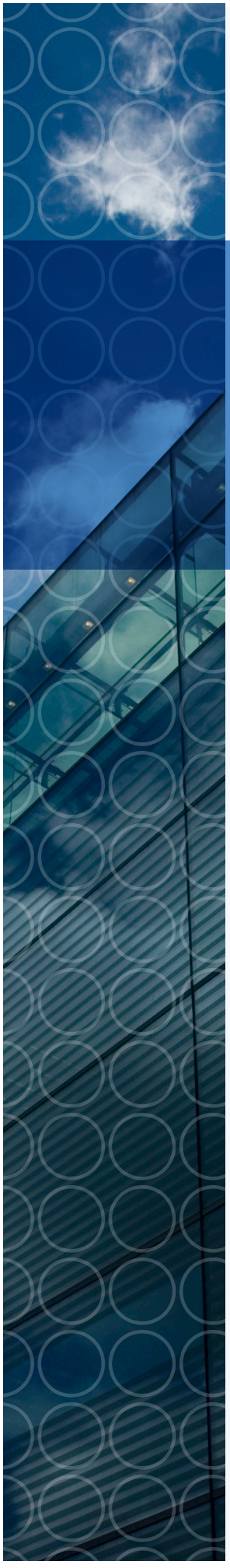


Ceridian-UCLA Pulse of Commerce Index®

By UCLA Anderson School of Management

December 13, 2011

CERIDIAN

UCLA Anderson
School of Management

Pulse of Commerce Index Increased 0.1 Percent in November Compared with November 2010, the PCI is Up 0.9 Percent

The Ceridian-UCLA Pulse of Commerce Index® (PCI®), issued today by the UCLA Anderson School of Management and Ceridian Corporation rose 0.1 percent in November following the 1.1 percent increase in October.

The combined effect of the positive October and November data was not enough to offset the summer weakness. Over the last three months, the PCI declined at an annualized rate of 4.8 percent compared with the preceding three months. On a year-over-year basis the November PCI was only 0.9 percent above last year.

The continuing weakness in the PCI is out-of-sync with real retail sales. The year-over-year increase in real retail sales through October was 3.6 percent compared with an increase in the PCI of 1.3 percent. This suggested that November could be a big catch-up month for the PCI, but it did not materialize. An examination of the daily data did not uncover any clear trend within the month of November, which was consistently 1 percent better than November last year.

These strong retail sales were, to some extent, a result of aggressive price cutting, which would tend to make December sales weaker, and if the rate of sales continues, the combination of strong sales growth and weak inventory growth suggests that retailers will have greater pricing power this December and less unsold inventory. This sequence of events may suggest that retailers have learned to better manage their inventory, explaining the disconnect between the PCI and real retail sales numbers. Shoppers can then anticipate fewer bargains in the month ahead, and relatively little stock left for the after-Christmas sales. Although real retail sales in December may be constrained by low inventories, the season could turn out great for the bottom line of retailers since higher prices may more than offset lower volume. It will also be important to keep an eye on December's daily data to confirm whether or not a new holiday seasonal pattern of last minute inventory stocking has formed, as experienced in December 2010 and 2009.

An alternative way of realigning retail sales and inventories measured by the PCI would have been for retail sales to weaken in November, but the media reports regarding Black Friday sales indicate the exact opposite has occurred.

Ceridian-UCLA Pulse of Commerce Index, November 2011 Data
Released December 13, 2011

Index Value, (2007=100)	Sep-11	Oct-11	Nov-11
Seasonal and Workday Adjusted	**93.63**	**94.71**	**94.83**
Unadjusted Index	93.70	96.78	92.41
Month-to-Month Growth	-1.0%	1.1%	0.1%
Annualized Growth Rates, Adjusted Index			
Three-Month v. Previous Three Months	**-4.3%**	**-5.8%**	**-4.8%**
Year-Over-Year	-0.2%	1.3%	0.9%

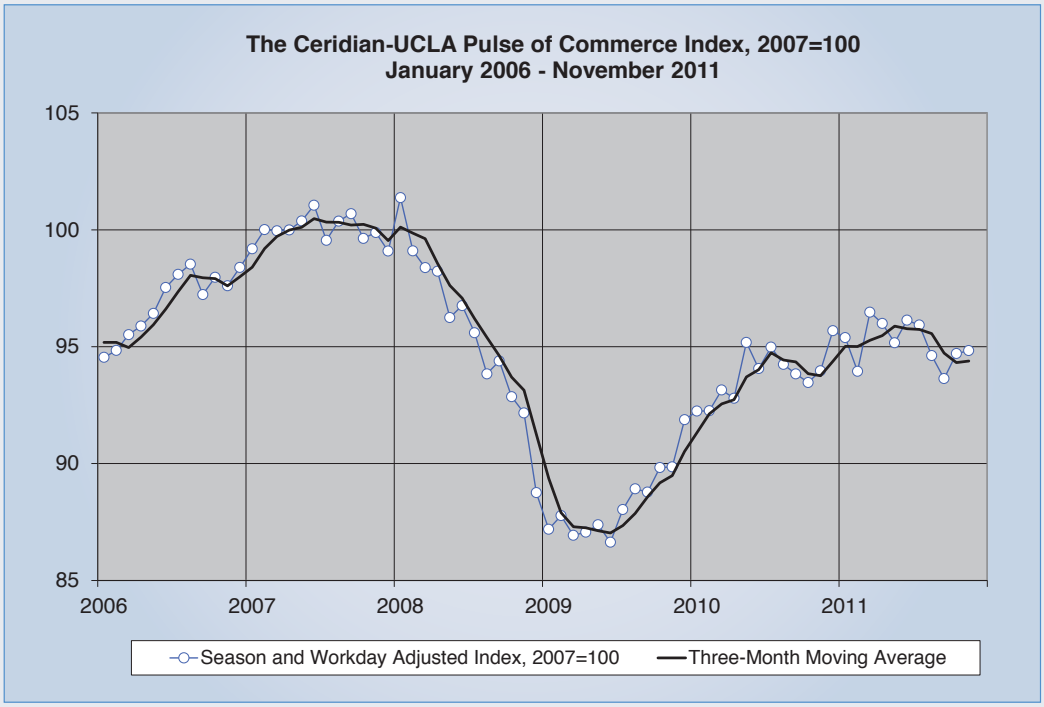
Revised seasonal and workday adjustment through 2010q12
Workday adjustment depends on monthly fractions of weekend days.
Seasonal adjustment using X12

With two months of PCI information now available for the fourth quarter, we are getting a not-too-rosy picture of fourth quarter GDP growth. Last month we wrote:

> *"Given the weak PCI, the advance estimate of third quarter GDP growth of 2.5 percent was surprising, but the final estimate may be lower. The PCI measures inventories in motion, and it is noteworthy that the inventory component of GDP contributed minus 1.1 percent to the overall 2.5 percent growth rate. In other words, if there had been no negative contribution of inventories, the growth rate would have been a healthy 3.6 percent. The positive growth of the PCI in October is the first sign that the inventory contribution to growth will turn positive, thus contributing to a favorable fourth quarter number."*

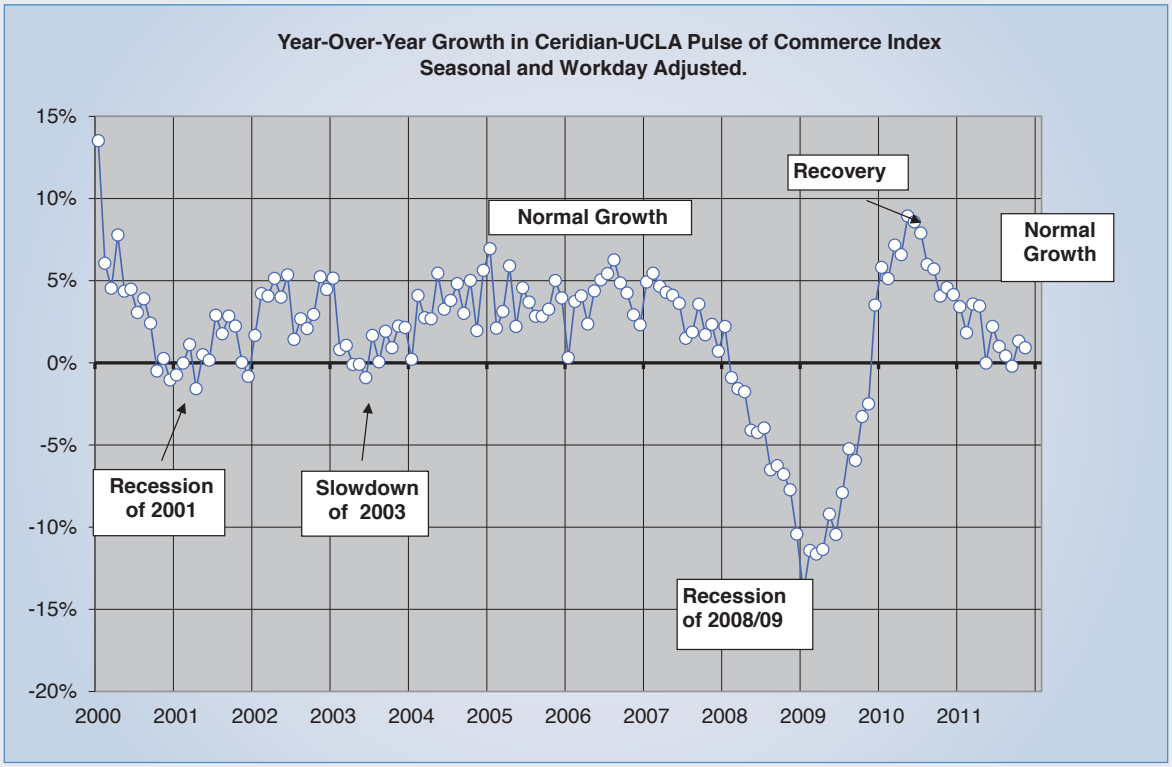
The inventory contribution to third quarter GDP was indeed revised downward to minus 1.55 percent, which accounted for most of the revision of GDP growth to 2.0 percent. As far as inventories are concerned, as measured by the PCI, this quarter is not shaping up to be very good. With two months of data available, the PCI is looking for GDP growth in the range of 0.0 to 1.0 percent.

PCI and Three-Month Moving Average



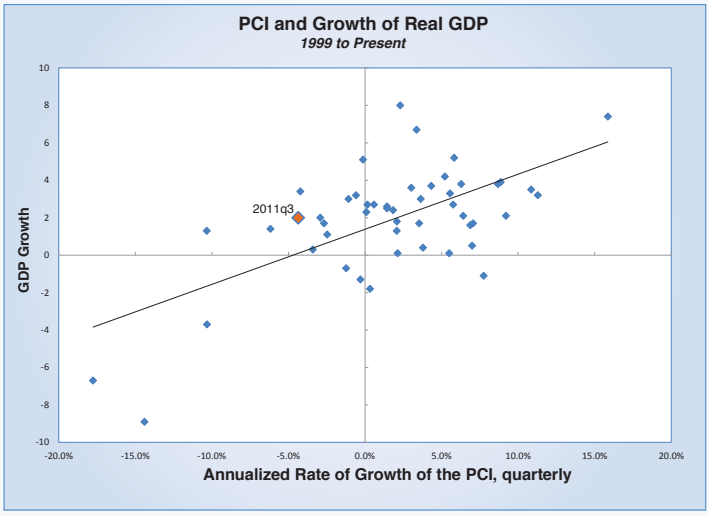
Year-Over-Year Growth of PCI

The year-over-year growth in the PCI is back to near-zero, like it was during the slowdown of 2003.

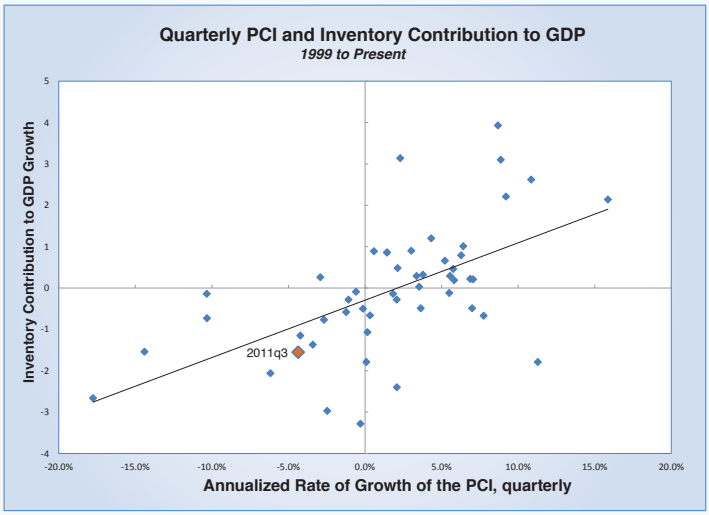


The PCI, Inventories, Imports and GDP growth

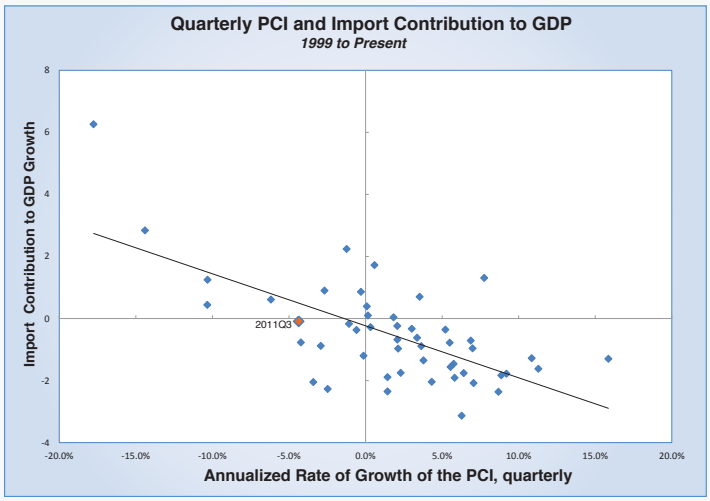
The scatter diagram at the right illustrates the significant positive association between the quarterly growth of the PCI and the quarterly growth of real GDP. The highlighted data point is the 2011Q3 observation with the revised real GDP estimate equal to 2.0 percent and the PCI growth equal to -4.4 percent. This data point is above the regression line and thus above the forecast GDP growth suggested by the PCI, which was approximately zero, but it is noteworthy that the revision took an initial GDP growth rate of 2.5 percent down to 2.0 percent, thus moving in the direction suggested by the PCI.



The largest revision to the initial GDP estimate for 2011Q3 was in inventories, lowering the contribution of inventories from -1.0 to -1.5 percent. Since the PCI measures inventories in motion, it is not surprising that the PCI tracks inventories quite well. The scatter diagram at the right compares the PCI growth with the contribution of inventories to GDP growth where we see the high correlation between the two. The weak PCI accurately anticipated the large negative contribution of inventories to the third quarter GDP.



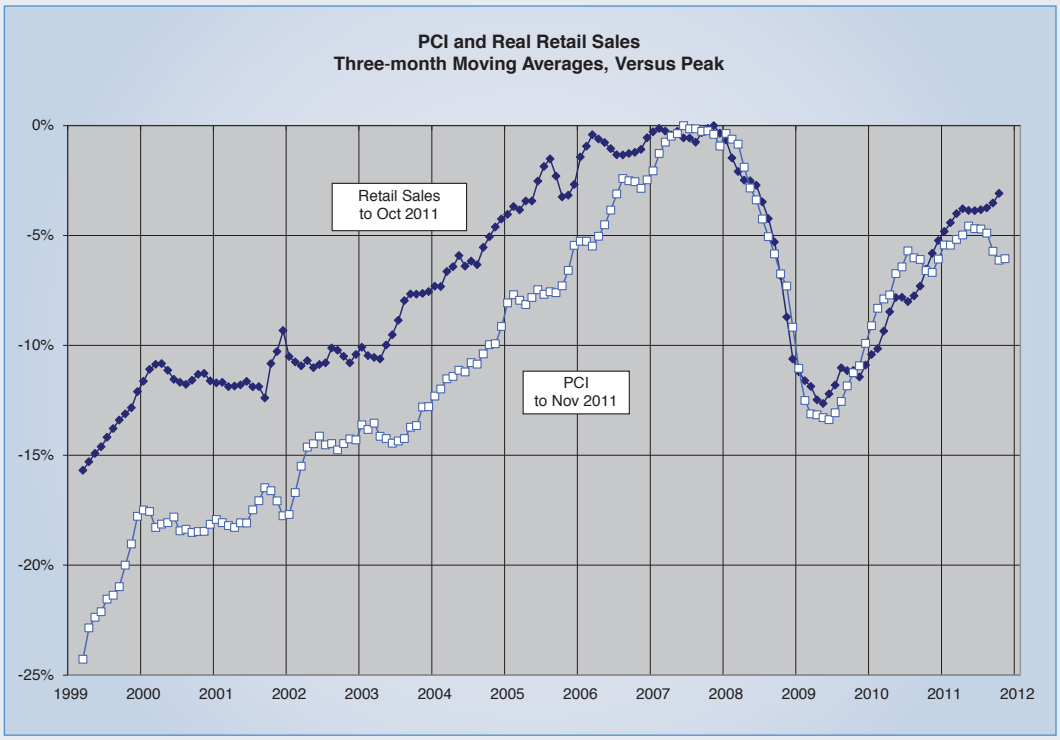
Correlations of the growth in the PCI with that of the overall GDP and with each component of GDP are reported in the table to the right. These are sorted by absolute value. Imports lead the list, followed by GDP overall and then inventories. The negative association with the import contribution comes from the fact that imports are subtracted from GDP, which adjusts for sales of products that are produced elsewhere and don't count as US GDP. A surge of imports that is positively associated with trucking thus creates a large negative contribution to GDP growth. This means that the PCI is negatively associated with the import contribution to GDP growth, which is illustrated in the scatter diagram below.



Correlation of Quarterly Growth of PCI with Contributions to GDP Growth	
Imports	-0.66
GDP	0.63
Inventories	0.58
Consumer Nondurables	0.55
Consumer Services	0.51
Exports	0.50
Equipment and Software	0.49
Residential Investment	0.39
Structures	0.14
Defense	-0.13
Consumer Durables	0.13
State and Local Government	0.07
Federal Nondefense	0.04

Retail Sales and the PCI: Inventories in Motion

The growth in real GDP is, to a large extent, driven by growth in consumer spending. One important symptom of consumer spending is real retail sales, which are compared with the PCI in the figure below. In this figure, both the PCI and the real retail sales are compared with their peak levels, making it easy to see that both declined from their peak values by 13 or 14 percent.



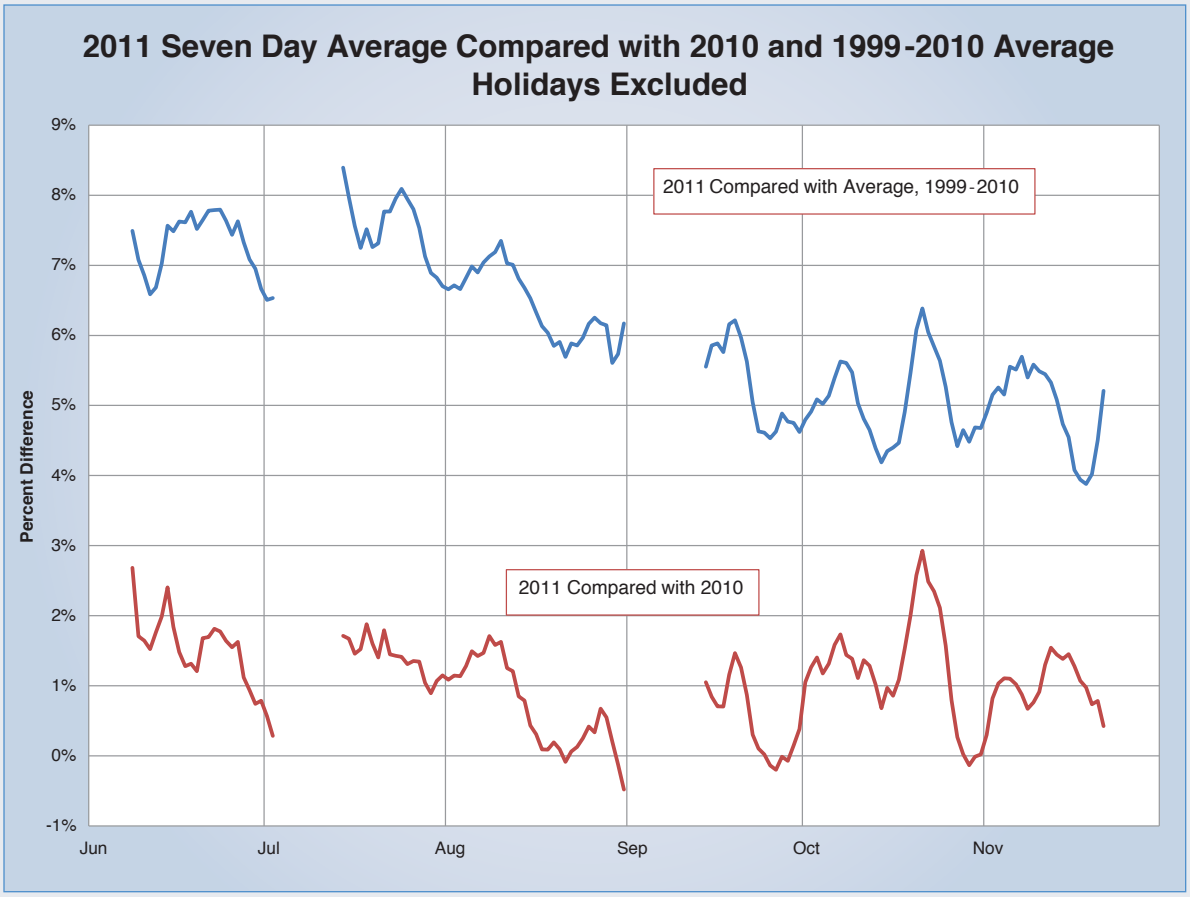
Viewing the PCI as a measure of inventories in motion, it appears that inventory restocking early last year in 2010 got ahead of real retail sales, and the decline in the PCI in the second half of 2010 was an indication of inventory realigning with sales. Coincident with the decline in the PCI in the summer of 2010 came heightened concerns about a second dip, which dissipated as the economy continued to grow in the second half of 2010.

Over the summer this year, we experienced another episode of double dip anxiety and a coincident decline in the PCI. Though the double dip fear has dissipated again, the PCI and real retail sales continue to move in opposite directions, a repeat of 2010. Last year the disconnect between the PCI and real retail sales was resolved with a burst in trucking activity in December. It will take more than a burst in trucking in December this year to realign the PCI and real retail sales.

Seven Day Averages

The daily PCI results are illustrated in the figure below. What this shows is that the October improvement was concentrated in the third week, but by the end of the month, trucking activity, adjusted for the season, was as weak as it was at the end of September. This did not lay the foundation for a strong November, and as it turned out, November trucking on a day-by-day basis was consistently about 1 percent better than last year.

To make this figure, seven-day averages were used to eliminate the very large weekday effects, and the calendar effect is controlled for by comparing with previous seven-day averages, 2011 versus 2010 and 2011 versus the averages from 1999-2010. The figure illustrates the fact that the 2011 PCI values in June were 7 percent greater than the 1999-2010 average and 1-2 percent greater than 2010. By the middle of November, the PCI was around 5 percent higher than the 1999-2010 average, and about 1 percent above the 2010 level.



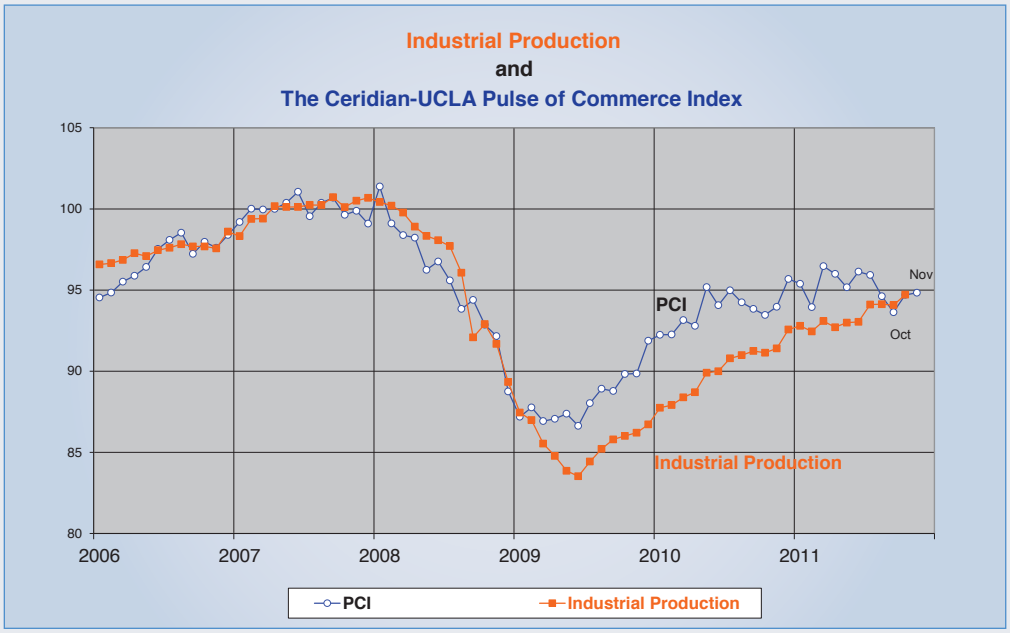
Foretelling Industrial Production

With the assistance of an econometric model, the PCI can be translated into future Industrial Production values. Over time, the PCI has been highly correlated with Industrial Production and is useful in predicting the direction and magnitude of Industrial Production prior to its release each month. The "forecasts" in this report rely only on the PCI and do not make use of other variables such as employment in manufacturing and the PMI index.

The PCI is released on or about the 10th of the month and the corresponding Industrial Production Index is generally released a week later. The table below has the Federal Reserve's estimates of the growth of Industrial Production in the first five columns from August 2011 to the present, as they have been revised over time. The next six columns in the table are forecasts based on the PCI released monthly. The numbers typed in bold are one-month ahead forecasts and the current estimates of Industrial Production, which conform well in general. The Federal Reserve's estimate of Industrial Production for the month of November will be released on December 15. The PCI suggests that the Industrial Production growth rate for November was 0.06 percent.

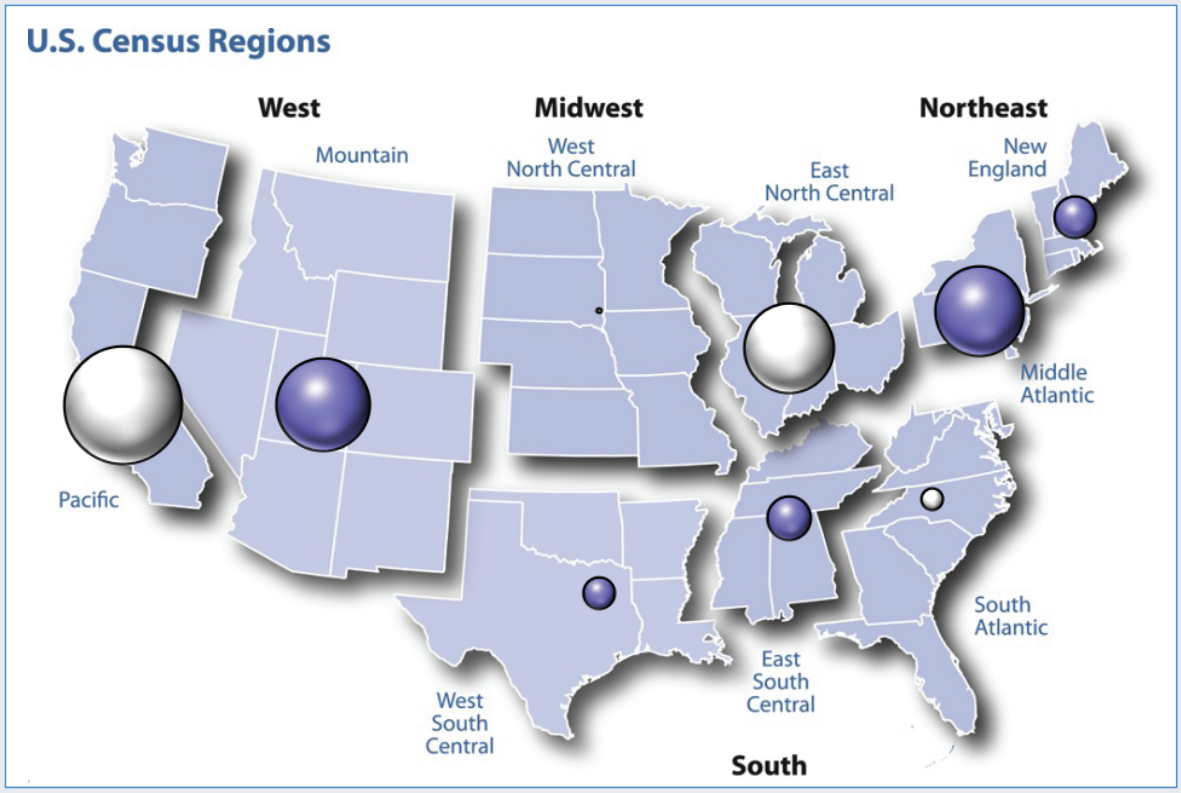
Growth of Industrial Production: Fed Estimate and PCI Forecast

	Fed Estimates by Release Date					PCI Forecast by Release Date					
	Aug	Sep	Oct	Nov	Dec	Jul	Aug	Sep	Oct	Nov	Dec
Jun-11	0.19%	0.37%	0.08%	0.03%	**0.00%**	**0.17%**					
Jul-11		0.90%	0.90%	1.05%	**1.18%**		**0.00%**				
Aug-11			0.18%	0.05%	**0.00%**			**-0.26%**			
Sep-11				0.19%	**0.00%**				**-0.55%**		
Oct-11					**0.64%**					**0.12%**	
Nov-11					**15-Dec**						**0.06%**
Dec-11											0.14%
Jan-12											0.09%
Feb-12											0.10%



Regional Summary

This was an unusually diverse month with exceptional weakness in the Pacific and the East North Central regions, offset by strength in the Middle Atlantic and the Mountain regions.



U.S. Census Regions Legend:
Blue is positive, white is negative. The size of bubble measures the percentage change of the PCI month-to-month. This data was illustrated from the **Ceridian-UCLA Pulse of Commerce Index** table below.

Ceridian-UCLA Pulse of Commerce Index Monthly Growth Rates

Seasonally and Workday Adjusted, Sorted by November 2011 Value

Monthly Percent Change				
	Sep-11	Oct-11	Nov-11	2010 Share
Mountain	-0.8%	0.0%	2.1%	9.6%
Middle Atlantic	-2.4%	1.1%	2.0%	6.7%
East South Central	-1.5%	1.5%	0.5%	11.5%
New England	2.2%	-2.3%	0.4%	1.4%
West South Central	-0.2%	0.8%	0.3%	19.1%
US Overall	**-1.0%**	**1.1%**	**0.1%**	100.0%
West North Central	-2.2%	1.3%	0.0%	10.0%
South Atlantic	-1.4%	1.1%	-0.1%	17.8%
East North Central	0.1%	1.6%	-2.0%	18.2%
Pacific	0.3%	3.1%	-3.4%	5.8%

About the Ceridian-UCLA Pulse of Commerce Index®

The Ceridian-UCLA Pulse of Commerce Index® by UCLA Anderson School of Management is based on real-time fuel consumption data for over the road trucking and serves as an indicator of the current state and possible future direction of the U.S. economy. By tracking the volume and location of diesel fuel being purchased, the index closely monitors the over the road movement of produce, raw materials, goods-in-process and finished goods to U.S. factories, retailers and consumers. Working with economists at UCLA Anderson School of Management and Charles River Associates, Ceridian publicly releases the Index monthly.

Comments in the monthly report are prepared by Edward Leamer, Chief Economist of the Ceridian-UCLA Pulse of Commerce Index and Director of the UCLA Anderson Forecast.

Ceridian is a global business services company providing electronic and stored value card payment services and human resources solutions. UCLA Anderson School of Management is known globally as a leading school of management. Charles River Associates is a leading global consulting firm that offers economic, financial, and business management expertise to organizations around the world.

For additional information on the Ceridian-UCLA Pulse of Commerce Index, please visit *www.ceridianindex.com* or call 1-800-729-7655.

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