

Border Prices and Retail Prices

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What We Do

- * Use CPI and IPP databases U.S. Bureau of Labor Statistics
 - Monthly data January 1994-July 2007

- * Match imports to CPI items that are *identical in description*
 - Details of procedure contained in the appendix

- * Compute distribution margin $\mu = [P(\text{CPI}) - P(\text{import})]/P(\text{CPI})$
 - Consider sales prices vs. regular, cif vs. fob price bases, transfer pricing

- * Investigate determinants of μ
 - Do margins vary with exchange rates?
 - Are margins related to sectoral characteristics?

Find Five Facts about Prices ... Retail and At-the-Dock

- (1) Distribution margins for the United States are large
- (2) Margins are larger than previously reported
- (3) Margins stable over time but vary considerably across items
- (4) Little variation across major exporters or with exchange rates
- (5) Variation explained by proxies for sectoral characteristics

I. Distribution Margins for the U.S. are Large (50%-70%)

A. Matching Procedure

Intra-company transfer prices excluded		
	regular	sale
cif	0.57	0.50
fob	0.68	0.60

Intra-company transfer prices only		
	regular	sale
cif	0.58	0.57
fob	0.62	0.49

B. Alternative Procedure

Price Levels		
	mean	weighted-average
μ	0.70	0.64

II. Margins Larger than Previously Reported

* Burstein, Neves, and Rebelo (1993)

- 42% in 1992 and 43% in 1997 (input-output tables)
- about same in 1992 Census of Wholesale & Retail Trade data

* Goldberg and Campa (2006) – cross-country evidence

- 43% in 1997 all U.S. final household consumption

* Bradford and Lawrence (2003)

- 40% overall distribution margin for U.S. in 1992

III. Margins stable over time but vary considerably across items

Matching procedure, intra-company transfer prices excluded

	Regular Price and fob	Sale price and fob
High Margins:		
Bananas	0.72	0.59
Calculators	0.72	0.70
Film	0.74	---
Men's pants	0.75	0.70
Tomatoes	0.78	0.70
Watches	0.78	0.79
Drugs	0.84	---
Low Margins:		
Televisions	0.21	0.35
Video cameras	0.29	0.23
VCRs	0.40	0.34
Telephones	0.42	0.27

IV. Little variation across major exporters or with exchange rates

Distribution Margins by Country of Origin

	cif	fob
Euro Area	0.48	0.60
Canada	0.55	0.59
China	0.54	0.50
Japan	n.a.	0.36
Mexico	0.75	0.55
United Kingdom	0.56	0.59

Regression Model of Change in Margins

Category	Contemporaneous Exchange Rate	Joint F Stat	Adjusted R Squared	n
Video cameras	1.24 (.63)	3.37*	0.034	326
Telephones	0.71 (.87)	1.50	-0.01	382
Watches	-0.16 (.13)	0.31	0.02	152
Computer accessories	-6.35 (8.91)	0.67	-0.02	135
Alcoholic beverages	0.02 (.11)	3.18*	0	3639
Televisions	-0.009 (.36)	0.07	0.003	1345
Women's pants	-0.86 (.60)	0.62	-0.01	197
Olive oil	0.02 (.34)	1.57	0.01	212
Beer	-0.04 (.04)	0.04	0	3979
Bananas	0.11 (.12)	0.16	0	7122
Audio players	-0.02 (.48)	0.09	0.004	484
Cameras	0.36 (.35)	0.04	-0.01	335
Drugs	-0.17 (.07)	3.49*	0.54	115
Film	-0.53 (.26)	1.49	0.002	527
Men's pants	0.21 (.36)	0.32	-0.01	472
Kitchen equip. (misc.)	-3.06 (1.79)	0.58	-0.004	245
Microwave ovens	-0.91 (.65)	6.48**	0.04	133
Stoves	-0.21 (.40)	1.51	-0.007	364
Tomatoes	0.33 (.17)	1.71	0.005	1767
VCRs	0.01 (.24)	0.007	0.002	707

Regression Model of Change in Margins

Country	Contemporaneous	Joint F	Adjusted R	n
Euro Area	.03	1.04	0	233
Canada	-.62	2.35*	0.002	114
China	1.95	1.07	-0.001	136
Japan	.08	0.06	-0.006	906
Mexico	.03	0.2	0.001	513
United	-.05	0.024	-0.004	101

V. Variation explained by sectoral characteristics

* Between categories,

- margins negatively related to *endogenous exits*
- margins positively related to cross-city CPI l.o.p. deviations
(Figure 1)

* Within categories,

- margins explained by brand, type of retail outlet and sales
(Table 6)

Table 6; An Empirical Model of Distribution Margins

A. By Item Category

Category	Full Model	Brand	Business Type	Sales Flag	Price Basis	LOP Deviations	Endo Exits
Alcoholic beverages	[0.24]	[0.22]	.10** (0.01) [0.03]	-.08** (0.01) [0.04]	.03* (0.01) [0.01]	.55** (0.06) [0.01]	.06** (0.01) [0.05]
Audio players	[0.69]	[0.49]	.04 (0.02) [0.23]	-.08** (0.01) [0.03]	.06* (0.01) [0.04]	.16** (0.02) [0.08]	.01 (0.01) [0.01]
Bananas	[0.30]	[0.01]	.13** (0.01) [0.04]	-.14** (0.002) [0.23]	na	.95** (0.09) [0.008]	-.06** (0.004) [0]
Beer	[0.61]	[0.48]	.09** (0.01) [0.03]	-.05** (0.003) [0.01]	.09** (0.002) [0.13]	-.35** (0.03) [0.01]	.02 (0.03) [0.05]
Calculators	[0.78]	[0.35]	.10** (0.004) [0.01]	-.08** (0.01) [-0.002]	-.02 (0.02) [0.2]	.78** (0.04) [0.32]	-.10* (0.02) [0.19]
Cameras	[0.57]	[0.63]	.04* (0.01) [0.01]	-.07** (0.01) [0.07]	na	.06 (0.11) [0.01]	.004 (0.03) [0.004]
Drugs	na	na	na	na	na	na	na
Film	[0.49]	[0.07]	.03* (0.01) [0]	-.05 (0.02) [0.01]	-.81** (0.05) [0.04]	1.6** (0.06) [0.16]	.37** (0.04) [0.05]
Men's pants	[0.75]	[0.03]	.02 (0.01) [0.02]	-.09** (0.01) [0.001]	0 (0) [0.03]	-.27** (0.03) [0.02]	-.01 (0.01) [0]
Microwave ovens	[0.58]	[0.58]	0 (0) [0.13]	-.07** (0.01) [0.08]	na	.42 (0.3) [0.13]	0 (0) [0.17]
Kitchen equip. (misc.)	[0.87]	[0.51]	.15** (0.01) [0.14]	-.15** (0.01) [0.05]	0 (0) [-0.001]	.1** (0.03) [-0.002]	.07** (0.01) [0.04]
Olive oil	[0.73]	na	.47** (0.02) [0.55]	-.08** (0.01) [0.01]	na	-.55** (0.06) [0.07]	.02 (0.01) [0.1]
Telephones	[0.16]	[0.11]	-.06 (0.03) [0.02]	-.09 (0.05) [0.002]	.05 (0.08) [0]	-.41** (0.06) [0.06]	-.27** (0.04) [0.01]
Stoves	[0.74]	[0.53]	.08** (0.01) [0.003]	-.08** (0.01) [0.07]	0 (0) [0.31]	-.36** (0.03) [0.05]	.07** (0.01) [0.07]
Tomatoes	[0.18]	na	.09** (0.01) [0.03]	-.04* (0.01) [0.05]	-.04* (0.01) [0.02]	.8** (0.04) [0.06]	-.01* (0.004) [0.004]

Televisions	[0.77]	[0.72]	.05* (0.01) [0.35]	.02 (0.01) [0.01]	.02 (0.02) [0.002]	-.24** (0.07) [0.11]	-.05* (0.01) [0]
VCRs	[0.42]	[0.37]	.03* (0.01) [0.08]	-.05* (0.01) [0.06]	-.03* (0.01) [0.002]	.37** (0.05) [0.01]	-.05* (0.01) [0.01]
Video cameras	[0.29]	[0.11]	.004 (0.01) [0.003]	-.05* (0.01) [0.04]	0 (0) [0.003]	-.14 (0.12) [0.02]	.07** (0.01) [0.01]
Watches	[0.76]	none	.03** (0,004) [0.17]	-.06** (0.01) [0.08]	0 (0) [0]	.32** (0.02) [0.36]	-.04** (0.003) [0.25]
Women's pants	[0.49]	[0.20]	.21** (0.02) [0.32]	-.10* (0.02) [0.02]	0 (0) [0.04]	.28** (0.05) [0.03]	-.04 (0.04) [0.14]

B. By Country of Origin

Country	Full Model	Brand	Business Type	Sales Flag	Price Basis	Absolute Deviations	Endo Exits
Euro Area	[0.46]	[0.34]	.18** (0.01) [0.05]	-.06** (0.01) [0.002]	.10** (0.01) [0.14]	[0.01]	[0.002]
Canada	[0.56]	[0.52]	-.01 (0.02) [0]	*-.011** (0.01) [0.15]	.05* (0.01) [0.18]	[0.02]	[0.2]
China	[0.75]	[0.54]	.06 (0.01) [0.05]	-.10** (0.01) [0.03]	.05* (0.01) [0.002]	[0.01]	[0.06]
Japan	[0.56]	[0.55]	.04* (0.01) [0.01]	-.06** (0.01) [0.01]	-.22 (0.09) [0.04]	[0.26]	[0]
Mexico	[0.76]	[0.74]	.09** (.004) [0.23]	-.06** (0.003) [0.02]	-.04** (0.004) [0.06]	[0.44]	[0.07]
United Kingdom	[0.27]	[0.22]	.04 (0.03) [0.004]	-.08** (0.01) [0.05]	-.08 (0.01) [0.02]	[0.02]	[0.004]

Notes: Standard errors are on parenthesis. In brackets are contributions to R2 from the column variable. A * (**) denotes significance at the 5% (1%) level.

