

U.S. Bureau of Labor Statistics



Construction Data Statistics: An Overview

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Presentation Outline

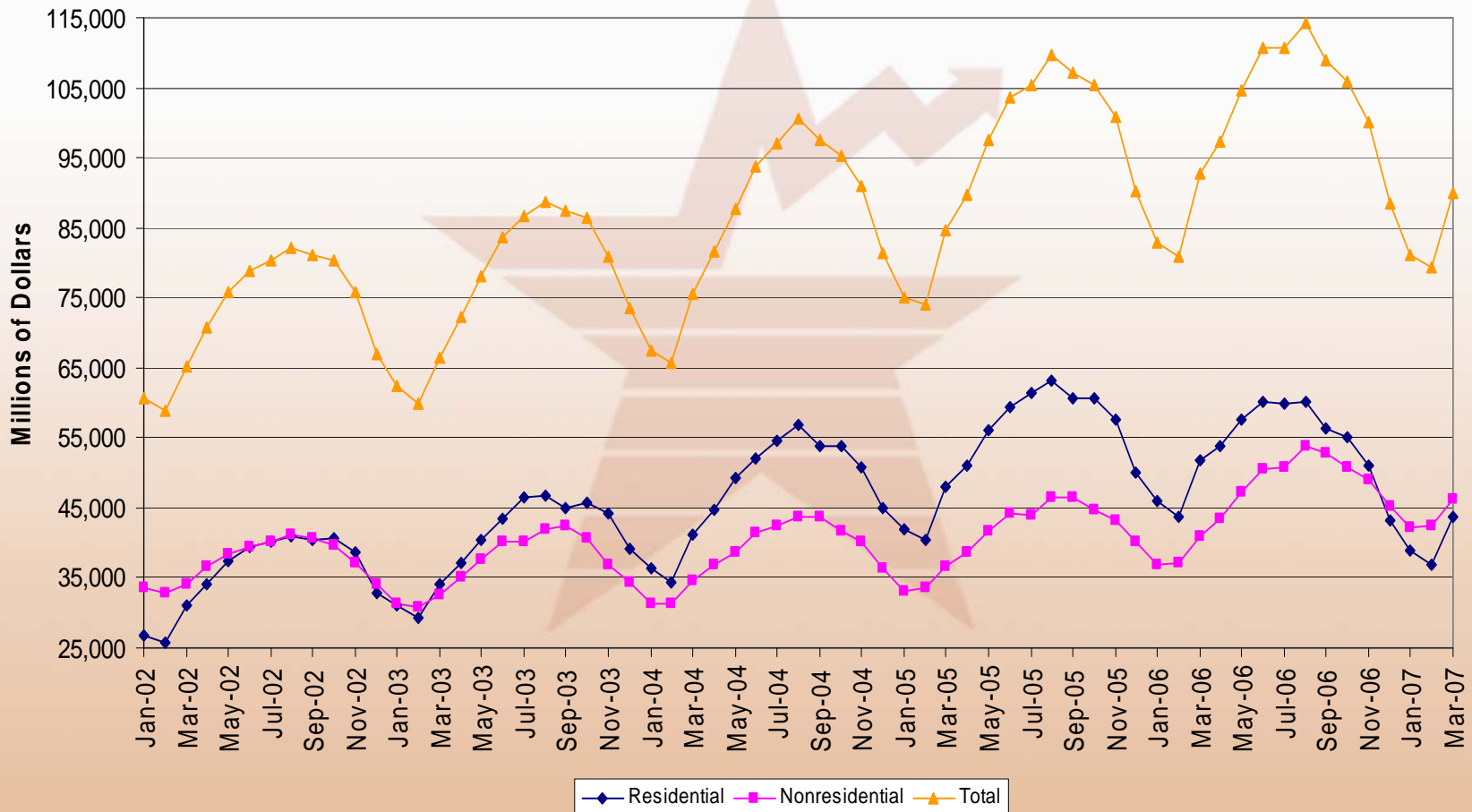


- Construction Trends
- Construction Data available from BLS
- Construction Data available from other sources

Trends in Construction Spending



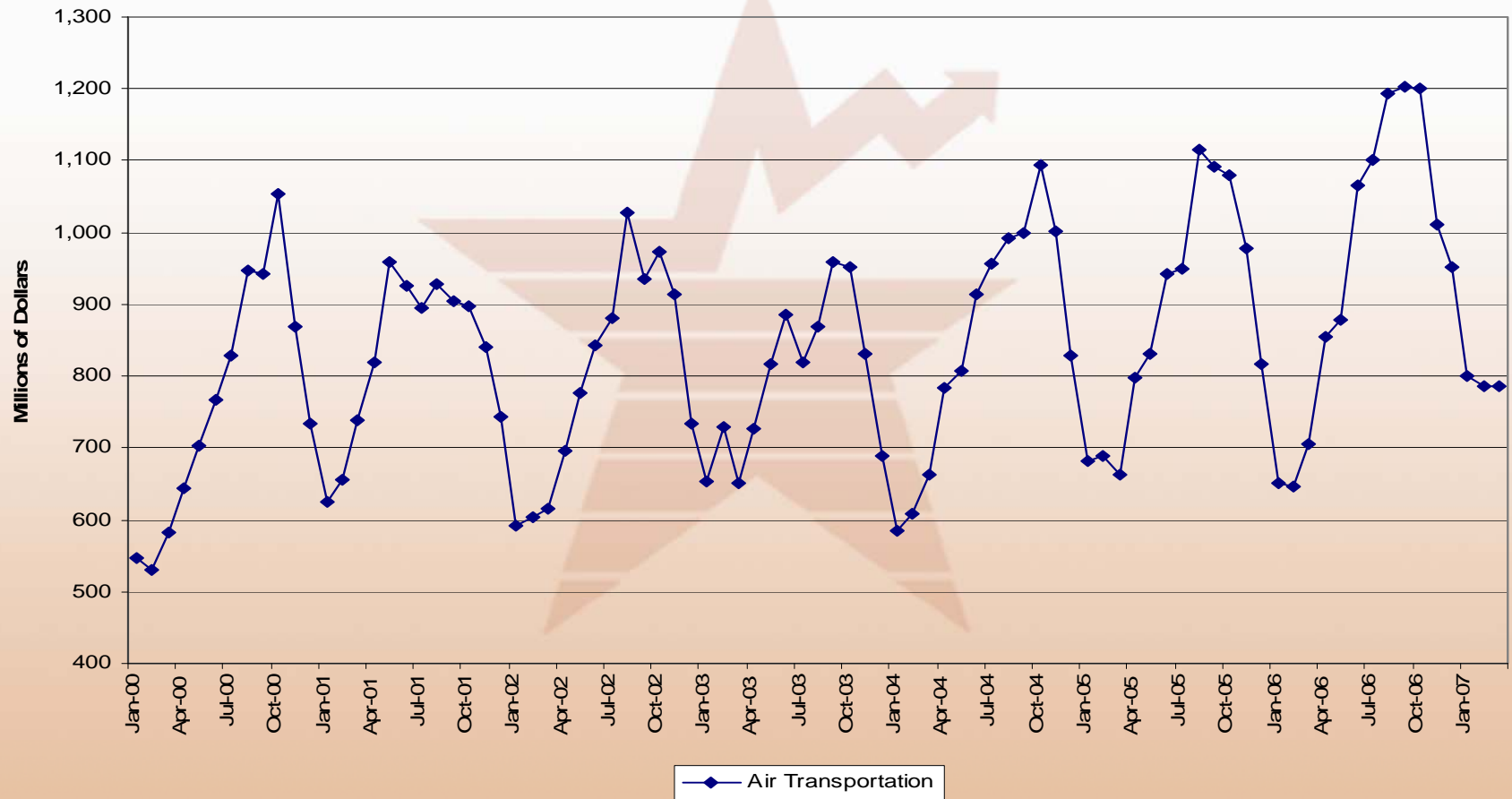
U.S. Census Total Value of Construction Spending-NSA



Airport Construction Spending



U.S. Census Air Transportation Construction Spending-NSA



Construction input costs

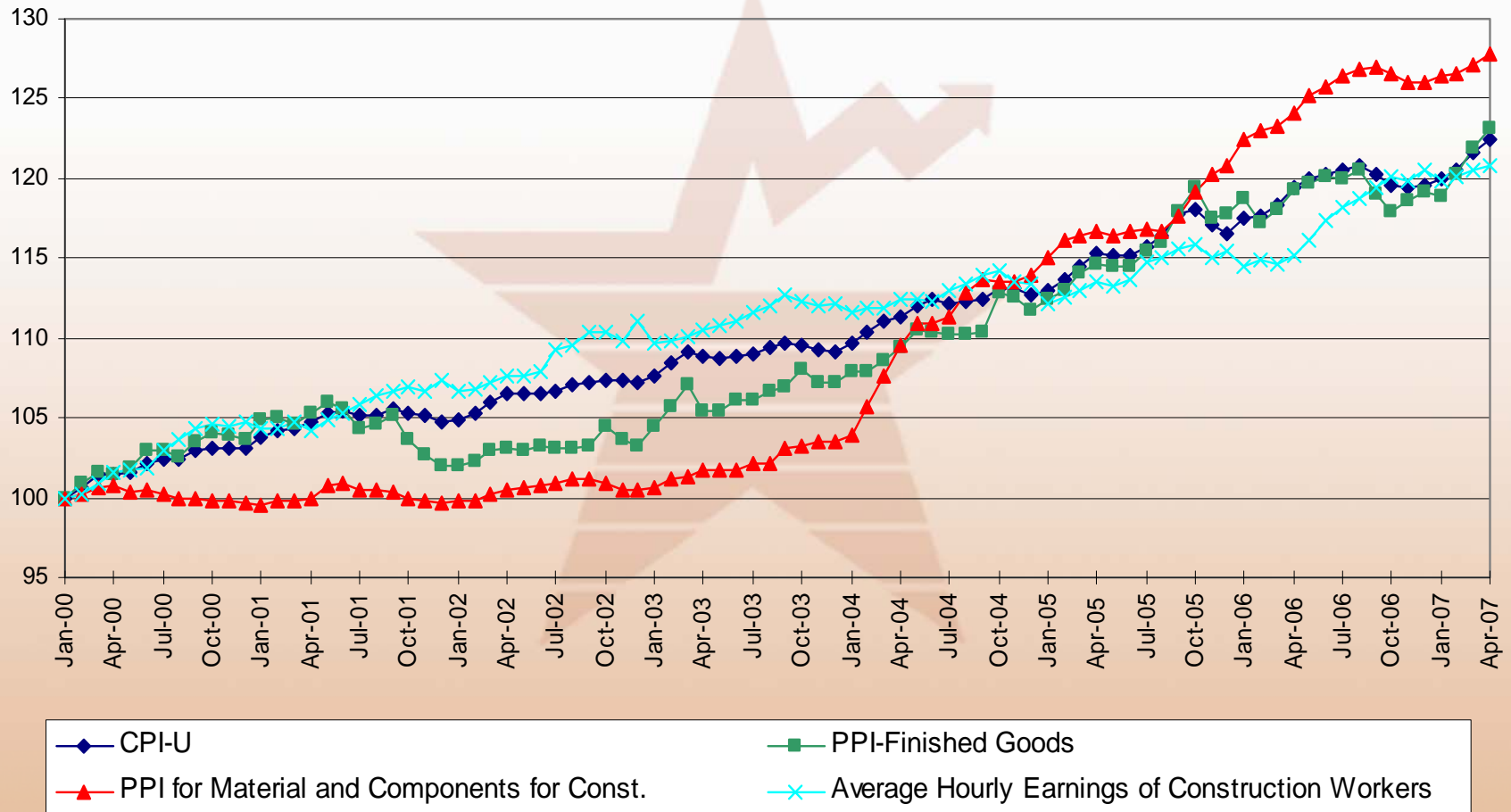


- Generally speaking, material costs represent the majority of total construction costs (excluding land, permitting, engineering services, etc.)
- Recently, material costs have been more volatile and have risen faster than consumer, producer, or wage inflation

Inflation Trends



Comparison of CPI-U, PPI-Finished Goods, and PPI-Construction Materials, and Avg Construction Wage



BLS Overview



- Mission: The U.S. Bureau of Labor Statistics (BLS) is the principal fact-finding agency for the Federal Government in the broad field of labor economics and statistics. BLS is an independent national statistical agency that collects, processes, analyzes, and disseminates essential statistical data for a variety of users.
- Web site: www.bls.gov

BLS Construction-related data



- Across several major statistical program areas, BLS publishes data on current and historical price trend for various construction material and labor inputs
- These data may be used in developing capital plans or as benchmark measures to track on-going projects/operations

BLS Data availability



- Some data available at the regional, state, or local level
- Some data available only at the national level
- Some data generally published monthly
- Some data published less frequently

BLS Construction Material Cost Data—Producer Price Index



- The **Producer Price Index** (PPI) is a family of indexes that measures the average change over time in selling prices received by domestic producers of goods and services. (Index movement generally represents **national average** changes.)
- Indexes are **published monthly** covering a large variety of construction inputs including: Asphalt felts and coatings, concrete block and brick, concrete pipe, ready-mixed concrete, gypsum products, steel mill products, copper and brass mill shapes, prefabricated metal buildings, and much more.
- **Web:** www.bls.gov/ppi

PPI Scope & Uses



- PPI is a voluntary monthly survey
- Covers more than 600 industries
 - 488111 – Scheduled Passenger Air Transportation
 - 488119 – Other Airport Operations
 - 488190 – Other Support Activities for Air Transportation
- Includes over 25,000 firms
- Tracks about 110,000 good & services
- Publishes more than 8,000 indexes monthly
- Uses:
 - Economic Indicator
 - GDP Deflator
 - Contract Escalator

Selected Aggregate PPIs



PPI Index	BLS Series ID	March 2006 – March 2007
Finished Goods	WPUSOP3000	+3.2%
Intermediate materials, supplies, and components	WUPSOP2000	+3.5%
Crude materials for further processing	WUPSOP1000	+15.6%
Materials and components for Construction	WPUSOP2200	+3.0%

Selected Construction Material PPIs



PPI Index	BLS Series ID	March 2006 – March 2007
Ready-mixed Concrete	WPU1333	+5.8%
Precast concrete products	WPU1334	+5.1%
Copper and brass mill shapes	WPU102502	+25.5%
Aluminum mill shapes	WPU102501	+7.7%
Cement	WPU1322	+4.6%
Diesel fuel	WPU057303	+6.6%
Lumber and plywood	WPUSI004011	-10.2%
Fabricated Steel Plate	WPU1076	+14.1%
Copper pipe and tube	WPU0314	+26.5%
Electric wire and cable	WPU10260301	+16.8%
Flat Glass	WPU1311	+2.1%
Steel Mill products	WPU1017	+13.1%
Asphalt paving mixtures & blocks	WPU136	+19.1%
Gypsum products	WPU137	-4.0%

Nonresidential Building PPIs



PPI Index	BLS Series ID	(Introduction) – March 2007
New Warehouse Building Construction	PCU236221236221	(Jan 2005) +17.8%
New School Building Construction	PCU236222236222	(Jan 2006) +17.4%
New Office Building Construction	PCU236223236223	(July 2006) +6.6%
New Mfg & Industrial Building Construction	PCU236211236211	(Jan 2008)

Nonresidential Building PPIs: Methodology



- Follow a unique index methodology
- Applies Model-based pricing approach
- Uses professional cost-estimating firm to develop model buildings
- Uses models developed for distinct geographic regions (N, S, W, and MW)
- Models based on actual recent projects

Nonresidential Building PPIs: Methodology



- Models represent 'typical' construction for each building type in each region
- Models fully specify the materials, labor, and equipment necessary to construct the building
- Models specified using current construction materials, methods, techniques, and codes
- Combines secondary-source data with directly collected data to achieve output price

Nonresidential Building PPIs: Analysis



- Material Costs—Rising two to three times faster than installation costs
 - Represent about 60-65% of total input costs
 - Rising Plastic material Prices
 - Rising Concrete Prices
 - Rising Steel, Copper, and Aluminum prices

- Installation Costs
 - Represent about 35-40% of total input costs
 - Rising labor costs
 - Rising fuel costs

- Changes in contractor OH&P
 - About 5% of contractors report changes each month
 - Increases outnumber decreases
 - Seasonal pattern evident

Nonresidential Building PPIs: Potential Use & Additional Info



- May be used as 'benchmark' measures of national-average construction cost inflation trends for total building projects
- Additional information: www.bls.gov/ppi/ppinrbc

BLS Wage Data



- The **Earning by Industry** data from the **Current Employment Statistics (CES)** survey include series for average hourly earnings, average weekly hours, average weekly earnings, and average weekly overtime hours in manufacturing industries.
- Industries covered include: poured concrete contractors, steel and precast concrete contractors, framing contractors, roofing contractors, electrical contractors, plumbing/HVAC contractors, and many others. Hours and earnings data are **published monthly** and available for about 850 industries. **All figures are national averages**
- **Web: www.bls.gov/ces**

BLS Wage Data



- The **National Compensation Survey (NCS)** makes it easy to find information on occupational wages paid in or near your area. (In contrast the CES data is by industry instead of occupation.) Data is **published annually** and include:
 - Average hourly wages for over 800 occupations in approximately 80 metropolitan and selected non-metropolitan localities
 - Weekly and annual earnings and hours for full-time workers
 - Earnings by work level that permit wage comparisons across occupational groups
 - Occupations covered include: carpenters, carpenter apprentices, drywall installers, electricians, electrician apprentices, etc.
- **Web: www.bls.gov/ncs**

BLS Wage Data



- The **Quarterly Census of Employment and Wages (QCEW)** program **publishes a quarterly** count of employment and wages reported by employers covering 98 percent of U.S. jobs, available at the county, MSA, state and national levels by industry.
- Average weekly wages for industries below the national level (state and county) are generally only available annually.
- Industries covered include: poured concrete contractors, steel and precast concrete contractors, framing contractors, roofing contractors, electrical contractors, plumbing/HVAC contractors, and many others.
- Web: www.bls.gov/cew

Other sources of Construction Statistics: Public Sector



- **U.S. Census Bureau:** www.census.gov – The Census Bureau provides monthly data on construction put in place for various types of construction.
- **Bureau of Economic Analysis (BEA):** www.bea.gov -- This site provides gross domestic product (GDP) information by industry as well as other data. Data on total output for construction and air transportation is available.
- **Bureau of Transportation Statistics (BTS):** www.bts.gov – The BTS provides economic data related to the services that airports provide. For example, indexes for the cost of air travel, statistics related to the frequency of delayed or cancelled flights.
- **Federal Aviation Administration (FAA):** www.faa.gov – The information provided by this site is similar to that provided by the BTS site. It also includes information about the construction of airports including design standards.

Other sources of Construction Statistics: Trade Groups



- **American Road and Transportation Builders Association (ARTBA):** www.artba.org – ARTBA is an advocacy group made up of private firms as well as public agencies and associations. The website has an ‘economics and research’ section that gives data on total value of contracts awarded for airport construction. The site also analyzes how factors like regulation and federal budgets impact the transportation industry.
- **Associated General Contractors of America (AGC):** www.agc.org – Trade group which publishes a variety of industry-related information including the Data DIGest. It is a one-page summary of the week's economic news, plus implications for construction segments.

Other sources of Construction Statistics: Private Sector



- **Turner Construction Company:** www.turnerconstruction.com – Turner publishes a quarterly cost index for overall construction activity
- **Engineering News Record (ENR):** www.enr.construction.com – ENR is a construction industry publication which periodically includes construction industry data and statistics.
- **McGraw-Hill Construction:** www.dodge.construction.com - Offers a wide range of construction industry data.
- **Reed Construction Data:** www.reedconstructiondata.com - Offers a wide range of construction industry data.