

Producer Price Indexes for Retail Trade

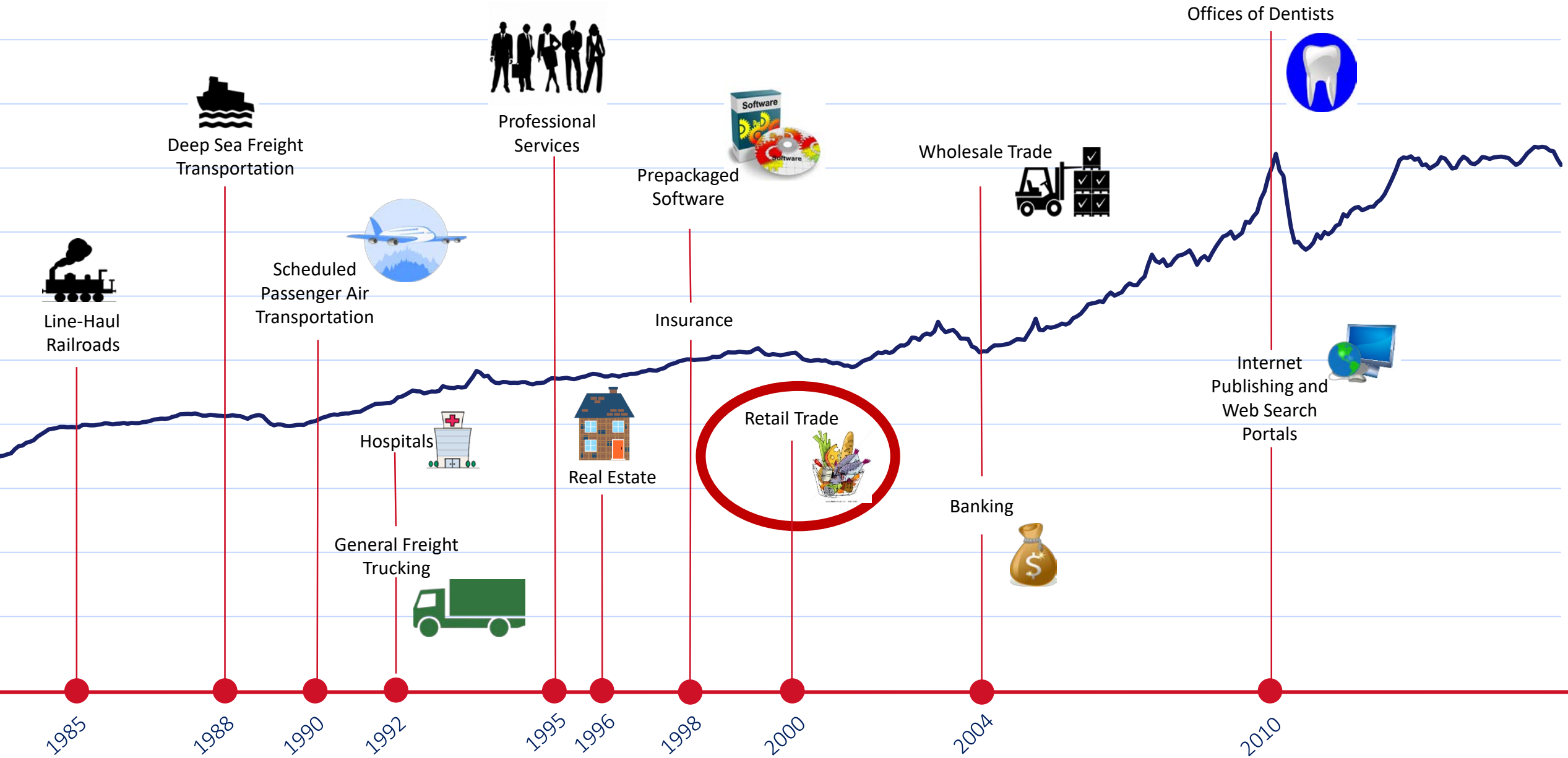
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Producer Price Index

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Services PPIs



Primary Output and Current Coverage

- Retail output: providing all of the necessary marketing functions to allow the general public to access and purchase various products.
 - ▶ Retail functions: Selling and promoting, bulk breaking, warehousing, and providing market information.
- Current coverage: 87.3%
 - ▶ A few very small retail industries with declining revenue are no longer covered

Preferred Price

Comparable product lines are groupings of related products that are distributed under a similar set of conditions.

Standard guidelines

- ▶ Classified within a single product category
- ▶ Displayed and/or marketed in a similar manner
- ▶ Located in the same area or department of the store

Preferred Price (continued)

■ Type of Price

- ▶ Average margin prices for a broad comparable product line
- ▶ Average margin prices for a narrow comparable product line
- ▶ Average margin prices for a specific product – not preferred

■ Price Level

- ▶ Nation-wide prices
- ▶ Regional prices
- ▶ Single location prices



Broad Product: Margin Price Example

Grocery store. Product: **All produce**. Produce department. **Census product category**: Groceries and other food items for consumption off the premises. **Nation-wide average price**.

Margin calculation:	May	June
Average retail price:	\$4.29	<u>\$4.40</u>
Average replacement cost:	\$3.52	<u>\$3.55</u>
Average margin price per unit:	\$0.77	<u>\$0.85</u>

Margin price increase of 10.3% in June

NOTE: No quantities specifically collected from respondent

Quality Adjustment – Beer, Wine, and Liquor Stores

■ Linear model

- ▶ dependent variable= margin percentage

■ Store specific independent variables

- ▶ square footage
- ▶ number of checkouts
- ▶ full-time employees
- ▶ number of different wines or beer carried
- ▶ conducts product testing
- ▶ classes offered
- ▶ local deliveries offered

■ Control variables - population differences, income level within the county, and number of liquor stores in the county

Quality Adjustment – Results

- Models were developed and updated annually from 2004-2015
- Majority of stores rarely changed store characteristics while margin prices change significantly
- Units providing average margin prices across locations were not used
- **Model discontinued** due to:
 - ▶ high respondent and PPI resource burden
 - ▶ infrequent store characteristics changes
 - ▶ model's limited ability to estimate quality adjustments
 - ▶ quality adjustments typically had no effect on industry level price change

New Data Collection Effort Underway

- Pilot program underway to collect more granular margin price data directly from a small number of large wholesale trade companies
- Ideally companies submit data files monthly through the BLS secure web-based data collection facility (already in place for some service industries)
- Other ways to submit data files may need to be explored if uploading of data files is not possible



Corporate Data File Item Example

Category: Fresh Fruits and Vegetables

Product ID (UPC, SKU.)	Store ID	Item Description	Unit of size	Quantity	Unit Price	Unit Cost	Margin price
51067	A	Tomatoes	Case	10	29.90	12.50	\$17.40
061075	B	Tomatoes	Case	25	32.00	13.00	\$19.00
62259	B	Cucumber	case	50	99.00	69.00	\$30.00
51049	B	Lettuce	head	100	1.29	0.79	\$0.50
53057	B	Salad kit	single	50	4.09	2.99	\$1.10
56665	A	Strawberries	basket	50	3.25	2.99	\$0.26
52238	B	Corn	single	25	0.99	0.52	\$0.47
65456	B	Baby carrots	bag	10	1.99	1.53	\$0.46
51246	A	Oranges	per lbs.	200	0.69	0.52	\$0.17
51028	A	Bananas	per lbs.	200	0.99	0.57	\$0.42

Corporate Data Collection Pilot

- If this data collection method can be employed more globally.....
 - ▶ Improves accuracy by expanding survey coverage of firm's activities (more robust)
 - ▶ Robust/granular data may allow publication at a more detailed product line level
 - ▶ Resource efficiencies – potential for data to be shared across price programs
 - Note: Acquisition prices may be more difficult to get from companies
 - ▶ Reduces respondent burden
 - ▶ Real-time product volume/weights
 - ▶ Quantity data for our sample may not be robust enough for an outlet substitution bias study – alternative data better for this

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