to provide some rough data or anecdotes to illustrate the HO Theorem (e.g. the United States in abundant in scientists, so it exports high-tech goods; Canada is abundant in land, so it exports natural resources, etc.). As plausible as these illustrations are, it turns out that the HO model is a *rather poor* predictor of actual trade patterns, indicating that its assumptions are not realistic. It has taken many years, however, to understand why this is the case, and we begin this exploration by considering the earliest results of Leontief (1953).

Leontief's Paradox

Leontief (1953) was the first to confront the HO model with data. He had developed the set of input-output accounts for the U.S. economy, which allowed him to compute the amounts of labor and capital used in each industry for 1947. In addition, he utilized U.S. trade data for the same year to compute the amounts of labor and capital used in the production of $1million of U.S. exports and imports. His results are shown in Table 2.1.

Table 2.1: Leontief's (1953) Test

	Exports	**Imports**
Capital ($ million)	$2.5	$3.1
Labor (person-years)	182	170
Capital/Labor ($/person)	$13,700	$18,200

Note: Each column shows the amount of capital or labor needed per $1 million worth of exports or imports into the United States, for 1947.

Table 2.5: Results from the HOV model

		SIGN HOV		RANK HOV		ESTIMATES	
Country	GDP per-capita	F	F^{δ}	F	F^{δ}	δ^i	t-stat
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Bangladesh	0.04	0.33	0.78	0.75	0.78	0.03	47.71
Pakistan	0.08	0.33	0.67	0.72	0.78	0.09	32.10
Indonesia	0.11	0.22	0.67	0.67	0.67	0.10	39.51
Sri Lanka	0.12	0.22	0.56	0.42	0.67	0.09	14.85
Thailand	0.16	0.22	0.67	0.69	0.72	0.17	23.80
Colombia	0.21	0.33	0.89	0.81	0.86	0.16	18.41
Panama	0.23	0.33	0.78	0.56	0.78	0.28	3.24
Yugoslavia	0.30	0.56	0.67	0.44	0.61	0.29	11.35
Portugal	0.30	0.22	0.78	0.53	0.58	0.14	9.63
Uruguay	0.31	1.00	0.11	0.72	0.53	0.11	19.46
Greece	0.35	0.11	0.56	0.47	0.75	0.45	4.63
Ireland	0.39	0.67	0.44	0.53	0.39	0.55	2.91
Spain	0.41	0.22	0.78	0.39	0.69	0.42	9.40
Israel	0.60	0.67	0.89	0.39	0.69	0.49	2.91
Hong Kong	0.61	0.67	0.89	0.83	0.72	0.40	4.12
New Zealand	0.62	0.44	0.22	0.53	0.61	0.38	7.89
Austria	0.65	0.56	0.67	0.53	0.47	0.60	3.03
Singapore	0.66	0.56	1.00	0.61	0.61	0.48	2.11
Italy	0.66	0.67	0.33	0.78	0.67	0.60	7.16
U.K.	0.66	0.67	0.78	0.58	0.64	0.58	8.04
Japan	0.66	0.78	0.67	0.78	0.78	0.70	7.15
Belgium	0.67	0.67	0.78	0.61	0.53	0.65	2.73
Trinidad	0.69	0.67	1.00	0.50	0.53	0.47	1.25
Netherlands	0.69	0.44	0.44	0.53	0.47	0.72	2.66
Finland	0.70	0.33	0.44	0.47	0.50	0.65	2.17
Denmark	0.72	0.44	0.44	0.53	0.42	0.73	1.92
West Germany	0.73	0.56	0.67	0.81	0.78	0.78	3.80
France	0.73	0.33	0.33	0.08	0.22	0.74	4.84
Sweden	0.75	0.44	0.44	0.67	0.36	0.57	4.09
Norway	0.82	0.44	0.44	0.61	0.78	0.69	1.80
Switzerland	0.91	0.89	0.89	0.56	0.47	0.79	1.41
Canada	0.95	0.56	0.22	0.89	0.56	0.55	9.82
U.S.A.	1.00	0.89	0.56	0.92	0.72	1.00	
All Countries		0.50	0.62	0.60	0.62		

Notes: Columns (1) is per-capita GDP relative to U.S. per-capita GDP. Columns (2) and (4) report the results of the sign and rank tests, assuming that all countries have the U.S. technology. Columns (3) and (5) report the results of the sign and rank tests, allowing for uniform technological differences δ^i across countries. Column (6) reports the estimates of δ^i and column (7) their asymptotic t-statistic for the null hypothesis $\delta^i = 1$.

Source: Trefler (1995) and empirical exercise 2.1 and 2.2.