

APPENDIX 6-A. DETAILED DATA FOR PRODUCT MARKUPS

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APPENDIX 6-A. DETAILED DATA FOR PRODUCT PRICE MARKUPS

6-A.1 INTRODUCTION

This appendix provides further details on the retailer, distributor, and builder markups and markups validation presented in chapter 6, Markups to Determine Product Cost. For retailers and distributors, DOE presents a breakdown of revenues and expenses (previously presented in chapter 6 in an aggregated form). DOE identified expenses which scale with direct “labor” costs (such as payroll) and “all costs” (such as advertising). The sum of all expenses that scale with “all costs” is the non-labor-scaling costs (NLSC) used for incremental markup calculations in chapter 6. For builders, DOE presents the by-state sales, payroll, sub-contract, and cost of materials data used to estimate the baseline and incremental builder markups presented in chapter 6. For the markups validation, DOE presents an example of the validation calculation for 40 gallon gas-fired storage water heaters.

6-A.2 DETAILED RETAILER DATA

Table 6-A.2.1 shows the complete breakdown of costs and expenses for retailers, as provided by the U.S. Census Bureau.¹

Table 6-A.2.1 Disaggregated Costs and Expenses for Retailers (1997\$)

Item	Million Dollars
Sales (revenue)	10343
Cost of Goods Sold (CGS)	7151
Gross Margin (GM)	3192
Labor Scaling Costs	
Payroll	1366
Fringe Benefits	208
Contract Labor	69
Taxes and License Fees	53
Lease and Rental Payments	264
Telephone and Communications	58
Utilities	70
Repair and Maintenance	36
Total Labor Scaling Costs	2124
Non-Labor Scaling Costs	
Computer and Office Supplies	37
Advertising Services	274
Legal Services	8
Accounting, Auditing and Bookkeeping	19
Computer Services	10
Depreciation and Amortization Charges	94
Other Operating Expenses	363
Net Profit Before Taxes	263
Total Non-Labor Scaling Costs	805
Baseline Markup	1.45
Incremental Markup	1.15

6-A.3 DETAILED DISTRIBUTOR DATA

Table 6-A.3.1 shows the complete breakdown of costs and expenses for distributors, as provided by the U.S. Census Bureau.¹

Table 6-A.3.1 Disaggregated Costs and Expenses for Distributors

Item	Electrical Goods Merchant Wholesalers <i>(Million 1997\$)</i>	Hardware, Plumbing and Heating Equipment and Supplies Merchant Wholesalers <i>(Million 1997\$)</i>
Sales (revenue)	205688	74080
Cost of Goods Sold (CGS)	160435	54835
Gross Margin (GM)	45253	19245
Labor Scaling Costs		
Payroll	19402	9154
Fringe Benefits	3233	1543
Contract Labor	954	-
Taxes and License Fees	450	203
Lease and Rental Payments	1980	985
Telephone and Communications	958	350
Utilities	478	219
Repair and Maintenance	436	226
Commissions	1309	190
Total Labor Scaling Costs	71310	29351
Non-Labor Scaling Costs		
Computer and Office Supplies	663	261
Packaging	425	121
Advertising Services	1842	371
Legal Services	292	88
Accounting, Auditing, and Bookkeeping	215	106
Computer Services	498	127
Depreciation and Amortization Charges	1947	517
Other Operating Expenses	6759	1835
Net Profit Before Taxes	3143	2764
Total Non-Labor Scaling Costs	12641	3426
Baseline Markup	1.28	1.35
Incremental Markup	1.10	1.11

6-A.4 DETAILED BUILDER DATA

Table 6-A.4.1 shows the complete breakdown of costs and expenses for builders, as provided in the 2002 Economic Census Geographic Area Series for Construction.² Eight states were omitted due to incomplete data reporting.

Table 6-A.4.1 Disaggregated Costs and Expenses for Builders (2002\$)

State	# of Firms	Value of Construction	Construction Payroll	Cost of Materials	Subcontracted Work Cost	Baseline Markup
		Thousand Dollars	Thousand Dollars	Thousand Dollars	Thousand Dollars	
AL	625	621596	34491	219447	238657	1.26
AZ	1022	1624290	94033	355310	863488	1.24
CA	5524	6687563	660997	1516936	2637976	1.39
CO	1683	1694526	127205	574850	663001	1.24
DE	282	321797	19884	80878	112716	1.51
FL	3342	6715061	255354	1923959	2705273	1.37
GA	1402	1665422	80051	608070	619846	1.27
HI	264	707731	69177	183672	294540	1.29
IL	2306	1952884	170913	546704	719301	1.36
IN	1283	1302913	155256	559830	428344	1.14
IA	739	370207	34795	146490	105194	1.29
KS	603	468596	37696	150681	168272	1.31
KY	586	547314	56437	186311	165726	1.34
LA	456	367627	27770	142457	119715	1.27
ME	588	433835	41420	139087	149814	1.31
MA	963	1350052	104444	396834	502107	1.35
MI	2580	2008409	184591	737948	672114	1.26
MN	1409	1384067	97220	411900	478584	1.40
MT	571	490475	45767	168316	186907	1.22
NE	427	272811	20008	91958	105480	1.25
NH	337	356830	25981	115120	131246	1.31
NJ	1530	2242274	189670	600881	837618	1.38
NM	591	440864	41657	126967	155652	1.36
NY	2812	2265480	165474	703889	871477	1.30
NC	2488	2386858	160435	831415	838182	1.30
ND	115	70417	9223	27293	15817	1.35
OH	2176	2123600	124602	695612	717457	1.38
OK	570	438084	33609	158829	136306	1.33
OR	1112	706038	47012	237685	247540	1.33
PA	2316	2701233	175321	886125	1009063	1.30
RI	260	219953	18137	103547	83347	1.07
SC	994	1020532	69041	395786	380231	1.21
SD	278	185576	13150	83969	57714	1.20
TN	823	686823	69934	234449	209053	1.34
TX	2412	3359463	182477	1125797	1422079	1.23
UT	735	654146	48009	207171	260917	1.27
VT	348	317156	28690	84640	82994	1.62
VA	1774	2030808	157808	596727	658787	1.44
WA	2180	1518492	111803	443597	589553	1.33
WV	527	239153	25920	79762	66543	1.39
WI	1916	2003070	150226	745314	742608	1.22
WY	278	238912	31477	71910	86807	1.26
Avg	1267	1361737	99933	421384	512811	1.31

6-A.5 DATA FOR MARKUP COMPARISON

DOE performed an analysis of the accuracy of the retail markups estimated for water heaters. This analysis demonstrated that DOE retail markups estimates from industry financial data are similar to those implied by the market retail prices. Note that this analysis was conducted in 2007, so the manufacturer costs, manufacturer selling prices, and retail prices are representative of that time period. To evaluate the accuracy of the baseline retail markup, only

baseline efficiency models of water heaters are considered. Within the category of baseline efficiency water heaters, there is variation in retail price across brands and retailers. For example, DOE collected 93 data points representing baseline efficiency gas storage water heaters, with retail prices ranging between \$178 and \$780.

Table 6-A.5.1 provides an example of baseline markup comparison for 40 gallon gas-fired storage, 50 gallon electric storage, 30 gallon oil-fired storage, and gas-fired instantaneous water heaters. Only models at the baseline energy factor level, shown in the second column of Table 6-A.5.1, are included in this analysis. The markup is calculated as for distribution channel “Replacement A,” described in chapter 6, Markups to Determine Product Cost.

Table 6-A.5.1 Water Heater Markup Implied by Retail Prices (Prices in 2007\$)

Water Heater Type	Energy Efficiency (EF)	Mfr. Production Cost	Mfr. Selling Price	Implied Mfr. Markup	Average Retail Price	Implied Retail Markup	Sales Tax	Total Markup
Gas (40 gallon)	0.59	\$160	\$221	1.38	\$388	1.76	7.24%	2.43
Electric (50 gallon)	0.90	\$122	\$168	1.38	\$238	1.42	7.24%	2.10
Oil (30 gallon)	0.54	\$518	\$715	1.38	\$1028	1.44	7.24%	2.13
Gas Instantaneous	0.69	\$235	\$341	1.38	\$560	1.64	7.24%	2.43

REFERENCES

1. U.S. Department of Commerce - Bureau of the Census, *1997 Economic Census: Business Expenses*, 2000. Washington, DC.
2. U. S. Department of Commerce - Bureau of the Census, *2002 Economic Census Geographic Area Series Construction.*, 2005. Washington, DC.