

Description	Mean	Median	Standard Deviation	Min	Max
Retail prices (cents per serving)	71	61	27	27	132
Market share of each product	.54	.15	1.16	.00005	9.17
Servings sold	16589	4655	34800	1.83	279,918
Share of Dominick's beer sales	65.04	65.89	13.96	31.58	98.20
Market share of 34 products	18.46	17.34	7.38	7.01	36.12
Market share of outside good	81.54	82.66	7.38	63.89	93.21

Table 1: *Summary statistics for prices, servings sold, and market shares for the 34 products in the sample.* The share of *Dominick's* total beer sales refers to the share of revenue of the 34 products I consider in the total beer sales by the *Dominick's* stores in my sample. The market share refers to the volume share of the product in the potential market which I define as all beer servings sold at supermarkets in the zip codes in which one of the *Dominick's* stores in my sample is located. Source: *Dominick's*.

Description	Mean	Median	Std	Minimum	Maximum
Percent Alcohol	4.52	4.60	.68	2.41	6.04
Calories	132.18	142.50	23.00	72.00	164.00
Bitterness	2.50	2.10	1.08	1.70	5.80
Maltiness	1.67	1.20	1.52	.60	7.10
Hops (=1 if yes)	.12	–	–	–	–
Sulfury/Skunky (=1 if yes)	.29	–	–	–	–
Fruity (=1 if yes)	.21	–	–	–	–
Floral (=1 if yes)	.12	–	–	–	–

Table 2: *Product characteristics.* Source: "Beer Ratings." *Consumer Reports*, June (1996), pp. 10-19.

Retail price	OLS	OLS	IV
Exchange rate	.011 (.001)**	.014 (.003)**	.057 (.018)**
Local wages		.245 (.099)*	.536 (.165)**
Foreign wages		.001 (.002)	.029 (.012)*
Feature		-.124 (.005)**	-.132 (.006)**
Constant	.011 (.004)**	-.468 (.217)*	-.919 (.309)**
Observations	1680	1680	1680
R^2	.024	.26	
1 st -stage partial F stat.			44.85

Table 3: *Some preliminary descriptive results.* Local wages are hourly compensation in local currency terms for the grocery sector in Illinois. The dependent variable is the retail price for each brand. Foreign wages are hourly wages in food and beverage manufacturing. The exchange-rate is the monthly average of the previous month's spot rate. Feature is a dummy variable that indicates if the brand was promoted by the store during that month in its weekly circular or in its display within the store. In the instrumental variables estimation, the instrument is interest rates in the countries that would eventually make up the Euro area. Source: My calculations.

Retail price	OLS	OLS
Local wages	.82 (.02)**	.85 (.02)**
Foreign wages		.01 (.002)**
Constant	-1.71 (.07)**	-1.73 (.07)**
Observations	1680	1680
R^2	.47	.47

Table 4: *An estimation of the share of local nontraded costs in retail beer prices.* Local wages are hourly compensation in local currency terms for the grocery sector in Illinois multiplied by the exchange rate which is foreign currency units per unit of domestic currency. The dependent variable is the retail price for each brand multiplied by the exchange rate which is foreign currency units per unit of domestic currency. The regression also includes brand dummy variables. Source: My calculations.

Variable	OLS		IV	
Price	-5.62 (.27)	-5.62 (.27)	-8.34 (.99)	-8.32 (.99)
Advertising		.17 (.22)		.16 (.22)
Measures of Fit				
Adjusted R^2	.86	.86		
Price Exogeneity Test			10.28 (3.84)	10.13 (3.84)
Overidentification Test			11.56 (45)	11.60 (45)
First-Stage Results				
F-Statistic			17.42	17.40
Partial R^2			.98	.97
Instruments			wages	wages

Table 5: *Diagnostic results from the logit model of demand.* Dependent variable is $\ln(S_{jt}) - \ln(S_{ot})$. All four regressions include brand fixed effects. Based on 4080 observations. Huber-White robust standard errors are reported in parentheses. Wages denote a measure of hourly compensation from the U.S. Bureau of Labor Statistics which is described in the text. Advertising is the annual amount spent on advertising for each brand across all potential media outlets. Sources: Competitive Media Reporting, 1991-1994; My calculations.

Variable	Mean in Population	Interaction with:		
		Unobservables	Age	Income
Constant	-12.664* (.478)			
Price	-21.743* (7.184)	1.407 (2.122)	3.157* (1.506)	.280* (.136)
Bitterness	1.195* (.039)			
Hops	1.277* (.001)			
Sulfury/Skunky	-1.139* (.061)			
Percent Alcohol	-1.59* (.104)	.028 (.759)	-.143 (.154)	-.014 (.022)
Calories	-.003 (.042)			
Maltiness	-.415 (.478)			
Fruity	-.974* (.046)			
Floral	-1.803* (.103)			
GMM Objective	45.83			
M-D Weighted R^2	.46			

Table 6: *Results from the full random-coefficients model of demand.* Based on 4080 observations. Asymptotically robust standard errors in parentheses. Starred coefficients are significant at the 5-percent level. Source: My calculations.

Brand	Amstel	Beck's	Bud	Bud L	Corona	Heineken	Miller HL
Amstel	-6.06	.0162	.0058	.0075	.0163	.0168	.0054
Beck's	.1437	-5.71	.0528	.0684	.1320	.1356	.0506
Bud	.1299	.1359	-6.37	.1560	.1413	.1345	.1511
Bud Light	.0977	.1005	.0853	-5.88	.0986	.0992	.0827
Corona	.0717	.0673	.0263	.0334	-6.04	.0693	.0261
Heineken	.1309	.1236	.0464	.0601	.1276	-6.12	.0453
Miller HL	.0843	.0910	.1015	.1041	.0915	.0895	-6.49

Table 7: *A sample of median own- and cross-price demand elasticities.* Cell entries i, j , where i indexes row and j column, give the percent change in the market share of brand j given a 1-percent change in the price of brand i . Each entry reports the median of the elasticities from the 120 markets. Source: My calculations.

Product	Price	Markup		
	Retail cents	Manufacturer cents	Retailer cents	Vertical cents
Domestic Brands				
Bud Light	53	10	15	25
Coors	49	8	13	22
Keystone Light	35	6	9	16
Michelob Light	59	11	18	28
Miller Genuine Draft	51	9	13	22
Stroh's	40	7	11	18
All Domestic Brands	49	9	12	21
Foreign Brands				
Amstel	99	22	30	52
Beck's	88	20	28	48
Corona	97	19	29	48
Heineken	99	21	28	49
Molson Light	76	18	28	46
Sapporo	106	24	31	55
All Foreign Brands	100	20	29	50

Table 8: *Median retail prices and derived price-cost markups for selected brands.* Median across 120 markets. The markup is price less marginal cost with units in cents per 12-ounce serving. Source: My calculations.

	Manufacturer Traded	Retail Nontraded	Retail Traded
Amstel	36	19	9
Bass	39	18	2
Beck's	50	21	36
Corona	66	27	33
Foster's	29	15	2
Grolsch	5	2	-8
Guinness	53	24	14
Harp	24	11	-4
Heineken	52	26	30
Molson L	31	16	6
Peroni	65	28	33
Sapporo	17	7	-1
St. Pauli	37	18	2
Tecate	28	12	1
All Foreign	35	16	9

Table 9: *Counterfactual experiments: median pass-through of a 5-percent increase in foreign brands' marginal costs.* Median over 120 markets. Retail traded pass-through: the retail price's percent change for a given percent change in foreign brands' marginal costs. Manufacturer traded pass-through: the wholesale price's percent change for a given percent change foreign brands' marginal costs. Retail nontraded pass-through: the retail price's percent change for a given percent change in the wholesale price due to the presence of a local component in costs. Source: My calculations.

	Manufacturer Traded	Retail Nontraded	Retail Traded
Amstel	12	7	5
Bass	12	6	9
Beck's	3	6	-11
Corona	-2	0	-8
Foster's	15	9	10
Grolsch	50	20	21
Guinness	-2	-1	2
Harp	26	13	17
Heineken	8	4	-5
Molson L	19	10	11
Peroni	-1	1	-7
Sapporo	40	15	15
St. Pauli	10	7	11
Tecate	18	9	15
All Foreign	16	8	7

Table 10: *Counterfactual experiments: median pass-through of a 5-percent decrease in foreign brands' marginal costs.* Median over 120 markets. Retail traded pass-through: the retail price's percent change for a given percent change in foreign brands' marginal costs. Manufacturer traded pass-through: the wholesale price's percent change for a given percent change foreign brands' marginal costs. Retail nontraded pass-through: the retail price's percent change for a given percent change in the wholesale price due to the presence of a local component in costs. Source: My calculations.

	Manufacturer		Retail	
	Nontraded	Traded	Nontraded	Traded
Amstel	54	16	18	11
Bass	51	11	21	16
Beck's	78	0	45	-23
Corona	74	-23	56	-8
Foster's	51	22	14	13
Grolsch	46	42	2	10
Guinness	58	-3	34	11
Harp	48	25	13	14
Heineken	71	-2	37	-6
Molson L	53	20	16	11
Peroni	74	-22	55	-7
Sapporo	49	33	10	8
St. Pauli	51	14	19	16
Tecate	50	22	17	11
All Foreign	54	17	20	8

Table 11: *Counterfactual experiments: Decomposition of the incomplete transmission of a 5-percent increase in foreign brands' marginal costs to final-goods prices.* Median over 120 markets. Manufacturer nontraded: the share of the incomplete transmission explained by the presence of a local component in manufacturer's marginal costs. Retail traded: the share of the incomplete transmission explained by the retailer's markup adjustment. Manufacturer traded: the share of the incomplete transmission explained by manufacturers' markup adjustment. Retail nontraded: the share of the incomplete transmission explained by the presence of a local component in the retailer's costs. Source: My calculations.

	Manufacturer		Retail	
	Nontraded	Traded	Nontraded	Traded
Amstel	53	39	6	2
Bass	56	41	7	-3
Beck's	46	41	-2	15
Corona	47	48	-2	7
Foster's	57	38	6	-1
Grolsch	64	-1	37	-1
Guinness	52	52	-1	-3
Harp	62	27	17	-6
Heineken	49	39	4	8
Molson L	57	34	10	-1
Peroni	47	47	-2	8
Sapporo	60	11	29	0
St. Pauli	57	44	4	-5
Tecate	60	36	11	-8
All Foreign	55	36	8	1

Table 12: *Counterfactual experiments: Decomposition of the incomplete transmission of a 5-percent decrease in foreign brands' marginal costs to final-goods prices.* Median over 120 markets. Manufacturer nontraded: the share of the incomplete transmission explained by the presence of a local component in manufacturer's marginal costs. Retail traded: the share of the incomplete transmission explained by the retailer's markup adjustment. Manufacturer traded: the share of the incomplete transmission explained by manufacturers' markup adjustment. Retail nontraded: the share of the incomplete transmission explained by the presence of a local component in the retailer's costs. Source: My calculations.

	Depreciation	Appreciation
	%	%
Retailer Profit	-2.10	-.24
Domestic Manufacturer Profit	.09	-.07
Foreign Manufacturer Profit	-5.83	4.57
Consumer Surplus	-4.20	.75

Table 13: *Median percent changes in variable profits and consumer surplus following a 5-percent change in the exchange rate.* 4080 observations.

Product	Profit		Quantity	Markup	
	Manufacturer	Retail		Manufacturer	Retail
Budweiser	0	-2	-2	2	0
Bud Light	3	6	6	-1	-1
Coors	-1	-4	-4	3	0
Coors Light	1	0	0	1	0
Michelob Light	6	10	13	-6	-3
Miller High Life	2	4	5	-2	-1
Old Milwaukee	-4	-10	-11	8	1
Old Style Classic	-3	-7	-8	6	1
Stroh's	-4	-10	-11	9	2
All Domestic Brands	0	-1	-1	2	0

Table 14: *Median percent changes in selected domestic brands' profits, quantities, and markups after a 5-percent depreciation.* Median percent change in profits, quantity sold and in the retail and manufacturer product markup over all markets. 4080 observations.

A Appendix

	Hourly Wages	T-Statistic
Amstel	.0596	1.46
Bass	.5714	3.75
Beck's	-.0063	-.46
Budweiser	.1218	3.44
Bud Light	.1710	4.10
Busch	.1464	1.66
Busch Light	.0793	1.04
Coors	.1598	3.86
Coors Light	.0039	.09
Corona	-.0001	-2.44
Foster's	-.3095	-6.11
Grolsch	.1087	2.67
Guinness	.0027	.01
Harp	.3371	2.36
Heineken	.0607	1.42
Keystone Light	-.0143	-.50
Michelob Light	.6118	7.63
Miller Genuine Draft	.1827	6.31
Miller High Life	.0702	2.05
Miller Lite	.1925	6.71
Milwaukee's Best	.5678	8.92
Milwaukee's Best Light	.3147	4.37
Molson Golden	.1216	.85
Molson Light	.1869	1.22
Old Milwaukee	-.3186	-7.72
Old Style	.2595	3.99
Old Style Classic	-.1666	-3.32
Peroni	.0001	1.81
Rolling Rock	.7274	7.69
Sapporo	-.0014	-1.00
Special Export	.2750	2.96
St. Pauli	-.1472	-3.18
Stroh's	-.0753	-1.11
Tecate	.0002	7.21

Table 15: *First-stage results for demand.* Hourly compensation in local currency terms for the food, beverage, and tobacco manufacturing industries. T-statistics are based on Huber-White robust standard errors. The dependent variable is the retail price for each brand in each month and each price zone. The regression also includes brand dummy variables. 4080 observations. Sources: My calculations; *Foreign Labor Statistics Program*, Bureau of Labor Statistics, U.S. Department of Labor.

Bilateral exchange rate	OLS
Euro-area interest rate	.797 (.119)**
Foreign wages	-.666 (.015)**
Domestic wages	-2.997 (1.141)**
Feature	.19 (.046)**
Constant	.284 (2.739)
Observations	1680
R^2	.744
1 st -stage partial F stat.	44.85

Table 16: *First-stage results for the reduced-form pass-through estimation.* Local wages are hourly compensation in local currency terms for the grocery sector in Illinois. The dependent variable is the bilateral nominal exchange-rate for each brand. Foreign wages are hourly wages in food and beverage manufacturing. Feature is a dummy variable that indicates if the brand was promoted by the store during that month in its weekly circular or in its display within the store. The instrument is interest rates in the countries that would eventually make up the Euro area. Source: My calculations.

Depreciation	Profit		Appreciation	Profit	
	Manufacturer	Retail		Manufacturer	Retailer
Amstel	-5	-1		5	1
Bass	-5	-1		8	1
Becks	-13	-8		2	-5
Corona	-16	-8		2	-6
Fosters	-3	0		7	1
Grolsch	2	1		10	6
Guinness	-9	-3		4	-3
Harp	-2	2		11	4
Heineken	-13	-8		2	-3
Molson Light	-5	0		5	1
Peroni	-16	-8		2	-5
Sapporo	-1	3		12	2
St. Pauli Girl	-3	1		7	2
Tecate	-2	3		10	3

Table 17: *Median percent changes in manufacturer and retailer profits after a 5-percent change in the nominal exchange rate.* Median percent change in profits over all markets. 4080 observations.