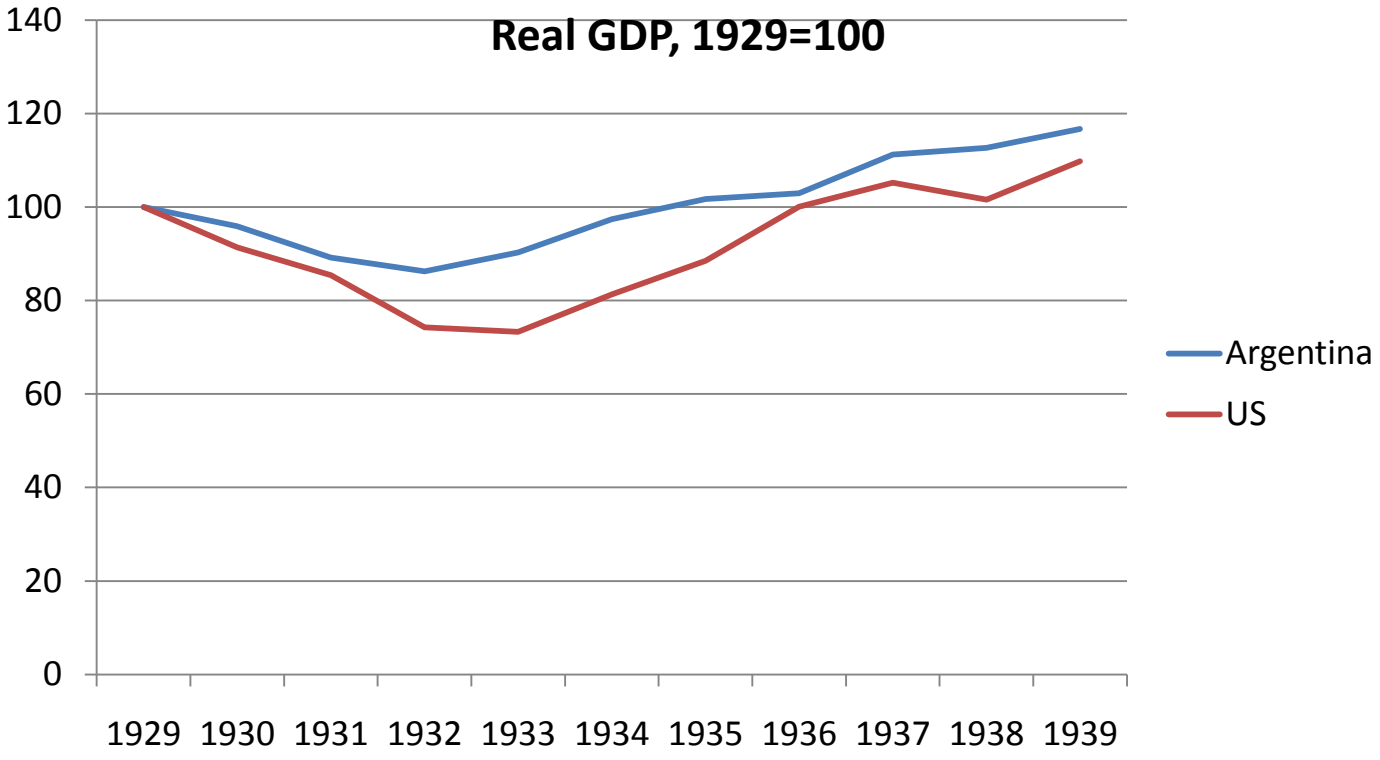
Paul Krugman

The Great Depression depresses developing-country terms of trade



Policy response: devaluation, exchange controls, tariffs – inward turn for economies and growth of manufacturing for domestic market

Growth performance actually not bad



Then “natural” protection during WWII

Postwar, turn to deliberate ISI

Intellectual basis:

Infant industry argument/linkages

Dependency theory

Dual economy

Big push

Secular terms of trade deterioration

Resources. The only resource in the economy is labor -- that is, we neglect the role of capital, physical or human. Labor is in fixed total supply L. It can, however, be employed in either of two sectors: a "traditional" sector, characterized by constant returns, or a "modern" sector, characterized by increasing returns. Although the same quality of labor is used in the traditional and modern sectors, it is not paid the same wage. Workers must be paid a premium to move from traditional to modern employment. We let $w>1$ be the ratio of the wage rate that must be paid in the modern sector to that in the traditional sector.

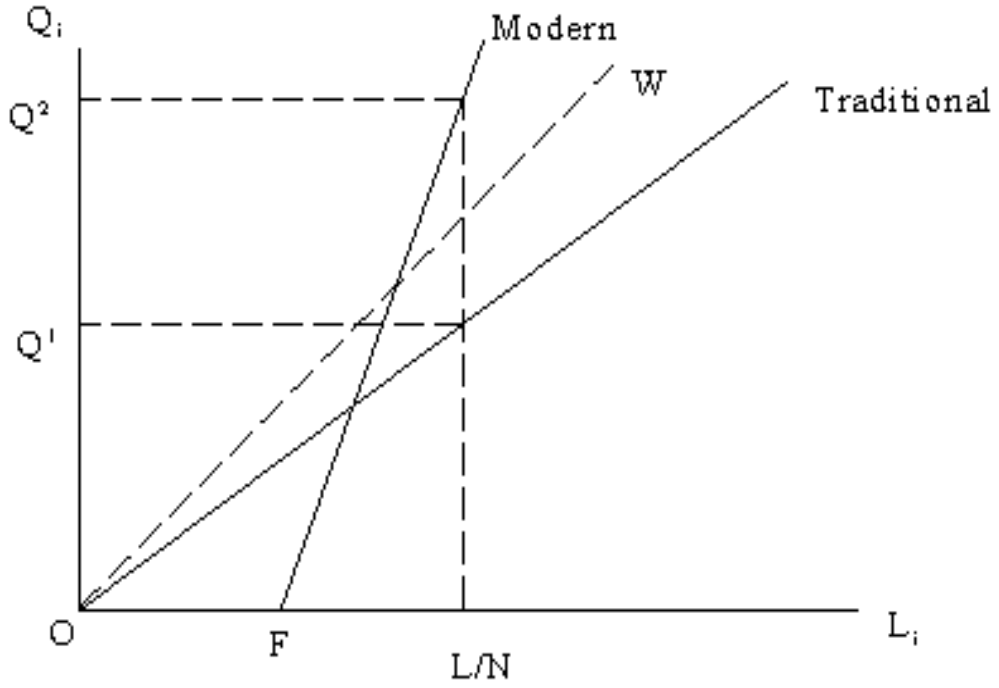
Technology. It is assumed that the economy produces N goods, where N is a large number. We choose units so that the productivity of labor in the traditional sector is unity in each of the goods. In the modern sector, average labor cost is decreasing in the scale of production. For simplicity, decreasing costs take a linear form. Let Q_i be the production of good i in the modern sector. Then if the modern sector produces the good at all, the labor requirement will be assumed to take the form

$$L_i = F + cQ_i$$

where $c<1$ is the marginal labor requirement.

Demand. Each good receives a constant share N of expenditure. The model will be static, with no asset accumulation or decumulation; so expenditure equals income.

Market structure. The traditional sector is assumed to be characterized by perfect competition. Thus for each good there is a perfectly elastic supply from the traditional sector at the marginal cost of production; given our choice of units, this supply price is unity in terms of traditional sector labor. By contrast, a single entrepreneur is assumed to have the unique ability to produce each good in the modern sector.


Qi
Modern
W
Traditional
Q²
Q¹
O
F
L/N
Li

Effective protection:

Imagine autos cost $10,000 on foreign market

Suppose that a 20% tariff is placed on auto imports

However, only *assembly* locates in your country; imported inputs of $8,000

Then, arguably, domestic assembly industry receives 100% protection: at domestic prices it adds $4000 to value added even though at international prices it adds only $2000

EFFECTIVE RATES OF SUBSIDY IN SOME DEVELOPING COUNTRIES
(PERCENT)

	Average all manufacturing	Sectoral range	
		Minimum	Maximum
Argentina (1977)[a]	46	−15	130
Brazil (1980)[a]	41	−43	172
Colombia (1979)[a]	56	25	127
Egypt (1980)	90	−29	355
Indonesia (1975)	30	−35	4,318
Jamaica (1978)[a]	50	−35	195
Jordan (1979)[a]	55	4	327
Korea (1968)	−7	−30	159
Malaysia (1980)[a]	27	−179	172
Mexico (1979)	11	−28	219
Nigeria (1979/80)[a]	40	−38	2,079
Philippines (1974)[a]	59	−27	300
Thailand (1983)[a]	136	−38	2,734
Turkey (1980)[a]	38	−2	110
Sri Lanka (1979)	38	−591	400

Also, highly fragmented industries

Argentine autos, 1965: 68 models produced, average output of 2860 units

Largest producer only around 50,000 cars total

Many producing much less

US assembly plants tended to produce around 200,000 units; US-Canada pact showed large gains from longer production runs

End of ISI:

Frustration with slowing growth

Disillusionment with high ERPs

Perceived Asian example

Debt crises and response

Rise of Washington Consensus