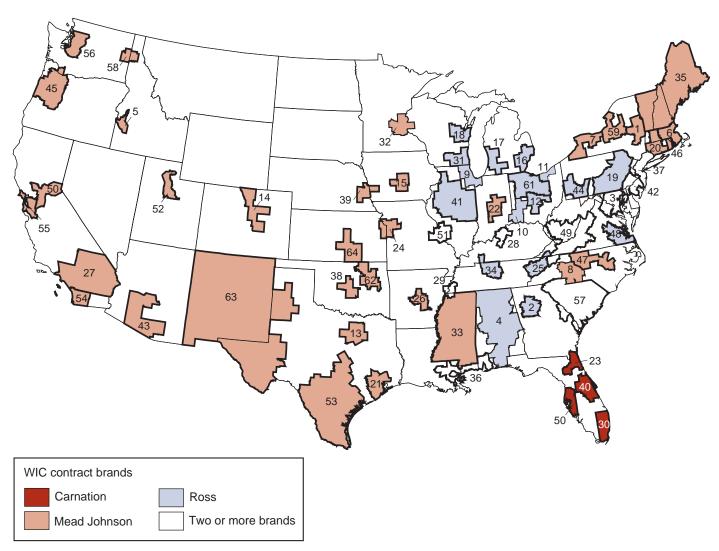
Retail Price of Infant Formula

To compare retail infant formula prices for WIC contract and noncontract brands, it is useful to control for the influence of factors other than contract brand status. The retail price of infant formula varies by a wide range of factors, such as product base, physical form, type of formula, outlet, and size of container. The examination of retail infant formula prices was narrowed to focus on similar products; otherwise, the inclusion of other formulas could bias the results of the study. Therefore, the price of infant formula for each brand is represented by one specific product per

company, determined by the universal product code (UPC) with the largest volume of sales in each of four product base and form categories: milk- and soy-based formula in powdered and liquid concentrate forms (table 3). Milk-based infant formula currently accounts for 77 percent of all infant formula sold in the United States. Price data represent supermarket sales, which account for 69 percent of all infant formula sold by volume in 2000. Information on the retail price of infant formula by market area is not available for drugstores or mass merchandisers.

The InfoScan data contained retail price information for 64 market areas. Of those areas, 23 spanned 2 or

Figure 10 WIC infant formula contract brand by market area, 2000



Note: Numerical identifiers of markets are provided in figure 3. Source: ERS Analysis of FNS WIC contracts.

more States. In some of those multistate areas, the WIC contract brand was the same throughout the market area. In others, a different WIC contract brand comprised only a small share of the market area. Since the objective of this analysis is to compare the cost of WIC contract brand infant formula with other brands of infant formula, those market areas located in two or more States with different WIC contract-winning manufacturers present a problem in identifying the WIC contract brand of infant formula. The criterion for including a multistate market area in this analysis was that a market area have at least 90 percent of the area's population in an area that had the same WIC contract brand throughout the reference period, which ran from January 2000 through September 2000.²³ Of the 64 market areas, 55 met this criterion; it was not possible to assign a "WIC brand" to the remaining 9 market areas (fig. 10).

Milk-Based Powdered Formula

Table 4 shows the average retail price of selected milk-based powdered infant formula products sold in supermarkets by the four companies in each market area. In all 55 market areas examined, PBM Products had the lowest retail price, and in 53 of these market areas, Carnation brand formula had the next lowest. Ross brand formula was the highest priced formula in 47 of the 55 market areas. There was no apparent relationship between a formula's being the WIC contract brand and having the highest average retail price. In 23 of the 55 market areas (42 percent), the WIC contract brand of infant formula was the highest priced formula. In the remaining 32 market areas, the WIC contract brand was not the highest priced infant formula.

Milk-Based Liquid Concentrate Formula

The comparison of the average retail price of WIC contract brand and other brands of milk-based liquid concentrate infant formula by market area is shown in table 5. Because the data did not identify any PBM Products in liquid concentrate, only three companies— Ross, Mead Johnson, and Carnation—were represented. In all 55 market areas in which a WIC brand was designated, Carnation brand formula had the lowest retail prices. The company producing the highest priced formula varied between Ross and Mead Johnson. There was not a strong relationship between being the WIC contract brand of formula and having the highest average retail price. In 31 of the 55 market areas with a designated WIC contractor (56 percent), the WIC contract brand of infant formula was the highest priced formula, and in one additional market area, it tied for the highest price. In the remaining 24-market areas, the WIC contract brand was not the highest-priced infant formula.

Soy-Based Powdered Formula

Infant formula sold by PBM was the lowest priced soy-based powdered formula in each of the 44 market areas in which it was available, followed by Carnation brand formula (table 6). In 44 market areas, Mead Johnson had the highest priced formula. In 34 of the 55 market areas (62 percent) in which a WIC contract brand was designated, the WIC brand was the highest priced soy-based powdered formula, and in an additional market area it tied for the highest price.

Soy-Based Liquid Concentrate Formula

The average retail prices of soy-based liquid concentrate infant formulas made by Carnation, Mead Johnson, and Ross are shown in table 7 (PBM did not market liquid concentrate during the study period). In all 55 market areas, Carnation had the lowest priced formula. The WIC contract brand was the highest priced formula in 33 of the 55 market areas (60 percent), and in 4 more it tied for the highest.

²³Geocoding analysis was used to estimate the proportion of the population within each market area that resided in specific States.

Table 3—Specific products included in the analysis of retail prices for infant formula

Milk-based powder

Mead Johnson—Enfamil with iron in 16-ounce cans Ross—Similac with iron in 14.1-ounce cans Carnation—Good Start in 12-ounce cans PBM—in 16-ounce cans

Milk-based liquid concentrate

Mead Johnson—Enfamil with iron in 13-ounce cans Ross—Similac with iron in 13-ounce cans Carnation—Good Start in 13-ounce cans

Soy-based powder

Mead Johnson—Prosobee in 14-ounce cans Ross—Isomil with iron in 14-ounce cans Carnation—Alsoy in 14-ounce cans PBM—in 16-ounce cans

Soy-based liquid concentrate

Mead Johnson—Prosobee in 13-ounce cans Ross—Isomil with iron in 13-ounce cans Carnation—Alsoy in 13-ounce cans

Note: During the study period, PBM sold infant formula in powdered form only. PBM powdered infant formula products are sold under a variety of store or private-label brands. Since the IRI data did not identify individual store or private-label brands, the price of PBM infant formula represents the aggregate average price of all PBM infant formula (either milk- or soy-based) sold in 16 ounce cans.

1 Prior to 1996, the product was sold in 16-ounce cans.

Table 4—Infant formula average retail prices: 12- to 16-ounce cans of milk-based powder in supermarkets by market area, 2000¹

	PBM			
Market area	(Wyeth)	Carnation	Mead Johnson	Ross
		Dollars per 26 ou	ınces reconstituted	
Albany	1.72	2.13	1.97	2.31
Atlanta	_	2.16	2.46	2.62
Baltimore/Washington	1.51	2.09	2.57	2.60
Birmingham/Montgomery	1.81	2.14	2.53	2.66
Boise	1.50	2.16	2.38	2.53
Boston	1.73	2.12	2.29	2.50
Buffalo/Rochester	1.43	2.11	2.22	2.30
Charlotte	1.49	2.06	2.51	2.58
Chicago	_	2.57	3.12	2.94
Cincinnati/Dayton	1.73	1.98	2.12	2.43
Cleveland	1.62	2.17	2.41	2.52
Columbus	_	2.10	2.38	2.56
Dallas/Ft. Worth	1.60	2.24	2.54	2.73
Denver	1.50	2.28	2.62	2.68
Des Moines	1.67	2.23	2.67	2.72
Detroit	_	2.16	2.53	2.74
Grand Rapids	1.64	2.11	2.14	2.34
Green Bay	_	2.28	2.77	2.86
Harrisburg/Scranton	1.51	2.12	2.40	2.55
Hartford/Springfield	1.73	2.18	2.43	2.60
Houston	1.53	2.12	2.48	2.66
Indianapolis	1.73	2.29	2.43	2.40
Jacksonville	1.50	2.18	2.49	2.55
Kansas City	1.58	2.27	2.65	2.51
Knoxville	1.44	2.09	2.48	2.60
Little Rock	_	2.32	2.70	2.90
Los Angeles	1.64	2.22	2.86	2.81
Louisville	1.53	1.99	2.37	2.41
Memphis	1.63	2.30	2.76	2.93
Miami/Ft. Lauderdale	1.62	2.34	2.53	2.60
Milwaukee	1.54	2.25	2.67	2.78
Minneapolis/St. Paul	_	2.13	2.46	2.63
Mississippi	1.60	2.20	2.57	2.81

Table 4—Infant formula average retail prices: 12- to 16-ounce cans of milk-based powder in supermarkets by market area, 2000 (Continued)

	PBM			
Market area	(Wyeth)	Carnation	Mead Johnson	Ross
	Dollars per 26 ounces reconstituted			
Nashville	1.49	2.13	2.53	2.72
New England	1.73	2.18	2.16	2.51
New Orleans/Mobile	1.51	2.23	2.73	2.68
New York	1.71	2.13	2.56	2.59
Oklahoma City	1.60	2.28	2.62	2.73
Omaha	1.58	2.16	2.52	2.60
Orlando	1.60	2.29	2.53	2.61
Peoria/Springfield	_	2.27	2.40	2.66
Philadelphia	1.81	2.11	2.49	2.65
Phoenix/Tucson	1.66	2.10	2.27	2.39
Pittsburgh	_	2.21	2.42	2.48
Portland, Oregon	1.62	2.37	2.69	2.82
Providence	1.73	2.11	2.26	2.52
Raleigh/Greensboro	1.49	2.06	2.51	2.57
Richmond/Norfolk	1.51	2.05	2.52	2.59
Roanoke	1.48	2.12	2.54	2.60
Sacramento	1.67	2.18	2.82	2.68
St. Louis	_	2.51	2.48	2.65
Salt Lake City	1.57	2.34	2.65	2.71
San Antonio/Corpus Christi	1.50	2.16	2.28	2.50
San Diego	1.64	2.21	2.68	2.79
San Francisco/Oakland	1.66	2.23	2.66	2.77
Seattle/Tacoma	1.70	2.07	2.52	2.48
South Carolina	1.50	2.09	2.50	2.59
Spokane	1.63	2.03	2.46	2.51
Syracuse	1.39	2.19	2.11	2.33
Tampa/St. Petersburg	1.64	2.28	2.52	2.64
Toledo	_	2.17	2.42	2.58
Tulsa	1.59	2.26	2.62	2.73
West Texas/New Mexico	1.57	2.31	2.79	2.77
Wichita	1.58	2.27	2.60	2.30
U.S. average	1.56	2.21	2.57	2.63

^{— =} Not applicable.

¹Numbers in red indicate WIC contract brand. Average refers to volume-weighted average during the first three quarters. Source: ERS tabulations of InfoScan supermarket data.

Table 5—Infant formula average retail prices: 13-ounce cans of milk-based liquid concentrate in supermarkets by market area, 2000¹

Market area	Carnation	Mead Johnson	Ross
	Dollars per can		
Albany	2.45	2.56	2.38
Atlanta	2.47	2.99	3.11
Baltimore/Washington	2.41	3.10	2.96
Birmingham/Montgomery	2.54	3.15	3.17
Boise	2.60	3.14	3.23
Boston	2.34	2.85	2.92
Buffalo/Rochester	2.44	2.86	2.78
Charlotte	2.43	3.01	3.02
Chicago	2.80	3.30	3.46
Cincinnati/Dayton	2.20	2.71	2.91
Cleveland	2.45	2.76	2.88
Columbus	2.48	2.91	2.99
Dallas/Ft. Worth	2.56	3.11	3.20
Denver	2.38	3.01	2.88
Des Moines	2.51	3.24	3.08
Detroit	2.51	3.14	3.14
Grand Rapids	2.35	2.63	2.92
Green Bay	2.47	3.26	3.27
Harrisburg/Scranton	2.38	2.93	2.91
Hartford/Springfield	2.46	2.98	3.04
Houston	2.41	2.98	3.05
Indianapolis	2.59	2.95	2.91
Jacksonville	2.57	3.02	3.04
Kansas City	2.52	3.19	2.84
Knoxville	2.37	2.94	2.95
Little Rock	2.74	3.48	3.55
Los Angeles	2.56	3.54	3.34
Louisville	2.49	2.86	2.88
Memphis	2.69	3.56	3.63
Miami/Ft. Lauderdale	2.72	3.13	3.15
Milwaukee	2.46	3.33	3.25
Minneapolis/St. Paul	2.45	3.15	3.18
Mississippi	2.52	3.26	3.34

Table 5—Infant formula average retail prices: 13-ounce cans of milk-based liquid concentrate in supermarkets by market area, 2000 (Continued)

Market area	Carnation	Mead Johnson	Ross
		Dollars per can	
Nashville	2.45	3.18	3.16
New England	2.46	2.79	2.66
New Orleans/Mobile	2.61	3.37	3.30
New York	2.40	3.17	3.12
Oklahoma City	2.50	3.11	3.19
Omaha	2.40	3.03	2.84
Orlando	2.72	3.20	3.15
Peoria/Springfield	2.47	3.00	3.09
Philadelphia	2.60	3.03	3.11
Phoenix/Tucson	2.28	2.74	2.80
Pittsburgh	2.37	2.74	2.78
Portland, Oregon	2.72	3.70	3.27
Providence	2.51	2.87	3.03
Raleigh/Greensboro	2.41	2.99	2.96
Richmond/Norfolk	2.41	2.99	2.96
Roanoke	2.44	3.10	2.96
Sacramento	2.37	3.41	3.29
St. Louis	2.65	3.28	3.31
Salt Lake City	2.76	3.39	3.27
San Antonio/Corpus Christi	2.39	2.96	2.93
San Diego	2.55	3.59	3.36
San Francisco/Oakland	2.43	3.13	3.34
Seattle/Tacoma	2.62	3.10	3.03
South Carolina	2.44	3.01	3.09
Spokane	2.31	3.00	3.02
Syracuse	2.42	2.77	2.72
Tampa/St. Petersburg	2.68	3.09	3.12
Toledo	2.49	2.96	3.05
Tulsa	2.53	3.11	3.32
West Texas/New Mexico	2.67	3.34	3.16
Wichita	2.54	3.01	2.95
U.S. average	2.59	3.11	3.09

¹Numbers in red indicate WIC contract brand. Average refers to volume-weighted average during the first three quarters. Source: ERS tabulations of InfoScan supermarket data.

Table 6—Infant formula average retail prices: 14- to 16-ounce cans of soy-based powder in supermarkets by market area, 2000¹

	PBM			
Market area	(Wyeth)	Carnation	Mead Johnson	Ross
	Dollars per 26 reconstituted ounces			
Albany	1.79	2.04	2.32	2.29
Atlanta	1.52	2.03	2.87	2.77
Baltimore/Washington	1.59	2.01	2.87	2.78
Birmingham/Montgomery	1.75	2.11	2.84	2.88
Boise	1.55	2.04	2.65	2.59
Boston	1.79	2.06	2.71	2.62
Buffalo/Rochester	1.60	1.94	2.46	2.38
Charlotte	1.51	2.00	2.84	2.76
Chicago	_	2.21	3.38	3.09
Cincinnati/Dayton	1.51	1.93	2.52	2.56
Cleveland	1.68	2.09	2.77	2.65
Columbus	1.53	1.81	2.79	2.72
Dallas/Ft. Worth	1.63	2.11	2.95	2.89
Denver	1.69	2.10	2.91	2.90
Des Moines	1.75	2.12	3.26	2.84
Detroit	1.55	2.01	2.81	2.79
Grand Rapids	1.46	1.95	2.43	2.44
Green Bay	_	2.09	3.13	3.04
Harrisburg/Scranton	1.55	2.01	2.79	2.70
Hartford/Springfield	1.78	2.09	2.68	2.69
Houston	1.57	2.07	2.83	2.77
ndianapolis	1.62	1.98	2.78	2.54
Jacksonville	1.58	2.09	2.87	2.72
Kansas City	1.62	2.14	3.06	2.86
Knoxville	1.54	1.99	2.80	2.72
_ittle Rock	1.59	2.06	3.09	3.18
₋os Angeles	1.80	2.05	3.14	2.89
_ouisville	1.56	1.96	2.67	2.59
Memphis	1.60	2.10	3.15	3.17
Miami/Ft. Lauderdale	1.69	2.10	2.92	2.73
Milwaukee	1.73	2.13	2.92	3.02
Minneapolis/St. Paul	_	2.05	2.94	2.78
Mississippi	1.49	2.10	2.94	3.03

Table 6—Infant formula average retail prices: 14- to 16-ounce cans of soy-based powder in supermarkets by market area, 2000 (Continued)

	PBM			
Market area	(Wyeth)	Carnation	Mead Johnson	Ross
	Dollars per 26 reconstituted ounces			
Nashville	1.55	1.98	2.83	2.89
New England	1.79	2.09	2.68	2.55
New Orleans/Mobile	1.56	2.14	3.14	2.85
New York	1.75	2.18	2.88	2.70
Oklahoma City	1.64	2.10	3.05	2.91
Omaha	1.66	2.06	2.83	2.75
Orlando	1.66	2.09	2.93	2.78
Peoria/Springfield	1.56	2.10	2.87	2.73
Philadelphia Philadelphia	1.83	2.21	2.82	2.74
Phoenix/Tucson	1.66	1.85	2.48	2.35
Pittsburgh	_	2.19	2.87	2.60
Portland, Oregon	1.64	2.23	3.13	2.94
Providence	1.79	2.13	2.72	2.62
Raleigh/Greensboro	1.53	2.01	2.86	2.74
Richmond/Norfolk	1.58	1.99	2.84	2.76
Roanoke	1.60	2.14	3.00	2.78
Sacramento	1.74	1.99	3.09	2.82
St. Louis	_	2.31	2.86	2.65
Salt Lake City	1.63	2.06	3.06	2.82
San Antonio/Corpus Christi	1.55	2.00	2.66	2.68
San Diego	1.77	2.05	3.05	2.85
San Francisco/Oakland	1.74	2.05	3.01	2.90
Seattle/Tacoma	1.72	2.03	2.84	2.50
South Carolina	1.51	2.07	2.83	2.79
Spokane	1.69	1.91	2.85	2.65
Syracuse	1.58	1.96	2.45	2.39
Tampa/St. Petersburg	1.69	2.09	2.92	2.80
Toledo	1.52	1.91	2.83	2.74
Tulsa	1.66	2.09	2.93	2.93
West Texas/New Mexico	1.71	2.08	3.08	2.93
Wichita	1.58	2.07	2.94	2.81
U.S. average	1.61	2.08	2.90	2.74

^{— =} Not applicable.

¹Numbers in red indicate WIC contract brand. Average refers to volume-weighted average during the first three quarters. Source: ERS tabulations of InfoScan supermarket data.

Table 7—Infant formula average retail prices: 13-ounce cans of soy-based liquid concentrate in supermarkets by market area, 2000¹

Market area	Carnation	Mead Johnson	Ross
	Dollars per can		
Albany	2.33	2.67	2.71
Atlanta	2.36	3.34	3.39
Baltimore/Washington	2.23	3.27	3.26
Birmingham/Montgomery	2.39	3.27	3.31
Boise	2.32	3.34	3.25
Boston	2.39	3.12	2.92
Buffalo/Rochester	2.38	2.89	2.85
Charlotte	2.33	3.30	3.26
Chicago	2.74	3.87	3.59
Cincinnati/Dayton	2.04	3.02	3.11
Cleveland	2.46	3.02	3.01
Columbus	2.31	3.23	3.22
Dallas/Ft. Worth	2.33	3.43	3.39
Denver	2.37	3.20	3.19
Des Moines	2.22	3.66	3.49
Detroit	2.26	3.27	3.29
Grand Rapids	2.22	3.04	3.04
Green Bay	2.18	3.56	3.58
Harrisburg/Scranton	2.15	3.08	3.16
Hartford/Springfield	2.50	3.20	3.20
Houston	2.13	3.23	3.25
Indianapolis	2.53	2.96	2.96
Jacksonville	2.39	3.28	3.29
Kansas City	2.24	3.52	3.36
Knoxville	2.24	3.25	3.21
Little Rock	2.44	3.77	3.80
Los Angeles	2.31	3.60	3.47
Louisville	2.48	3.13	3.08
Memphis	2.38	3.81	3.85
Miami/Ft. Lauderdale	2.52	3.38	3.35
Milwaukee	2.31	3.60	3.46
Minneapolis/St. Paul	2.29	3.30	3.34
Mississippi	2.34	3.45	3.57

Table 7—Infant formula average retail prices: 13-ounce cans of soy-based liquid concentrate in supermarkets by market area, 2000¹

Market area	Carnation	Mead Johnson	Ross
		Dollars per can	
		•	
Nashville	2.26	3.31	3.41
New England	2.32	3.13	2.85
New Orleans/Mobile	2.36	3.62	3.65
New York	2.49	3.36	3.15
Oklahoma City	2.34	3.41	3.38
Omaha	2.25	3.34	3.06
Orlando	2.49	3.35	3.35
Peoria/Springfield	2.44	3.22	3.27
Philadelphia	2.56	3.26	3.26
Phoenix/Tucson	2.38	3.05	2.93
Pittsburgh	2.39	3.03	3.03
Portland, Oregon	2.75	3.60	3.45
Providence	2.57	3.26	3.04
Raleigh/Greensboro	2.33	3.29	3.23
Richmond/Norfolk	2.30	3.29	3.24
Roanoke	2.33	3.43	3.26
Sacramento	2.42	3.64	3.45
St. Louis	2.64	3.34	3.27
Salt Lake City	2.37	3.72	3.63
San Antonio/Corpus Christi	2.26	3.05	3.20
San Diego	2.31	3.59	3.36
San Francisco/Oakland	2.40	3.44	3.54
Seattle/Tacoma	2.34	3.41	3.30
South Carolina	2.31	3.29	3.31
Spokane	2.02	3.23	3.30
Syracuse	2.53	2.88	2.87
Tampa/St. Petersburg	2.39	3.37	3.36
Toledo	2.29	3.22	3.27
Tulsa	2.38	3.47	3.41
West Texas/New Mexico	2.45	3.50	3.46
Wichita	2.21	3.34	3.16
U.S. average	2.43	3.35	3.29

¹Numbers in red indicate WIC contract brand. Average refers to volume-weighted average during the first three quarters. Source: ERS tabulations of InfoScan supermarket data.