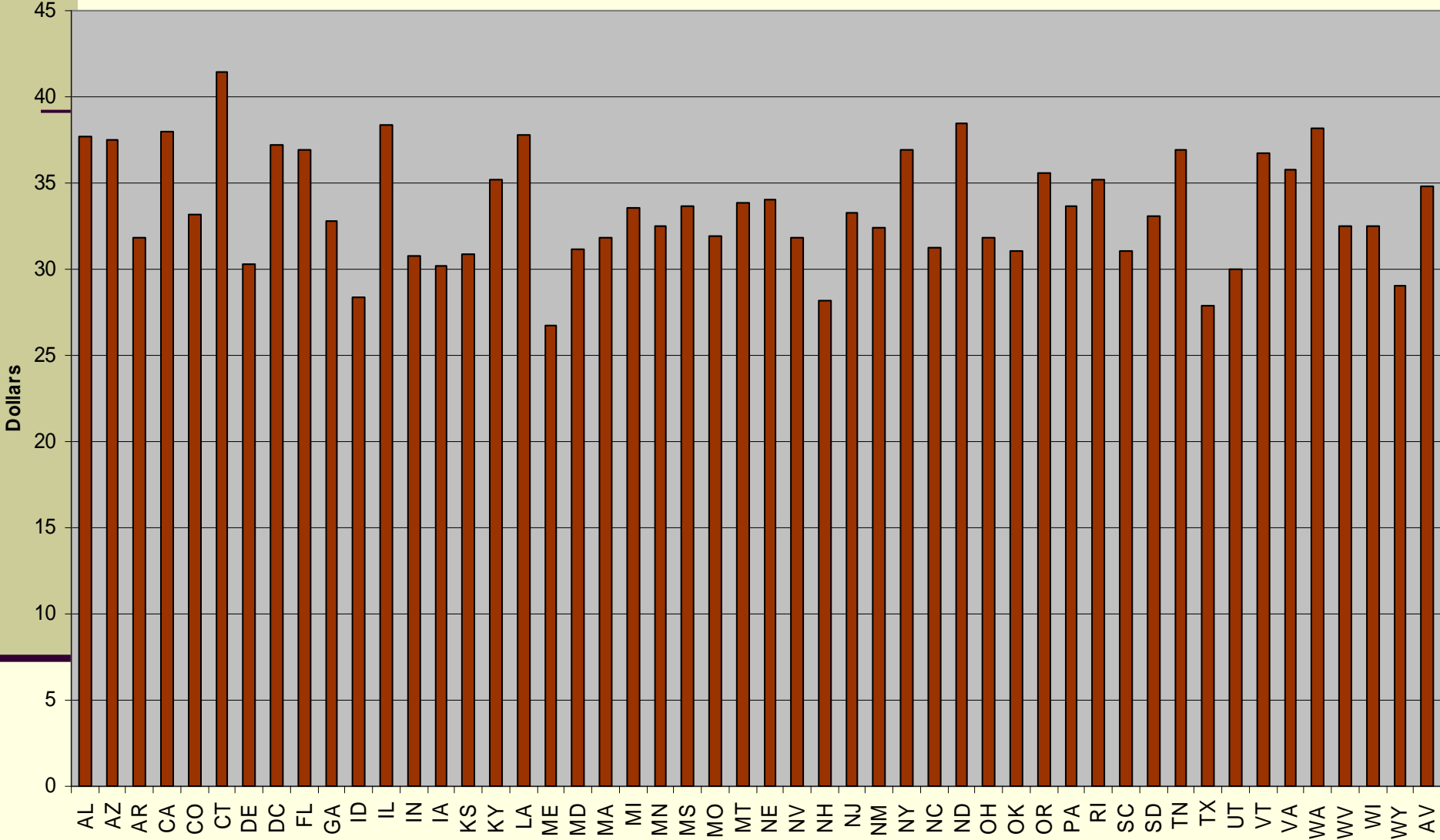


# The Impact of Food Price Variation on WIC Food Costs

*Ephraim Leibtag, PhD  
ERS-USDA  
presented at  
The National WIC Association  
18th Annual Washington Leadership Conference*

March 9, 2008

# Average monthly food cost per participant, FY 2002



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# The Issue

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- Average WIC package costs vary by state
- What impact does regional price variation have on these differences?
- Regional differences in food prices imply that different states may be able to get more or less from a marginal dollar given existing food price variation.

# Other Sources of Package Cost Variation

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- The Mix of Participants Varies
  - Some Food Packages are more expensive than others
- Food Redemption Rates May Vary
  - Quantities Vary
- Preferences for Brand/Flavor/Package Sizes May Vary
- Cost-Containment Practices Affect Acceptable Brands and Sizes

# What Prices?

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- Inflate Old Survey Data
  - How old is too old?
- BLS AP/CPI Micro Data
  - Sample size, geographic coverage concerns
- Store-Level Scanner Data
  - Which stores?
- Household-Based Scanner Data
  - Demographics, but not perfect

# BLS Average Price Data

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- Statistically sound sample, but only national and regional prices
- No market-level or demographic-level information
- Limited food product coverage

# Nielsen Homescan Panel

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- Price and quantity purchased by households
  - Observed on a daily basis
- Market level data with 50 U.S. markets during the years 1998 to 2006
  - Traditional supermarkets and grocery stores
  - Discount retailers, warehouse stores, supercenters
  - Drug and convenience stores

# Why regional price differences?

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- Demand-side Differences
- Differences in Distribution Costs
- Differences in Operating Costs
- Differences in Retail Market Competition Levels

# Nontraditional retailers lower food prices, but increase price variation



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# Dairy prices lower at nontraditional retailers

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- Milk – 5.7% Lower
- Egg – 18.6% Lower
- Butter and Margarine – 8.9% Lower
- Cheese
  - Hard Cheeses — 8.6% Lower
  - Soft Cheeses — 16.5% Lower
  - Random Weight Cheeses — 12.6% Lower
- Yogurt — 16.2% Lower
- Ice Cream — 3.8% Lower

# Popularity of nontraditional formats varies by region

	Northeast	Midwest	South	West
1998	16%	16%	20%	19%
1999	17%	18%	23%	20%
2000	18%	20%	27%	23%
2001	20%	22%	30%	24%
2002	21%	26%	34%	28%
2003	22%	28%	35%	30%
2004	23%	30%	39%	34%
2005	24%	32%	41%	34%

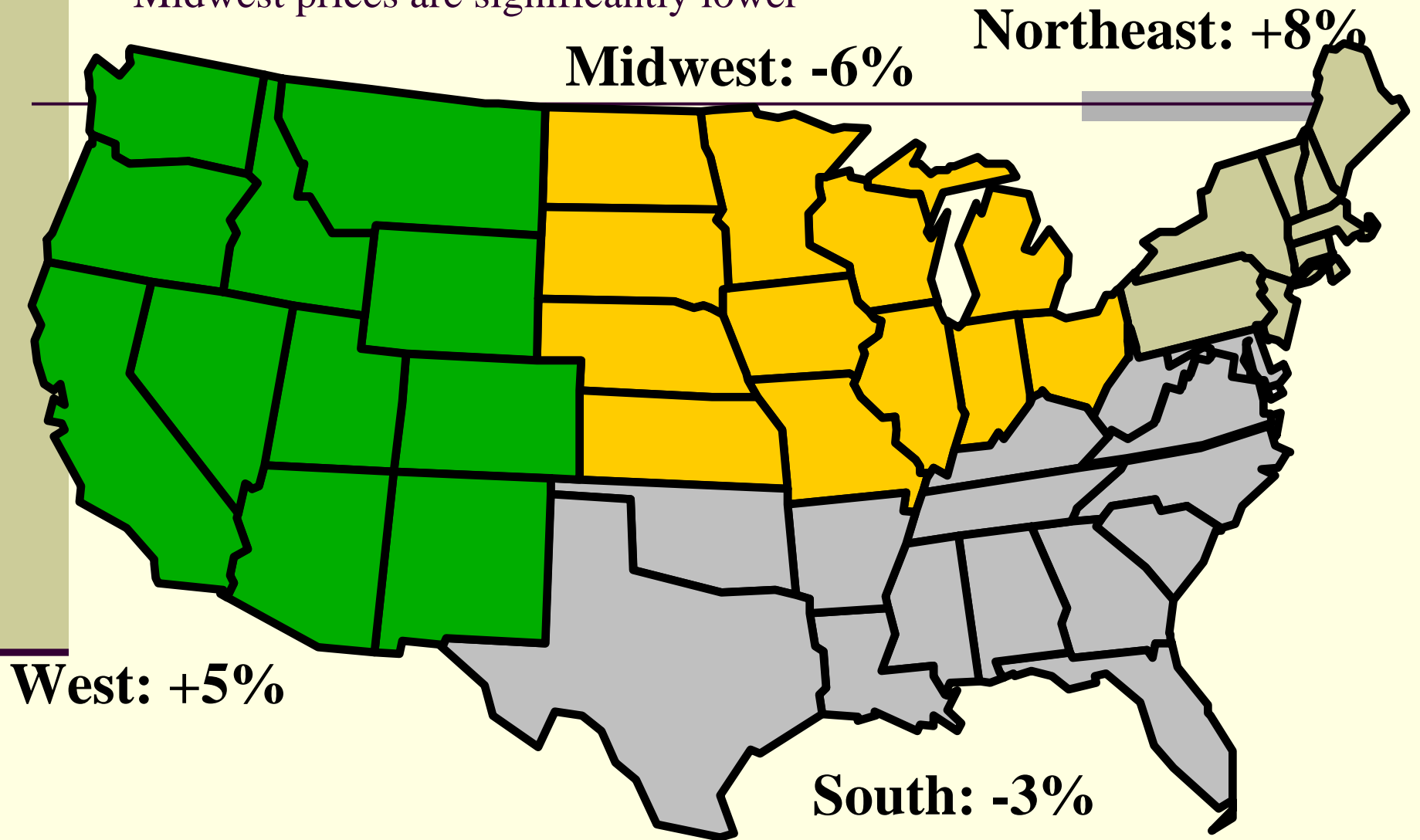
Source: ERS Calculations using Nielsen Homescan Data

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# Regional average price examples

1998-2003	Extra Large Eggs	Skim Milk	American Cheese
Northeast	\$1.14	\$2.42	\$2.81
Midwest	\$0.92	\$2.21	\$2.58
South	\$1.01	\$2.54	\$2.74
West	\$1.26	\$2.15	\$3.24

Northeast food prices significantly above the national average, while  
Midwest prices are significantly lower



Source: ERS calculations using Bureau of Labor Statistics' average price data and Nielsen Homescan, 1998-2007.

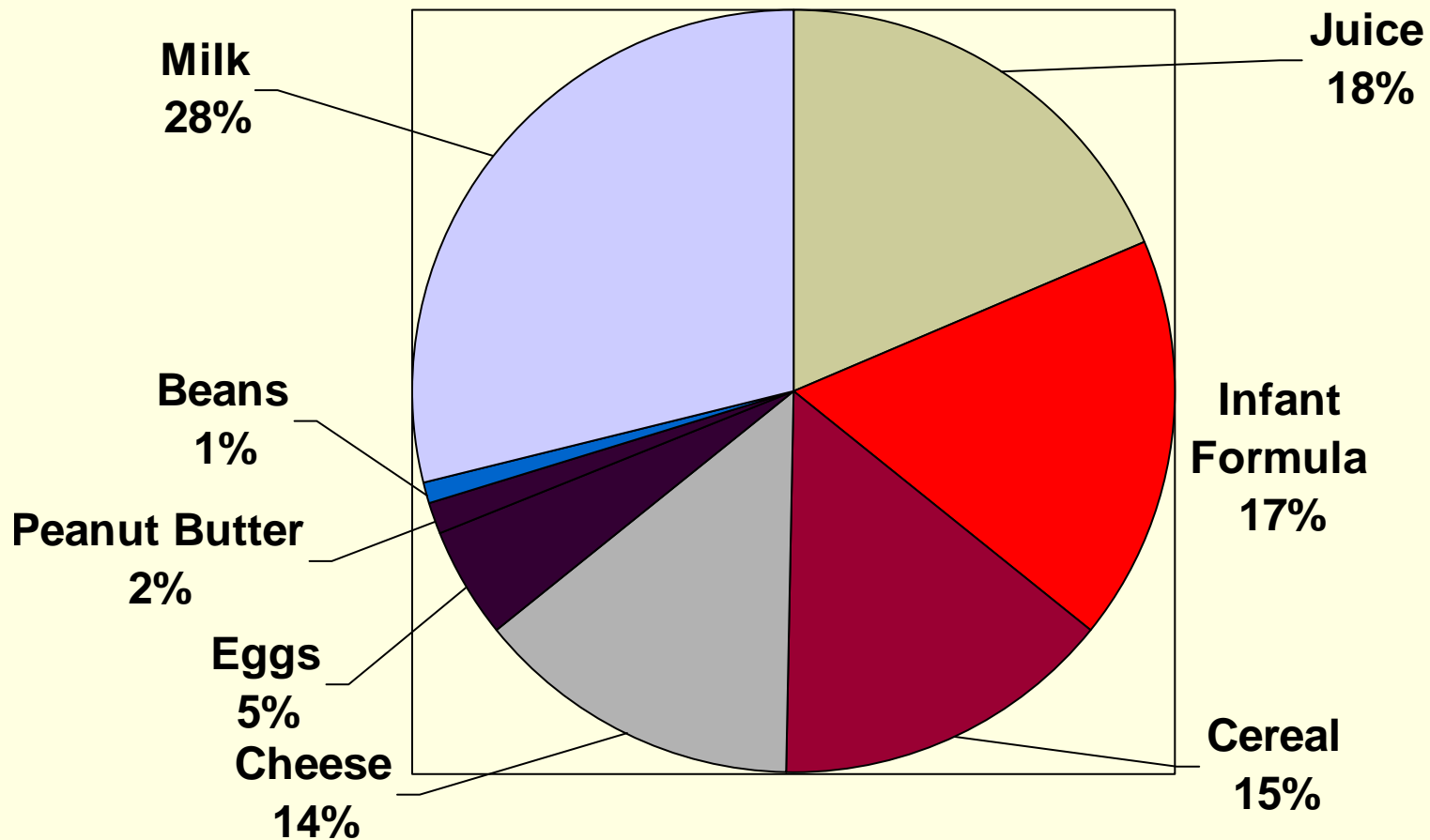
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# Regional Price Variation for WIC

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- Use BLS AP data for 2007 (if available)
- Average annual price by region
- Percent difference from national average
- Current WIC items
- Selected fruits and vegetables

# Share of WIC Package Food Costs



Source: FNS Food Package Costs and Rebates Summary, FY05

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# WIC Regional Price Variation (a)

2007 Average Prices	Milk	Eggs	Cheese
Northeast	-1.4%	<b>29.2%</b>	<b>12.5%</b>
Midwest	<b>-9.7%</b>	-4.8%	-3.1%
South	<b>11.4%</b>	<b>-7.1%</b>	0.5%
West	<b>-8.9%</b>	<b>-14.3%</b>	<b>-9.9%</b>

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# WIC Regional Price Variation (b)

	Tuna (1997)	Orange Juice (1999)	Peanut Butter (2001)
Northeast	1.0%	<b>6.1%</b>	3.1%
Midwest	2.5%	0.6%	<b>-17.9%</b>
South	<b>-5.5%</b>	-1.1%	<b>-6.2%</b>
West	<b>6.0%</b>	<b>8.9%</b>	<b>9.7%</b>

# Fruit Regional Price Variation

	Apples	Oranges	Strawberries
Northeast	<b>10.7%</b>	<b>6.8%</b>	3.1%
Midwest	-3.6%	1.8%	4.7%
South	<b>6.2%</b>	<b>-7.3%</b>	0.8%
West	<b>12.5%</b>	0.9%	<b>-10.9%</b>

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# Vegetable Regional Price Variation

	Iceberg Lettuce	Romaine Lettuce	Tomatoes	Broccoli
Northeast	<b>19.4%</b>	NA	<b>9.1%</b>	NA
Midwest	<b>-12.9%</b>	<b>14.9%</b>	<b>-6.1%</b>	-3.1%
South	-2.2%	<b>-6.7%</b>	<b>-5.5%</b>	<b>-5.0%</b>
West	-4.3%	<b>-19.4%</b>	3.6%	-4.4%

# Regional Variation Summary

	Current WIC	Fruits and Vegetables
Northeast	<b>8.4%</b>	<b>9.8%</b>
Midwest	<b>-5.4%</b>	-0.6%
South	-1.3%	-2.8%
West	-1.4%	<b>-6.7%</b>

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# Implications

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- Should investigate the feasibility of cross-market, or at least, regional adjustment to expected budget allotments based on food price variation.
- Fruit and Vegetable Voucher Adjustments?
- Political considerations...
- But if it works for salaries, then why not?

# Questions

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# Contact Information

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<http://www.ers.usda.gov/Publications/FANRR41/>