GLOBALINSIGHT

The Price Impact of Wal-Mart:
An Update Through 2006

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I. SUMMARY

Wal-Mart's growth in the U.S. market has sparked increasing debate about the economic impact of its expansion. As a contribution to this debate, Wal-Mart commissioned Global Insight in 2005 to undertake an independent research effort to analyze this issue. The goal of this research was to independently and credibly document the national- and local-area impacts in terms of jobs, wages, prices, consumer buying power, productivity, and gross domestic product (GDP).[1]

In the 2005 report, Global Insight estimated that the existence of Wal-Mart over the 1985 and 2004 period resulted in a cumulative reduction in consumer prices of 3.1% by 2004. This translated into savings for consumers amounting to $263 billion in 2004, $895 per person, and $2,330 per household. The purpose of this study is to estimate the cumulative price impact as of 2006 and generate the cost savings in total, per person, and per household for 2006.

This update, which includes two more years of historical data and some revisions in the square footage of stores in place prior to 2005, continues to support the claim that an economy without Wal-Mart would have meant higher prices for consumers. Global Insight found that the expansion of Wal-Mart over the 1985-2006 period lead to a cumulative 3.0% decline in overall consumer prices as measured by the Consumer Price Index for All Items. (This price index includes prices for both goods and services.) This estimate is in line with other researchers' estimates of Wal-Mart's price effects.[2]

The 3.0% estimate is a cumulative total over the 1985-2006 period and corresponds to a 0.15% reduction in the annual inflation rate over the period. These results were generated through a statistical analysis of the variation in consumer price inflation across a set of Metropolitan Statistical Areas (MSAs) in relation to changes in Wal-Mart's market penetration and other (non-Wal-Mart) drivers of price variation. As discussed in the earlier report, Jerry Hausman of M.I.T. has presented an analysis that the official CPI actually incorporates a bias that excludes some of Wal-Mart's direct cost savings.[3] In both the 2005 and the current 2007 studies, Global Insight's analysis only focused on the CPI "as measured" and did not add any additional cost savings that might be generated by this hypothesized measurement bias.

The updated study concludes that the reduction in the price level due to the presence of Wal-Mart translates directly into savings for consumers amounting to $287 billion in 2006. This corresponds to savings of $957 per person and $2,500 per household.

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[1] Global Insight Incorporated, The Economic Impact of Wal-Mart, November 2, 2005.

[2] Global Insight Incorporated, The Economic Impact of Wal-Mart, November 2, 2005, Appendix A, Tables 19 and 20.

[3] Hausman, Jerry & Leibtag, Ephraim. "CPI Bias from Supercenters: Does the BLS know that Wal-mart exists?" NBER Working Paper Series Aug 2004:2.

We should also note that our previous analysis also considered the effect of lower price inflation on wages through the use of the Global Insight Macroeconomic Model. Within the macroeconomic model, inflation is modeled as a carefully controlled, interactive process involving wages, prices, and market conditions. Equations embodying a near accelerationist point of view produce substantial secondary wage and price effects after the initial impetus from the efficiency, capital, and import price changes. Thus, nominal wage inflation is also lower (but not by as much) as a result of lower consumer price inflation. Partially offsetting the decline in wage inflation are higher productivity gains and lower unemployment rates that are also attributed to Wal-Mart. As a result, wage rate inflation is not reduced by as much as consumer price inflation. Wal-Mart's presence in the economy, therefore, has led to an increase in the inflation-adjusted or real wage rate. The higher real wage rate, combined with higher employment levels, increased consumers' real purchasing power by $118 billion in 2004 dollars and an estimated $129 billion in 2006.

Table 1
Consumer Savings and Increased Purchasing Power with Wal-Mart
(Dollars)

	Billions	Per Capita	Per Household
Consumer Expenditure Savings (1)	287	957	2,501
Increase in Purchasing Power(2)	129	429	1,122
1. Reflects only changes in prices, nominal dollars			
2. Reflects changes in prices, wage rates, and employment levels, inflation adjusted 2006$			

Source: Global Insight Analysis

II. Background

Data Sources

Both the 2005 and the current price impact studies were based upon a statistical analysis of consumer prices. Historical data for the statistical analyses were obtained from U.S. government agencies, Wal-Mart, and Global Insight's economic databases. Global Insight obtained data from the Bureau of Labor Statistics (BLS) for consumer price indexes, unemployment rates, and industry employment by major metropolitan areas. The average U.S. and MSA population data were acquired from the U.S. Census Bureau. Electricity prices by state were obtained from the U.S. Department of Energy and used to approximate electricity prices by MSA. Wal-Mart provided Global Insight with Wal-Mart store square footage data from 1985-2006 data for over 3000 stores.

Global Insight noted in its 2005 report that the Bureau of Labor Statistics (BLS) creates and publishes consumer price indexes (CPI) to quantify changes in consumer prices over time, but the procedure that it uses tends to underestimate Wal-Mart's price impact. The BLS has a sample of stores in a market from which it collects prices. When a new

retail outlet enters the market, it may replace an existing outlet in the BLS sample. The replacement occurs, however, through a "linking procedure" that ignores differences in the overall level of prices between the two outlets. The BLS assumes that the "quality-adjusted" prices at the new outlet are the same as at the outlet that it is replacing. This "quality adjustment" argument is applied to all items, including identical brand items. Anecdotal evidence suggests that when Wal-Mart enters a market, its everyday low prices are anywhere from 5% to 25% lower for identical goods. Thus, the BLS measuring technique ignores the direct price effect of a lower price outlet such as Wal-Mart in its CPI measurement when the outlet first enters the sample. What it does capture, however, is the indirect effect that the lower price outlet has on the prices of competitors that are in the sample and the direct price effects of the lower price outlet going forward.

The objective of this report is to quantify the impact that Wal-Mart has had on the measured CPI. Because of the technique that the BLS uses to create its CPI, this falls short of Wal-Mart's total impact on consumer prices. Global Insight will quantify the measured impact that Wal-Mart has had on consumer prices for 24 MSAs and for the U.S. in total.

Theory

The current analysis is based upon the same underlying theory for prices as the 2005 analysis. That is, prices are determined in combination with demand, supply and financial conditions. Prices adjust in response to gaps between demand and supply potential and to changes in the cost of inputs. Wages adjust to labor supply-demand gaps, current and expected inflation, productivity, tax rates, and minimum wage legislation. The supply of labor positively responds to the perceived availability of jobs, to the after-tax wage level, and to the growth and age-sex mix of the population. Demand for labor is keyed to the level of output in the economy and the productivity of labor, capital, and energy. Tempering the whole process of wage and price determination is the exchange rate; a rise signals prospective losses of jobs and markets unless costs and prices are reduced.

Both studies attempt to explain the variation in consumer price growth across MSAs. The variation to be explained is the difference in the MSA CPI growth relative to U.S. CPI growth. Therefore, the question we need to ask is which of the factors that determine price inflation are likely to vary significantly across regions. We would expect that the impact of financial markets on capital costs and the effect of exchange rates to be relatively uniform across the country. On the other hand, we would expect labor, energy and goods market conditions to vary significantly across U.S. regions. This in turn can lead to significant variations in regional wage and energy cost inflation and in demand pressures. In addition, both studies test whether or not Wal-Mart has had a significant impact on price inflation across the MSAs. This is possible because Wal-Mart's concentration varies significantly by MSA.

The BLS creates and publishes consumer price indexes for 26 MSAs, 24 of which have history going back to 1985. This study attempts to explain the variation in consumer price growth from 1985 to 2006 for the 24 MSAs and the U.S. This analysis tests for the statistical significance of the following factors in explaining variation in consumer price growth using pooled-cross section regression analysis:

- Labor market impacts
    - Change in unemployment rates (wage rate pressures)
    - High wage employment industries (wage rate pressures)
- Energy markets impacts
    - Energy cost growth (cost pressures)
- Goods and services markets
    - Population growth (demand pressures)
- Wal-Mart impacts
    - Change in Wal-Mart square footage

MSA unemployment rates and high-wage industry employment shares (versus manufacturing) were considered factors that could explain the variation in MSA CPI inflation rates because they summarize wage rate pressures. Low (high) unemployment rates put upward (downward) pressures on wage rates, and wage inflation in turn drives price inflation. High-wage industry concentrations versus manufacturing industry concentrations further advance inflation. We choose to measure labor market pressures through the unemployment rate and the employment shares rather than wage rates themselves because of the strong simultaneity between wages and prices. We want to capture only the labor market pressures on wage rates and not the effect of prices themselves on wage rates.

Energy costs were considered in the analysis because they were highly volatile over the 1985-2006 analysis period, and this volatility was not uniform across states and MSAs. The variation in energy price inflation has been largely due to variation in each area's fuel mix and its ability to change its mix in response to changing costs. This ability, in turn, depended upon its existing infrastructure, state and local regulations, and its access to alternative fuel sources. Energy was considered in the analysis since it is the production cost (outside of labor) that varies the most across regions, and it is a cost to all supplying sectors.

Areas with high population growth could experience higher price inflation if the population's product demand is outpacing product supply. Variation in population growth was thus considered as a possible factor affecting the variation in price inflation across the regions.

Wal-Mart is likely to have had a significant impact on price inflation across the MSAs largely for three main reasons. First, its sophisticated logistics and distribution innovations have increased total factor productivity, lowering its overall cost structure and allowing Wal-Mart to provide its goods at lower prices. Second, Wal-Mart's

integrated purchasing system and its sheer size has led its suppliers to offer significant volume discounts, which Wal-Mart in turn has passed along to its consumers. And third, its lower prices have pressured its competitors to adopt more efficient processes and to lower their prices.

III. The Analysis

This section presents the results of Global Insight's statistical analysis of the variation in consumer prices inflation across the MSAs in relation to changes in Wal-Mart's market penetration and other (non-Wal-Mart) drivers of price variation. The regression model's structure, the supporting data, the statistical regression analysis, and the measured impact of Wal-Mart on consumer prices by MSA and for the U.S are presented.

Model Structure

The regression equation to explain the variation in consumer price inflation between 1985 and 2006 across MSAs was specified as follows:

$$CPIGrowth_j - CPIGrowth_{US} = C + B1*(URChange_j - URChange_{US})$$
$$+B2*(HighWageIndustryShareGrowth_j - HighWageIndustryShareGrowth_{US})$$
$$+B3*(EPGrowth_j - EPGrowth_{US}) + B4*(POPGrowth_j - POPGrowth_{US})$$
$$+B5*(CPISGrowth_j - CPISGrowth_{US}) + B6*(WMSFChange_j - WMSFChange_{US})$$

Where:
- CPIGrowth = Growth in CPI for all items from 1985 to 2006 in MSA j and U.S.
- URChange = Change in the unemployment rate, 2006 minus 1990 in MSA j and U.S.
- HighWageIndustryShareGrowth = Growth in concentration of high-wage industry employment versus manufacturing industry employment in MSA j and U.S.
- EPGrowth = Electricity price growth from 1985 to 2003-2005 average in MSA j and U.S.
- POPGrowth = Population growth from 1985 to 2004-2006 average in MSA j and U.S.
- CPISGrowth = Growth in CPI for services from 1985 to 2006 in MSA j and U.S.
- WMSFChange = Change in Wal-Mart square footage per capita, 2004-2006 average minus 1985 in MSA j and U.S.

Since the identical U.S. factors are subtracted from each MSA, the U.S. data can be collapsed into the constant term of the regression.

$$CPIGrowth_j = C' + B1*URChangei_j + B2*HighWageIndustryShareGrowth_j$$
$$+B3*EPGrowth_j + B4*POPGrowth_j + B5*CPISGrowth_j + B6*WMSFChange_j$$

The Supporting Data

MSA Consumer Prices

The BLS publishes consumer prices indexes for 26 MSAs. Twenty-four of these MSAs have historical data back to at least 1985 and could be used in our statistical analysis to explain variation in price changes for all items over the 1985-2006 period. The MSAs include:

1. Anchorage
2. Atlanta-Sandy Springs-Marietta
3. Boston-Cambridge-Quincy
4. Chicago-Naperville-Joliet
5. Cincinnati-Middletown
6. Cleveland-Elyria-Mentor
7. Dallas-Fort Worth-Arlington
8. Denver
9. Detroit-Warren-Livonia
10. Honolulu
11. Houston-Baytown-Sugar Land
12. Kansas City
13. Los Angeles-Long Beach-Santa Ana
14. Miami-Fort Lauderdale-Miami Beach
15. Milwaukee-Waukesha-West Allis
16. Minneapolis-St. Paul-Bloomington
17. New York-Northern New Jersey-Long Island
18. Philadelphia-Camden-Wilmington
19. Pittsburgh
20. Portland-Vancouver-Beaverton
21. San Diego-Carlsbad-San Marcos
22. Seattle-Tacoma-Bellevue
23. San Francisco-Oakland-Fremont
24. St. Louis

Our objective is to determine if Wal-Mart's presence has had an impact on measured consumer prices for urban consumers over the past 20 years. The CPI includes three broad categories: durable goods (11%), non-durable goods (29%), and services (60%). If Wal-Mart has an impact on consumer prices, it would be on the first two categories. Consumer prices for services are dominated by rents, imputed rents, utilities, medical services, and transportation -- all areas outside of Wal-Mart's product offerings. The impact of service prices in the overall analysis is netted out by including the CPI for services (with a lag) as an explanatory variable in the regression analysis.[4] Hence, the

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[4] Alternatively, we could have constrained the coefficient on the services CPI to its weight in the overall consumer price index. Since the estimated coefficient on the services CPI was close to its weight in the overall price index, and the coefficients associated with the remaining explanatory variables were not

remaining explanatory variables in the regression need only explain the variation in the non-service prices.

Figure 1 illustrates the variation in consumer price inflation for the 24 MSAs over the 1985-2006 period. The San Diego and Boston MSAs experienced the highest consumer price inflation over the period, averaging 3.5% per year. Anchorage and Houston experienced the lowest price inflation at an average 2.5-2.6% annually. The average compound annual growth in consumer prices for the 24 MSAs was 3.0%, with a standard deviation of 0.28%.

Figure 1
Consumer Price Inflation, 1985-2006, Ranked by MSA
Compound Annual Rate of Growth

☒ Contribution from Services   ☐ Contribution from Commodities

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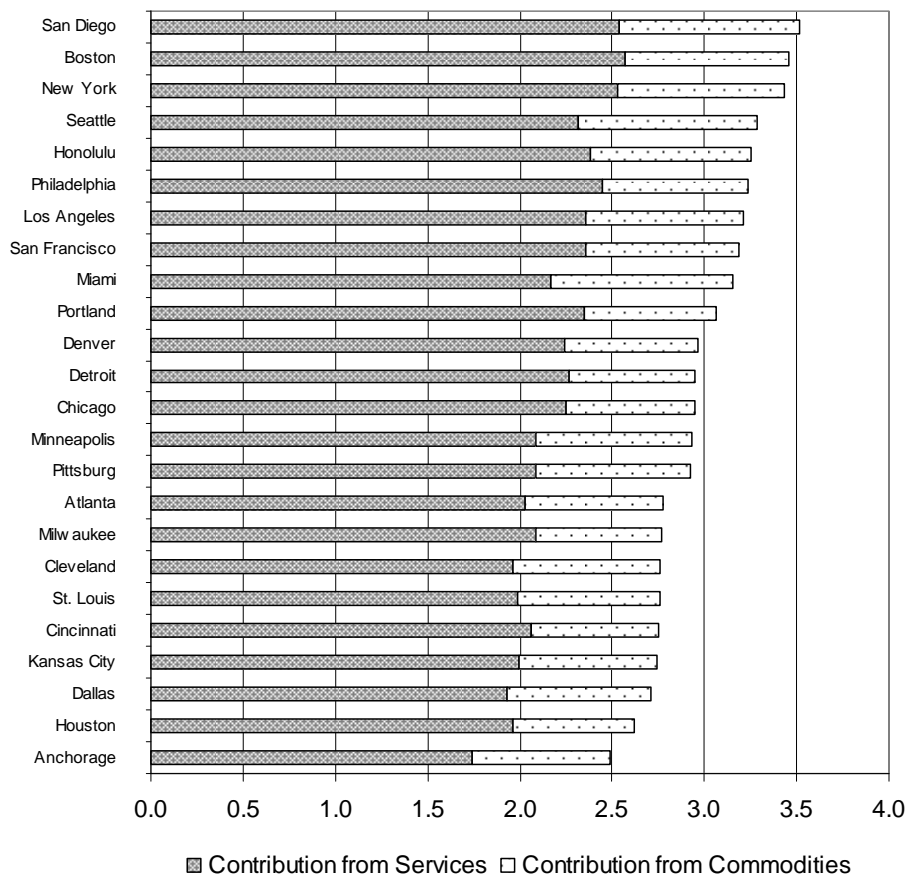
significantly different with and without the constraint, we left the coefficient on the services CPI unconstrained.

MSA Unemployment Rates

The most significant economic measure affecting the variation in inflation rates over the analysis period is changes in unemployment rates. Low unemployment rates put upward pressures on wage rates, and wage inflation in turn drives price inflation. We have included the change in the unemployment rates between 1990 and 2006 as an explanatory variable in the analysis to capture changes in labor market pressures on inflation rates. Unemployment rate statistics by MSA are available from the BLS beginning in 1990. We believe that the unemployment rate changes over this 17-year period could still be significant in the analysis, since they cover most of the period and they exhibit considerable variation.

Figure 2 illustrates the variation in unemployment rate changes for the 24 MSAs between 1990 and 2006. The Miami MSA posted the largest drop of 3.6 percentage points in its unemployment rate between 1990 and 2006, while the unemployment rate in the Portland MSA registered the largest rise of 0.8 percentage points over the same period. The average change in the unemployment rate for the 24 MSAs was 0.4 percentage points, with a standard deviation of 0.9 percentage points.

Figure 2
Change in the Unemployment Rate, 1990-2006, Ranked by MSA
Percentage Point Change
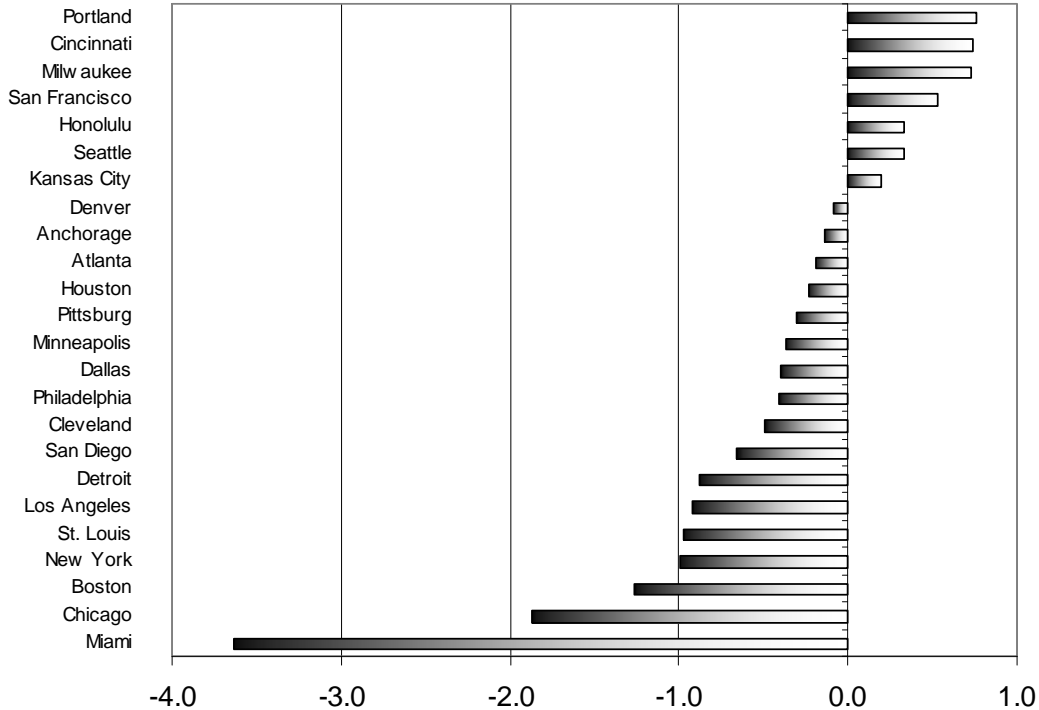
MSA Employment

Growth in high-wage industry employment shares (versus manufacturing) is an additional labor market indicator that explains the variation in MSA CPI inflation rates. High-wage industry concentrations versus manufacturing industry concentrations advance consumer prices through the price-wage spiral.

Growth in high-wage industry employment shares varied significantly across MSAs. Miami posted the strongest growth in its share of high-wage industry employment (1.6%) and the largest decline in its manufacturing share (-4.8%). MSAs with the weakest growth in high-wage industry employment included Anchorage, New York, and Pittsburg. Interestingly, New York also posted a large percentage decline in its manufacturing employment share.

Figure 3
Growth in High-Wage Industry Employment, 1990-2006, Ranked by MSA Compound Annual Rate of Growth
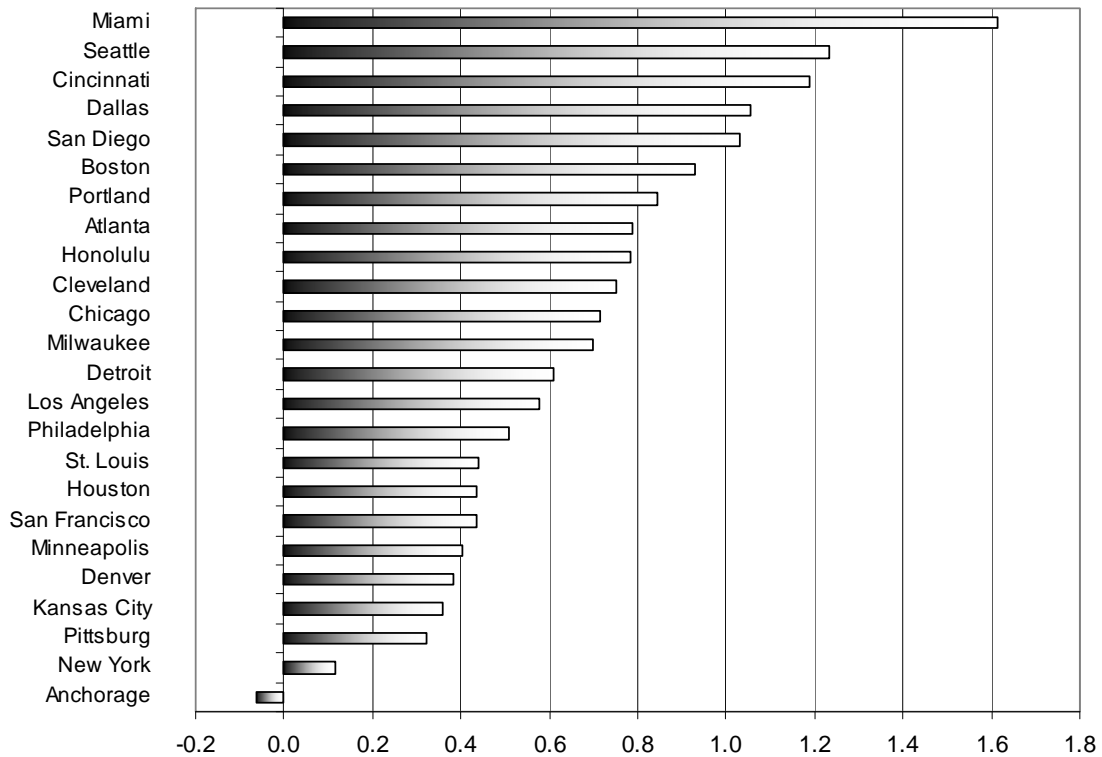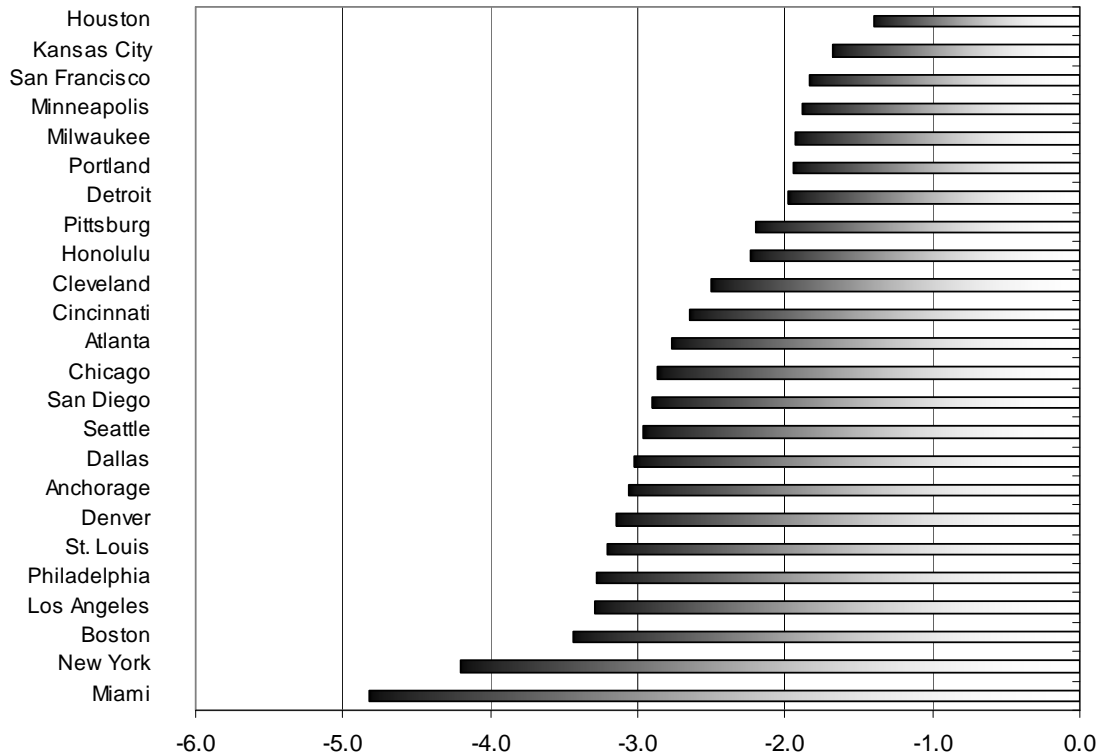
MSA Electricity Prices

Energy costs were highly volatile over the 1985-2006 analysis period, and this volatility was not uniform across states and MSAs. The variation in energy price inflation was largely due to variation in each area's fuel mix and its ability to change its mix in response to changing costs. This ability, in turn, depended upon its existing infrastructure, state and local regulations, and its access to alternative fuel sources. Energy was considered in the analysis since it is the production cost (outside of labor) that varies the most across regions, and it is a cost to all suppliers.

We tested a variety of energy costs, including electricity prices, motor fuel prices, and natural gas prices. The electricity price was the only energy cost that proved to be significant in the analysis. This is likely because electricity costs are a major cost to retailers for air conditioning, lighting, and computer systems. In addition, electricity prices reflect the costs of the fuels used in the generation of the electricity. Electricity price statistics were obtained by state from the Department of Energy, Energy Information Administration. Each MSAs electricity price was equated to its state price.

Figure 5 illustrates the variation in residential electricity price changes for the 24 MSAs over the 1985-2005 period since electricity prices were included in the analysis with a one year lag. The Honolulu MSA experienced the largest rise by far in electricity prices, with residential electricity prices growing at a compound annual rate of growth of 3.1% per year over the 1985-2005 period. Over the same period, electricity prices in Chicago declined an average 0.8% per year, and prices in Miami, Cincinnati and Cleveland posted average annual increases of only 0.4-0.5%. The average compound annual growth in residential electricity prices for the 24 MSAs was 1.4%, with a standard deviation of 0.9%.

Figure 5
Electricity Price Inflation, 1985-2005, Ranked by MSA Compound Annual Rate of Growth
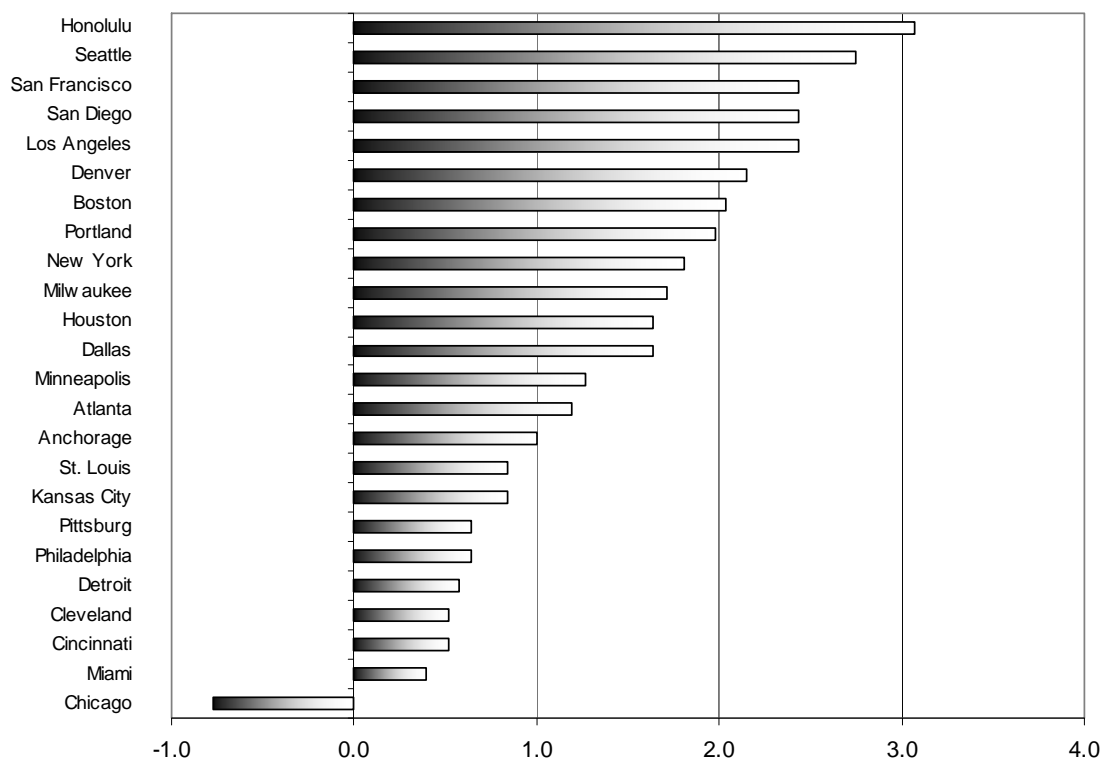

MSA Population

Areas with high population growth could experience higher price inflation if the population's product demand is outpacing product supply. Variation in population growth was thus considered as a possible factor affecting the variation in price inflation across the regions. Our analysis, however, did not find population growth to be a significant explanatory factor. Population estimates by MSA were obtained from the U.S. Census Bureau. Migration in and out of MSAs is largely motivated by job opportunities, so the high-wage industry employment factors may be capturing these demand pressures as well.

Figure 6 illustrates the variation in population growth for the 24 MSAs over the 1985-2006 period. The Atlanta MSA experienced the most population growth, at 3.2% per year, followed by Dallas, Portland, and Houston. Population in the Pittsburgh MSA actually declined slightly over the same period, while Cleveland's population remained relatively unchanged. The average compound annual growth in population for the 24 MSAs was 1.1%, with a standard deviation of 0.8%.

Figure 6
Population Growth, 1985-2006, Ranked by MSA Compound Annual Rate of Growth
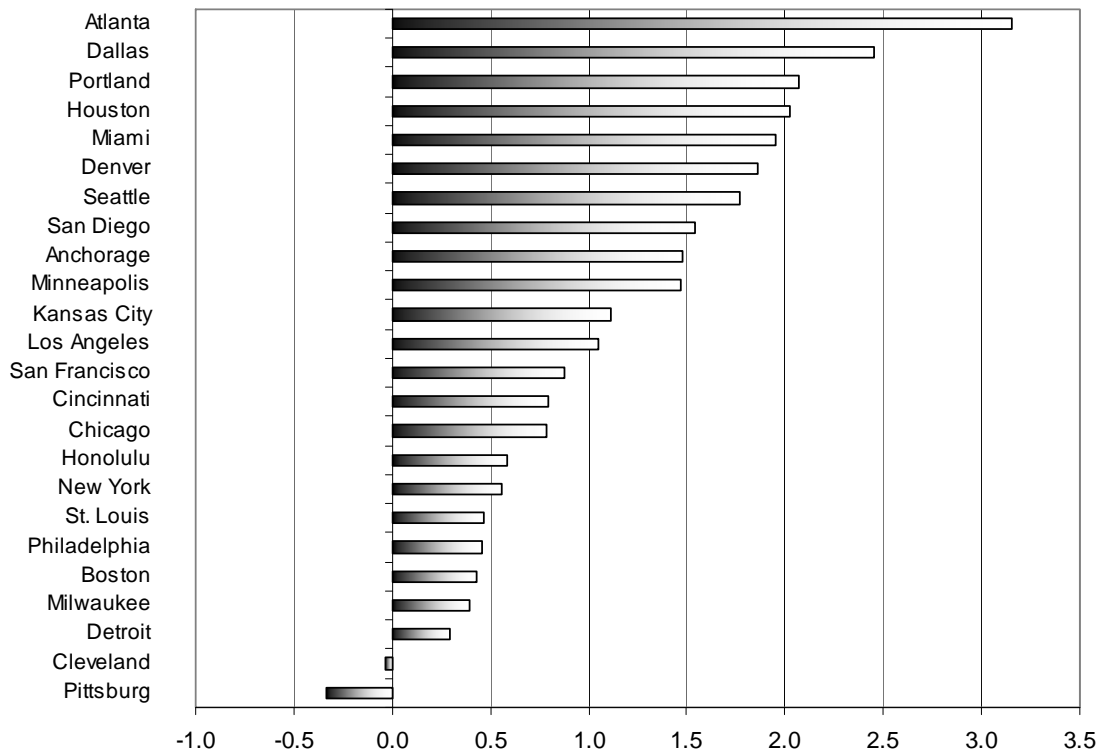
MSA Wal-Mart Square Footage

To measure Wal-Mart's impact on competitors' prices, we included the change in Wal-Mart square footage per capita over the 1985-2006 analysis period as an explanatory variable in the regression analysis. Wal-Mart square footage statistics by MSA were obtained from Wal-Mart.

Our analysis attempts to quantify the impact of Wal-Mart on measured consumer price inflation in MSAs. Data availability has limited the analysis to the 1985 and 2006 period. While Wal-Mart opened its first store in 1962, its growth did not accelerate until after 1985. Wal-Mart's 1985 square footage amounted to just 8.5% of its 2006 square footage. The growth acceleration was even more pronounced for the 24 MSAs

in this analysis; Wal-Mart's 1985 square footage in the 24 MSAs represented only 3.5% of the MSAs' 2006 square footage. Consequently, we believe that the 1985-2006 analysis period should reflect the bulk of Wal-Mart's impact on the measured CPI for urban consumers.

Figure 7 illustrates the change in Wal-Mart square footage per capita for the 24 MSAs over the 1985-2006 period. The increase in Wal-Mart square footage per capita ranged from as high as 2.5-2.7 square feet per person in the Atlanta, Cincinnati, and Dallas MSAs, to as low as 0.4-0.6 square feet per person in the New York, Los Angeles, and San Francisco MSAs. The increase in square footage per person averaged 1.4 square feet per person across the MSAs with a standard deviation of 0.7 square feet.

Figure 7
Change in Wal-Mart Square Footage per Capita, 1985-2006, Ranked by MSA Square Feet per Person
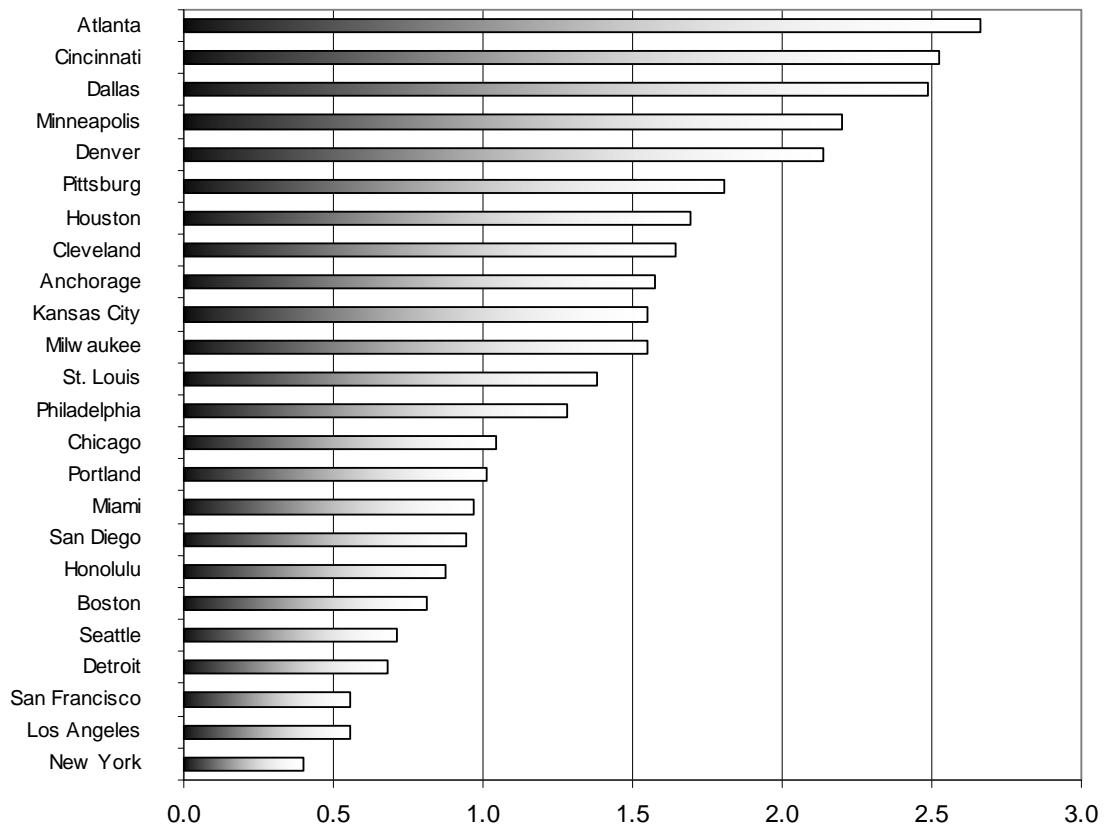

Figure 8 illustrates the relationship between changes in Wal-Mart square footage per capita and consumer price inflation over the 1985-2006 analysis period. The figure indicates a negative relationship between Wal-Mart square footage per capita and

consumer price inflation. That is, greater increases in Wal-Mart square footage per capita in an MSA are generally associated with lower consumer price inflation rates. The following section supports this relationship through statistical analyses.

Figure 8
Linear Relationship between the Compound Annual Growth in the CPI, All Items and the Change in Wal-Mart Square Footage over the 1985-2006 Period
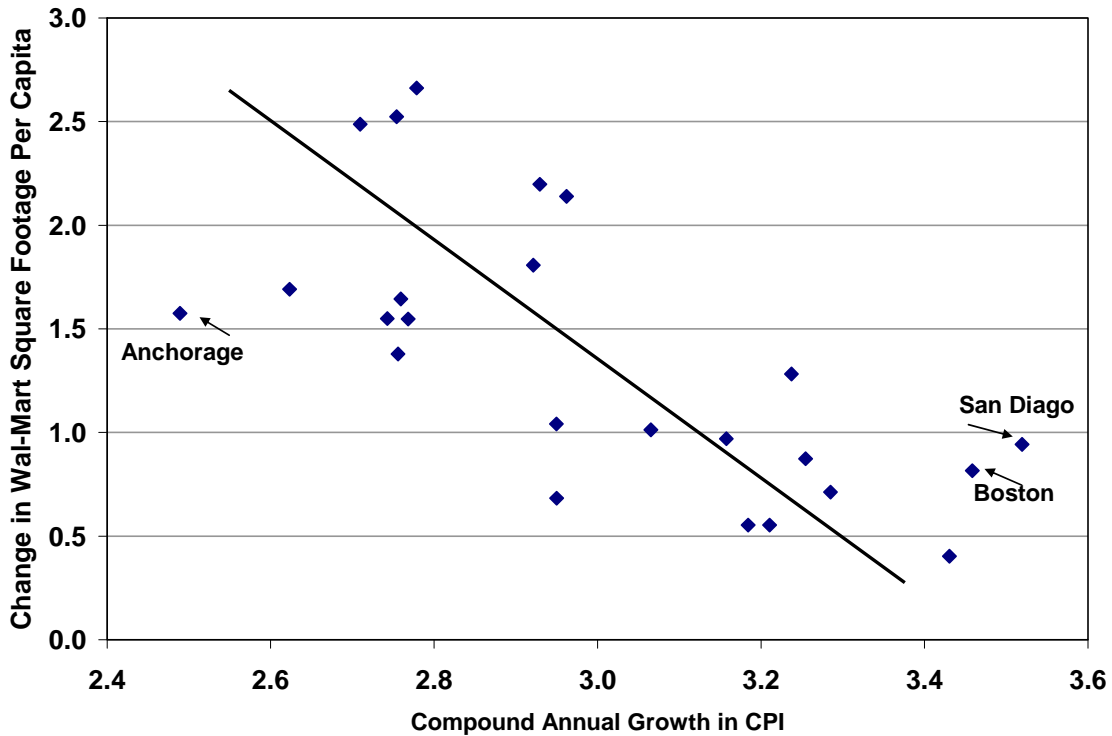
Statistical Results

The statistical regression results are presented in Tables 2 and 3 for the CPI for all items before including the Wal-Mart effect. For both regressions, the coefficient associated with population growth by MSA was not significantly different from zero and was dropped from the regressions. All other explanatory variables are significantly different from zero at the 5% level. Once differences in consumer service prices are accounted for, we are able to explain nearly 89% of the variation in consumer price inflation across the MSAs by considering the variation in unemployment rate changes, high-wage industry employment share growth, and electricity price growth. The same regression with the added variable – changes in Wal-Mart square footage per capita in table 2. The Wal-Mart effect is significant at the 5% level and increases the explanatory power of the regression to 91%.

The regression coefficients in Table 3 tell us that each 1% increase in consumer service inflation contributes 0.5% to consumer price inflation as measured by the CPI for all items. This compares with a relative importance of 0.6 for services in the CPI.

Electricity is one of the services represented in the CPI for services. Our analysis shows an additional impact on consumer price inflation from growth in electricity prices. Each 1% increase in electricity prices adds another 0.09% to consumer price inflation. This additional impact suggests that changes in retailers' electricity prices are passed along to the consumers, giving electricity a larger weight than its relative importance in the services CPI.

The regression also tells us that each one point increase in the unemployment rate lowers consumer price inflation 1.3%, while each 1% increase in the high-wage industry employment share or 1% decrease in the manufacturing employment share increases the CPI by 0.06%. And finally, each unit increase in Wal-Mart square footage per capita lowers the CPI by 2.2%.

Table 2
Regression Results for Consumer Price Inflation, All Items, Urban Consumers

Dependent Variable: Growth in CPI for all items from 1985 to 2006 Cross Sections Included: 24 MSAs			
Determinants by MSA			
	Coefficient	**Std. Error**	**t-Statistic**
Constant term	0.1668	0.0443	3.77
Change in the unemployment rate, 2006 minus 1990	-0.0177	0.0068	-2.60
Growth in electricity price from 1985 to 2003-2005 average	0.1156	0.0322	3.59
Growth in CPI for services from 1985 to 2003-2005 average	0.5771	0.0661	8.73
Growth in financial/information/business services employment share from 1985 to 2004-2006	0.0519	0.0344	1.51
Adjusted R-squared	0.8926		
S.E. of regression	0.0188		

Table 3
Regression Results for Consumer Price Inflation, All Items, Urban Consumers

Dependent Variable: Growth in CPI for all items from 1985 to 2006 Cross Sections Included: 24 MSAs			
Determinants by MSA			
	Coefficient	**Std. Error**	**t-Statistic**
Constant term	0.2521	0.0567	4.45
Change in Wal-Mart square footage per capita, 2004-2006 minus 1985	-0.0220	0.0102	-2.15
Change in the unemployment rate, 2006 minus 1990	-0.0129	0.0066	-1.95
Growth in electricity price from 1985 to 2003-2005 average	0.0934	0.0312	2.99
Growth in CPI for services from 1985 to 2003-2005 average	0.4891	0.0730	6.70
Growth in financial/information/business services employment share from 1985 to 2004-2006	0.0603	0.0317	1.90
Adjusted R-squared	0.9099		
S.E. of regression	0.0172		

Simulation Results

A model for the CPI price indexes was developed from the above regression equation and used to quantify the measured impact of Wal-Mart on consumer prices by MSA and for the U.S. The model was first simulated in 2006 based upon Wal-Mart's actual square footage in 2006 and then simulated in 2006 with Wal-Mart square footage held to 1985 levels. The difference between the two simulations defined the impact of Wal-Mart on the consumer price indexes.

Wal-Mart added 453 million square feet (net) between 1985 and 2006. These additions amounted to 1.5 square feet per capita for all Wal-Mart net additions. Our price model

determined that Wal-Mart's growth over the 1985-2006 period reduced consumer prices as of 2006 by 3.0%.

Tables 4 and 5 summarize price impacts by MSA and for the total U.S. in alphabetical order and rank order, respectively. Differences between price impacts for each MSA between the 2005 study and the current study are presented in Table 4. These differences are attributed primarily to the addition of more stores in 2005 and 2006, store closures in 2005 and 2006, and revisions to the square footage of existing stores.

Table 4

Measured Impact on MSA and U.S. Consumer Prices from Wal-Mart

2006 Alphabetical Order

(Percent difference in the price level)

MSA	2006	2004	Difference
Anchorage	-3.5%	-4.2%	0.7%
Atlanta-Sandy Springs-Marietta	-4.2%	-3.3%	-0.9%
Boston-Cambridge-Quincy	-1.8%	-1.9%	0.1%
Chicago-Naperville-Joliet	-1.8%	-1.7%	-0.1%
Cincinnati-Middletown	-3.9%	-2.5%	-1.4%
Cleveland-Elyria-Mentor	-2.5%	-1.5%	-0.9%
Dallas-Fort Worth-Arlington	-4.4%	-3.8%	-0.6%
Denver	-3.6%	-2.7%	-0.8%
Detroit-Warren-Livonia	-1.3%	-1.3%	-0.1%
Honolulu	-1.2%	-0.8%	-0.4%
Houston-Baytown-Sugar Land	-3.5%	-3.5%	0.0%
Kansas City	-3.5%	-4.2%	0.8%
Los Angeles-Long Beach-Santa Ana	-1.0%	-0.8%	-0.2%
Miami-Fort Lauderdale-Miami Beach	-1.7%	-1.7%	0.0%
Milwaukee-Waukesha-West Allis	-2.8%	-2.5%	-0.3%
Minneapolis-St. Paul-Bloomington	-3.2%	-1.9%	-1.3%
New York-Northern New Jersey-Long Island	-0.7%	-0.5%	-0.2%
Philadelphia-Camden-Wilmington	-2.0%	-1.4%	-0.6%
Pittsburgh	-3.2%	-2.6%	-0.6%
Portland-Vancouver-Beaverton	-1.4%	-1.0%	-0.4%
San Diego-Carlsbad-San Marcos	-1.8%	-1.4%	-0.4%
Seattle-Tacoma-Bellevue	-1.2%	-0.9%	-0.3%
San Francisco-Oakland-Fremont	-0.8%	-0.6%	-0.2%
St. Louis	-2.8%	-2.8%	0.0%
United States	-3.0%	-3.1%	0.1%

Source: Global Insight Analysis

Table 5

Measured Impact on MSA and U.S. Consumer Prices from Wal-Mart,

2006 Rank Order

(Percent difference in the price level)

MSA	2006 Price Impact	Square Footage Per Capita Increase 1985-2006
Dallas-Fort Worth-Arlington	-4.4%	2.49
Atlanta-Sandy Springs-Marietta	-4.2%	2.66
Cincinnati-Middletown	-3.9%	2.52
Denver	-3.6%	2.14
Houston-Baytown-Sugar Land	-3.5%	1.69
Kansas City	-3.5%	1.55
Anchorage	-3.5%	1.58
Minneapolis-St. Paul-Bloomington	-3.2%	2.20
Pittsburgh	-3.2%	1.81
Milwaukee-Waukesha-West Allis	-2.8%	1.55
St. Louis	-2.8%	1.38
Cleveland-Elyria-Mentor	-2.5%	1.64
Philadelphia-Camden-Wilmington	-2.0%	1.28
Chicago-Naperville-Joliet	-1.8%	1.04
Boston-Cambridge-Quincy	-1.8%	0.82
San Diego-Carlsbad-San Marcos	-1.8%	0.94
Miami-Fort Lauderdale-Miami Beach	-1.7%	0.97
Portland-Vancouver-Beaverton	-1.4%	1.01
Detroit-Warren-Livonia	-1.3%	0.68
Honolulu	-1.2%	0.87
Seattle-Tacoma-Bellevue	-1.2%	0.71
Los Angeles-Long Beach-Santa Ana	-1.0%	0.55
San Francisco-Oakland-Fremont	-0.8%	0.55
New York-Northern New Jersey-Long Island	-0.7%	0.40
United States	-3.0%	1.47

Source: Global Insight Analysis