



# Profiles of Local Consumer Commerce

Insights from 12 Billion Transactions  
in 15 U.S. Metro Areas

December 2015



# About the Institute

The global economy has never been more complex, more interconnected, or faster moving. Yet economists, businesses, nonprofit leaders, and policymakers have lacked access to real-time data and the analytic tools to provide a comprehensive perspective. The results—made painfully clear by the Global Financial Crisis and its aftermath—have been unrealized potential, inequitable growth, and preventable market failures.

The JPMorgan Chase Institute is harnessing the scale and scope of one of the world's leading firms to explain the global economy as it truly exists. Its mission is to help decision-makers—policymakers, businesses, and nonprofit leaders—appreciate the scale, granularity, diversity, and interconnectedness of the global economic system and use better facts, real-time data and thoughtful analysis to make smarter decisions to advance global prosperity. Drawing on JPMorgan Chase's unique proprietary data, expertise, and market access, the Institute develops analyses and insights on the inner workings of the global economy, frames critical problems, and convenes stakeholders and leading thinkers.

The JPMorgan Chase Institute is a global think tank dedicated to delivering data-rich analyses and expert insights for the public good.

## Acknowledgments

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# Profiles of Local Consumer Commerce

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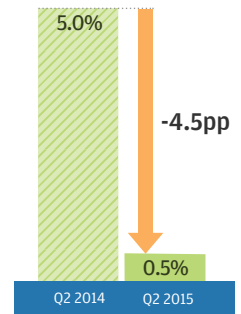
# Executive Summary

New research from the JPMorgan Chase Institute shows that the year-to-year growth of consumers' everyday spending on most goods and services in 15 major U.S. metropolitan areas has slowed dramatically, from 5 percent in the second quarter of 2014 to 0.5 percent in the comparable period in 2015.

This slowdown in everyday spending growth is one of several puzzling signals in the data on the U.S. economy. Gross domestic product has increased every quarter except for Q1 2014 in the past four years, but in fits and starts. Unemployment is down and corporate profits have largely been solid. In real terms, retail sales have also grown every quarter since the 2009 recession, though inconsistently and at a slowing rate. Within the sector, spending growth has differed significantly by category. For example, auto sales have grown strongly in recent months, but several big chains and other merchants are forecasting a tough 2015 holiday season.

A new, powerful data asset—the JPMorgan Chase Institute “Profiles of Local Consumer Commerce”—allows us to shed light on these ambiguous indicators. With this new data set, we can analyze important characteristics of the transactions between consumers and businesses at the point of sale and at the neighborhood, city, and metropolitan-area levels. In this initial report, we use these data to explore the marked 4.5 percentage point slowdown in the growth of local consumer commerce between Q2 2014 and Q2 2015. Specifically, we identify the contribution of different consumer and business segments to this slowdown.

15 Metro Area Local Consumer Commerce YOY Growth



## Profiles of Local Consumer Commerce Data

**15 Cities**

**48 Million**  
Anonymized JPMorgan Chase Customers

**Age**  
How do older and younger consumers spend differently?

We use 12.4 billion credit and debit card transactions of 48 million JPMorgan Chase customers conducted over 34 months to analyze the growth of local consumer commerce at business establishments in 15 metropolitan areas. We analyze how the growth of local consumer commerce is shaped by the age and income of the consumer, the products sold by the business and its size, and the residence of the consumer relative to the business.

**12.4 Billion**  
Debit & Credit Card Transactions

**Income**  
Does spending grow more quickly for higher income consumers or lower income consumers?

**34 Months**  
October 2012 to July 2015

**Business Size**  
Do large businesses contribute more to spending growth than Small and Medium Enterprises?

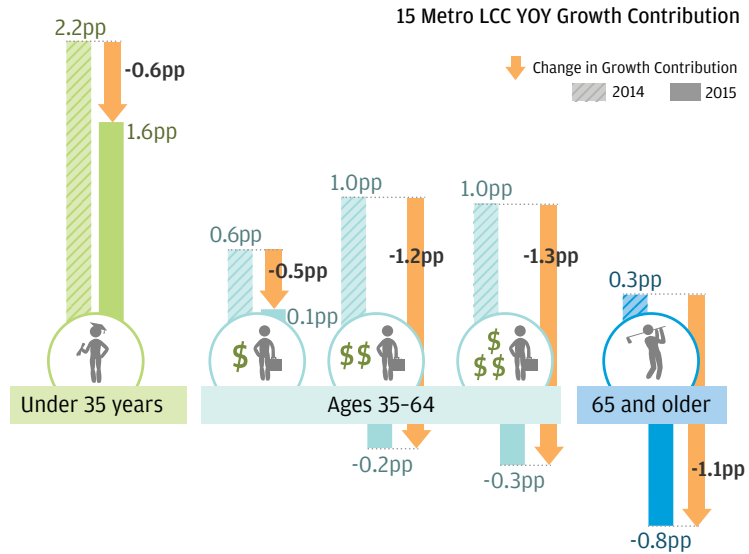
**Product Type**  
How does spending differ across durable goods, nondurable goods, and services?

**Consumer Residence**  
Do consumers who live in the same area as a business spend more or less than those who live farther away?

**Finding One**

Middle- and high-income consumers, and consumers ages 65 and older, were responsible for most of the slowdown in growth, while low-income consumers and those under 35 maintained relatively stable spending growth.

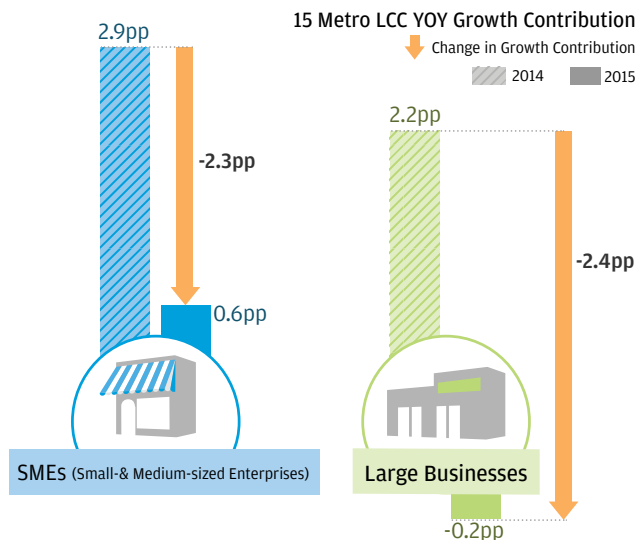
We attribute the slow-down in spending growth to higher-income and older consumers, whose spending fell significantly from a moderate level of growth. This contrasts with young consumers, whose spending continued to grow healthily, and with low-income consumers, whose spending slowed but is still rising.



**Finding Two**

Spending at large businesses shrunk more than spending at small- and medium-sized enterprises (SMEs), though SMEs accounted for almost as much of the slowdown in local consumer commercial spending as large businesses.

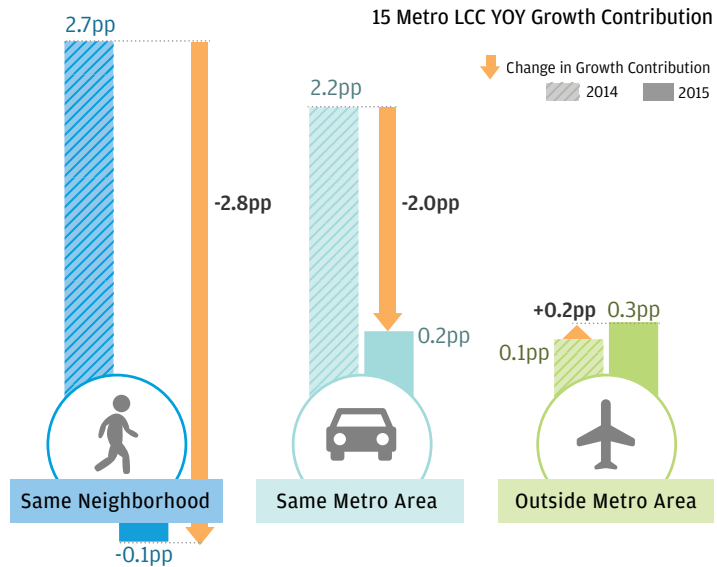
Spending growth at large businesses fell sharply, from an increase of nearly 7 percent from Q2 2013 to Q2 2014 to a decline of almost 1 percent from Q2 2014 to Q2 2015. Spending growth at small- and medium-sized enterprises also slowed, though to a lesser extent. However, SMEs account for nearly 70 percent of local consumer commerce sales. As a result, SMEs contributed nearly as much to the slowdown in growth of local consumer commerce as large businesses.



## Finding Three

The growth of spending by consumers at businesses in their own metropolitan areas slowed the most, particularly at businesses in their own neighborhoods.

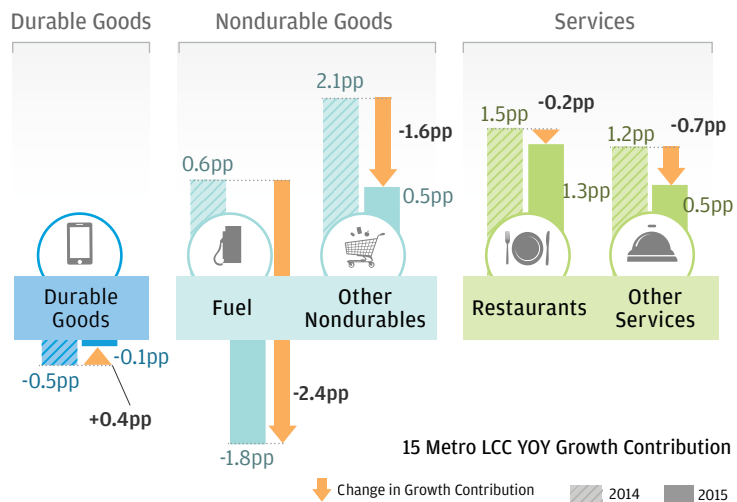
We attribute the slowdown in spending growth to considerably fewer purchases by residents from businesses in their neighborhood—spending plummeted from a 9 percent growth rate to zero. Purchases by residents from businesses within the same metropolitan-area (but not in the same neighborhood) also fell, but not as steeply. In contrast, spending by out-of-town consumers rose, although they represent a much smaller share of total metropolitan-area sales.



## Finding Four

Spending growth at businesses that sell fuel and other nondurable goods slowed dramatically, and not only because of price declines.

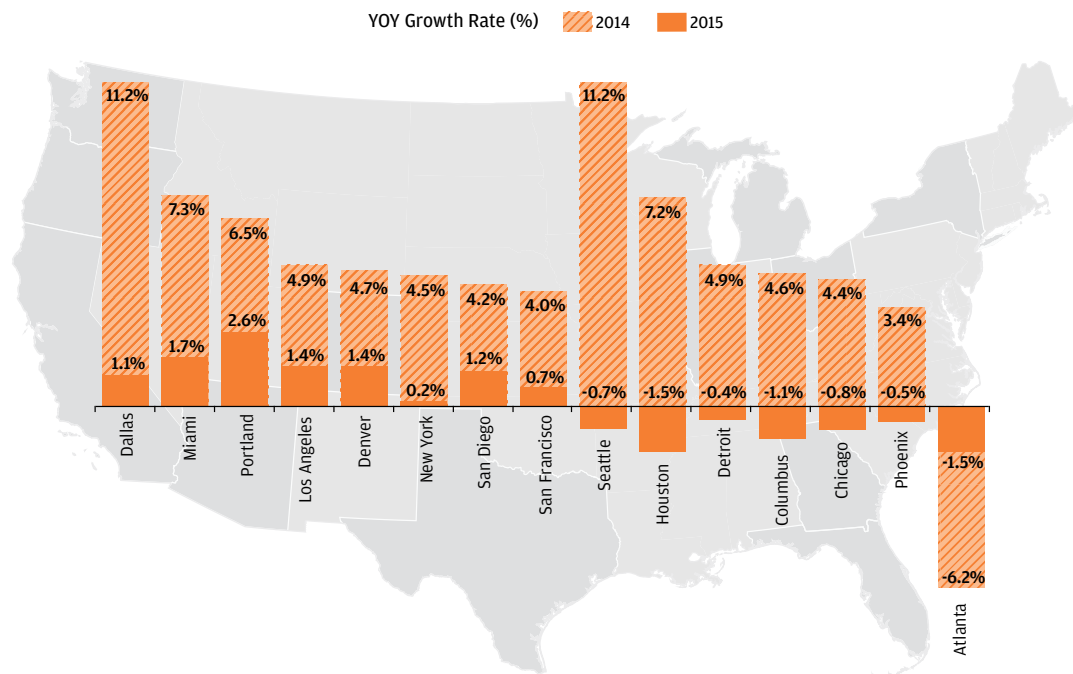
We attribute the slowdown in spending growth to businesses that sell fuel and other nondurable goods. While fuel was a small share of total spending, the sharp decline in gas prices contributed significantly to the overall slowdown in local consumer commerce. Nearly as important was a slowdown in spending on other nondurables, notably apparel, food, medical commodities, and recreational goods. Among these other nondurables, price declines contributed only to slowing spending on apparel, and just in part. Restaurants and other services continued to see moderate, but leveling, growth.



**Finding Five**

**Strong and diverse growth across most metropolitan areas from Q2 2013 to Q2 2014 has slowed to tepid growth across the board from Q2 2014 to Q2 2015.**

We find weaker spending in nearly all 15 metropolitan areas, with no city experiencing particularly strong growth. Local consumer commercial growth among the 15 cities ranged from -1.5 percent to 2.6 percent between Q2 2014 and Q2 2015. In contrast, spending growth rates rose in most of the cities between Q2 2013 and Q2 2014, with a range of 2.7 percent to 11.2 percent. Atlanta was the exception, showing a decline in local consumer commerce in both periods.



Our analyses show that changes in spending by higher-income older consumers played a major role in the slowdown of spending growth, as did spending at both SMEs and large businesses, spending on nondurable goods including but not limited to fuel, and spending by customers at the businesses closest to home. Over time, Profiles of Local Consumer Commerce will provide monthly data on commercial vibrancy at the national and city level and will be released on a quarterly basis. We hope our ongoing data series will serve as a rich platform to help answer important questions about the consumer sector, the dominant sector of the economy.

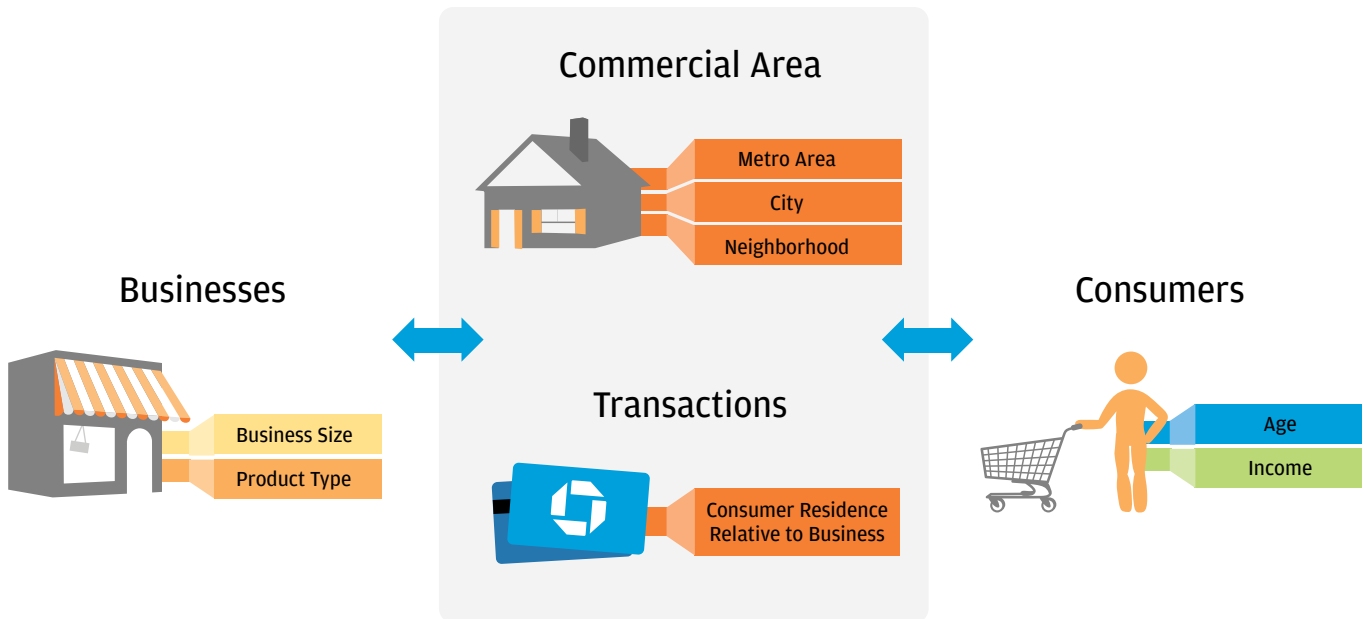
# Introduction

New research from the JPMorgan Chase Institute shows that the growth of consumers' everyday spending on most goods and services in 15 major U.S. metropolitan areas has slowed dramatically, from 5 percent in the second quarter of 2014 to 0.5 percent in the comparable period in 2015.

To be sure, the economic data are puzzling. Gross domestic product has increased every quarter except for Q1 2014 in the past four years, but in fits and starts. Auto sales continue to grow strongly, but spending on fuel has plummeted. Unemployment is down and corporate profits are solid. However, growth in retail sales, excluding autos, is weak, and several big chains and other merchants are forecasting a tough 2015 holiday season.

These ambiguous signals suggest that the available public data are insufficiently granular to explain what is really happening locally between consumers and businesses. A local consumer commerce perspective is essential to gain a richer understanding of the consumer sector, the major component of the U.S. economy.

To that end, the JPMorgan Chase Institute is releasing a new data series that captures the day-to-day purchases consumers make using credit and debit cards. We focus on the purchases directly related to consumers' shorter-term needs rather than investments in more durable goods, such as autos, that may require forms of longer-term financing. We create this data asset from the 12.4 billion anonymized credit and debit card transactions completed by 48 million anonymized card customers from October 2012 to July 2015 in 15 metropolitan areas.<sup>1</sup> Our portfolio of cities mirrors the geographic and economic diversity of larger metropolitan areas in the United States and accounts for 32 percent of retail sales nationwide.<sup>2</sup>





With this powerful data set, we are able to analyze important characteristics of the transactions between consumers and businesses at the point of sale and at the neighborhood, city, and metropolitan-area levels.

In this initial report, we use this new data series to explore the marked 4.5 percentage point slowdown in local consumer commerce across 15 metropolitan areas between Q2 2014 and Q2 2015. In summary, we attribute the slowdown between these two periods to:

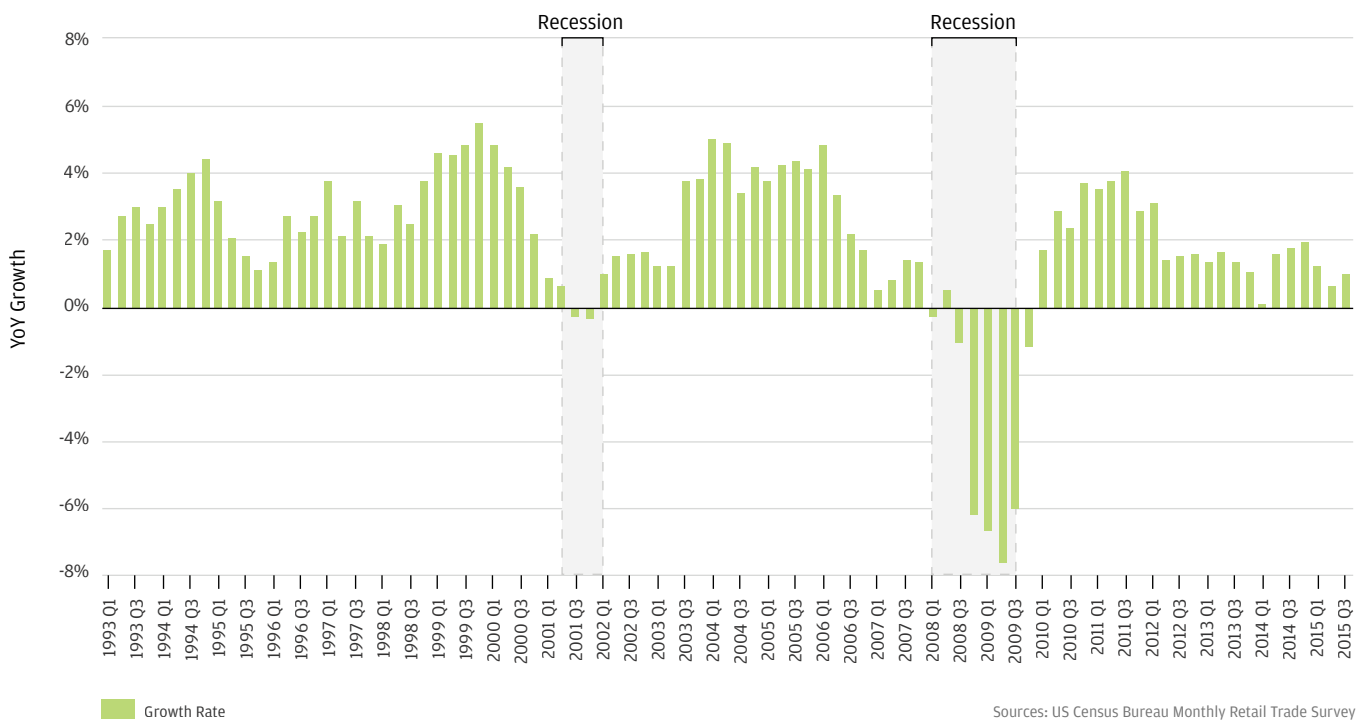
- Higher-income and older consumers, whose spending fell significantly from a moderate level of growth. This contrasts with young consumers, whose spending continued to grow healthily, and with low-income consumers, whose spending slowed but is still rising.
- A sharp fall in spending growth at large businesses, from rising nearly 7 percent from Q2 2013 to Q2 2014 to declining almost 1 percent from Q2 2014 to Q2 2015. Spending growth at small- and medium-sized enterprises (SMEs) also slowed, although to a lesser extent. However, SMEs comprise nearly 70 percent of local consumer commerce sales, which led them to contribute nearly as much to the slowdown in growth of local consumer commerce as large businesses.
- Considerably fewer purchases by residents from businesses in their neighborhood—spending plunged from a 9 percent growth rate to zero. Purchases by residents from businesses within the same metropolitan area (but not in the same neighborhood) also fell, but not as steeply. In contrast, purchases by out-of-town consumers from local businesses rose, although they represent a much smaller share of total metropolitan-area spending.
- Businesses that sell fuel and other nondurable goods. While fuel is a small share of total spending, the sharp decline in gas prices was a major contributor to the overall slowdown in local consumer commerce. Nearly as important was a slowdown in spending on other nondurables, notably apparel, food, medical commodities, and recreational goods (price declines were partially responsible for the slowing spending on apparel, but not for the other categories). Restaurants and other services continued to see moderate, but leveling, growth.
- Weaker spending in nearly all 15 metropolitan areas, with no city experiencing particularly strong growth. Local consumer commercial growth among the 15 cities ranged from -1.5 percent to 2.6 percent between Q2 2014 and Q2 2015. In contrast, spending growth rates rose in most of the cities between Q2 2013 and Q2 2014, with a range of 2.7 percent to 11.2 percent. Atlanta was the exception, showing a decline in local consumer commerce in both periods.

The JPMorgan Chase Institute will issue updated data on a quarterly basis on our website. In doing so, we wish to provide an ongoing source of rich data that can advance the understanding of local consumer commerce in aggregate and in the 15 selected metropolitan areas. The data comprise five important dimensions: the age and income of consumers, the size of the merchant and the type of product it sells, and the residence of the consumer relative to the location of the merchant. This report covers the first release of the series, which we title “Profiles of Local Consumer Commerce.”

# Profile of a Slowdown

The recovery from the global financial crisis has proceeded erratically since mid-2009. Consumer spending has grown in the ensuing six years, although observers have had difficulty accounting for changes in the overall U.S. economy that might have produced the ups and downs in retail activity. Survey measures suggest that personal consumption has risen, though year-on-year growth slowed through the beginning of 2015.<sup>3</sup> Gross domestic product, of which personal consumption is nearly 70 percent, has grown by every quarter except for Q1 2014, though irregularly so. Growth in the S&P 500 suggests that investors have confidence in rising corporate profits, though markets have been far from steady.

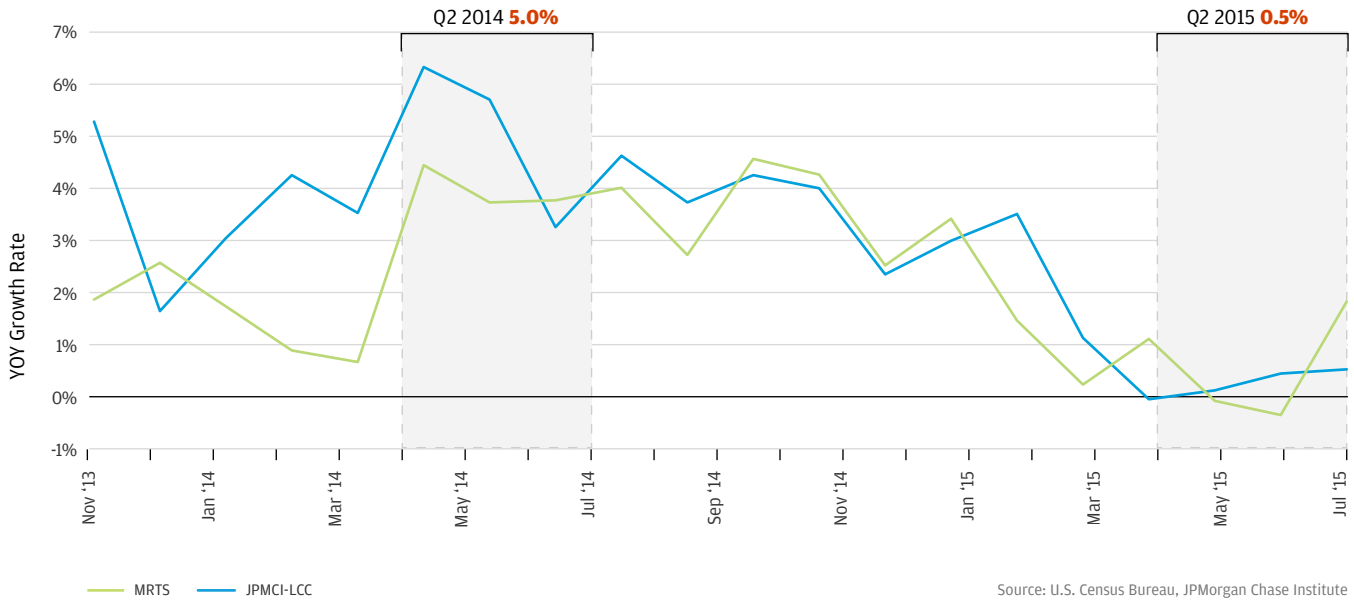
Figure 1: Year-over-Year Growth of Real Retail Spending excluding Autos: 1993–2015



The Census Monthly Retail Trade Survey (MRTS) offers one view of the growth in everyday spending in U.S. metropolitan areas. Figure 1 shows the year-over-year growth of real retail spending, excluding automobile purchases.<sup>4</sup> In the early quarters after the 2009 recession, real spending grew at a level commonly seen in many other non-recessionary periods dating to 1993. In contrast, real spending growth has been less robust in more recent quarters, particularly in the last year. While retail spending is certainly still rising, it is growing less robustly in real terms than it has in many other periods over the past 20 years, and appears to have slowed in recent months.

This uncertainty about the direction of the economy makes it increasingly important to understand how consumers are faring. In particular, we draw attention to local consumer commerce—a view of the purchase by consumers of goods and services that play a direct role in shaping urban economies. We focus on the day-to-day purchases consumers make using credit and debit cards—purchases directly related to short-term needs rather than investment in goods that may require other forms of long-term financing. In addition, we look closely at purchases from businesses with a local presence in a metropolitan area, including some that sell goods and services online. These local enterprises are an integral part of their communities, offering goods and services that local consumers value, providing jobs, and generating tax revenue.

Figure 2: Year-over-Year Growth in 15 Metro Local Consumer Commerce and Retail Sales



Our new local consumer commerce data series (JPMCI-LCC) shows that everyday spending grew 5 percent from Q2 2013 to Q2 2014, but only 0.5 percent from Q2 2014 to Q2 2015,<sup>5</sup> as shown in Figure 2. The MRTS offers a similar view. Nominal year-over-year sales growth excluding automobile purchases estimated by MRTS fell in mid-2012, and then dropped precipitously from Q2 2014 to Q2 2015, reaching a negative year-over-year growth rate in Q2 2015. The slowdown observed by MRTS is not entirely due to decreased spending on fuel. Both real and nominal spending observed by MRTS excluding both automobiles and fuel grew more from Q2 2013 to Q2 2014 than it did from Q2 2014 to Q2 2015, though less markedly.

In this report, we arrive at five key findings with respect to the 4.5 percentage point slowdown in local consumer commerce in the past year.

# Findings

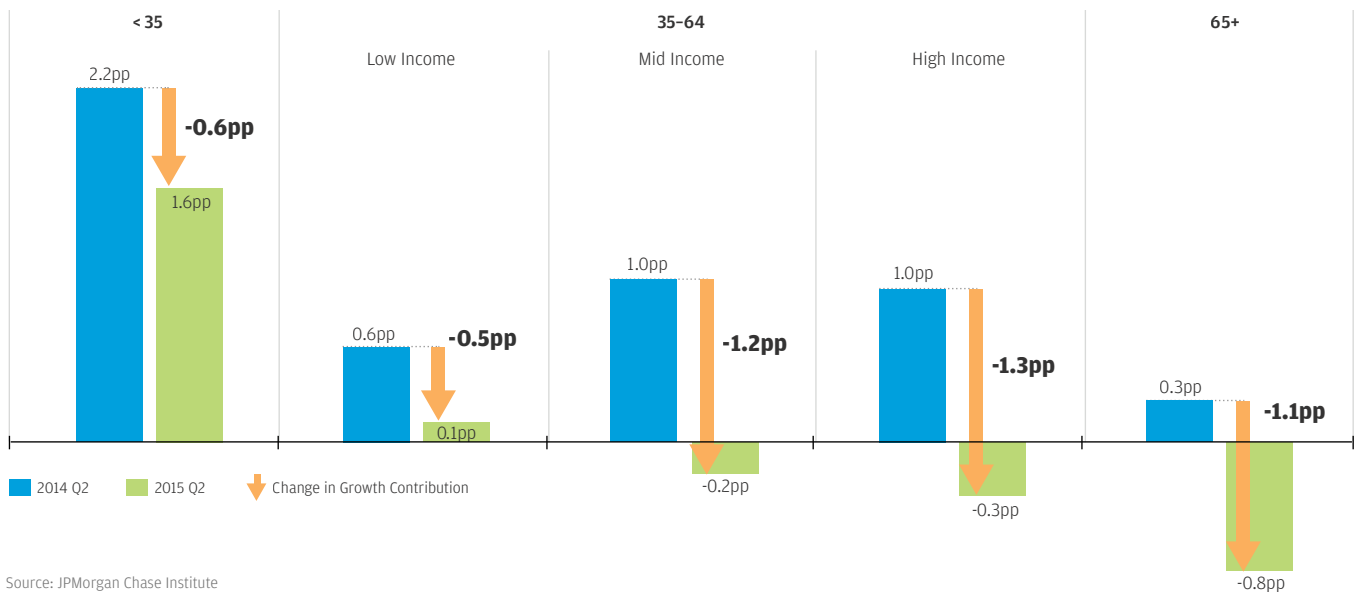
## Finding One

Middle- and high-income consumers, and consumers ages 65 and older, were responsible for most of the slowdown in growth, while low-income consumers and those under 35 maintained relatively stable spending growth.

We attribute the slowdown in spending growth to higher-income and older consumers, whose spending fell significantly from a moderate level of growth. This contrasts with young consumers, whose spending continued to grow healthily, and with low-income consumers, whose spending slowed but is still rising.

We first explore the simultaneous impact of consumer age and income on local consumer commercial spending. Spending is largely driven by income, which for many consumers is strongly related to their age. We define five age and income segments that best explain this pattern (see Data and Methodology for details of this segmentation). Based on these segments, our analyses show that middle-income and high-income consumers ages 35 to 64, and consumers 65 and older, were responsible for most of the slowdown in growth, while low-income consumers 35 to 64 and those under 35 maintained relatively stable spending growth.

Figure 3: Changes in 15 Metro LCC Year-Over-Year Growth Contribution by Age/Income Segment



Source: JPMorgan Chase Institute

Figure 3 shows the contributions<sup>6</sup> to growth by consumers in different age and income segments, and the extent to which growth contributions from Q2 2014 to Q2 2015 were lower than those from Q2 2013 to Q2 2014. Consumers under 35 contributed 1.6 percentage points to growth from Q2 2014 to Q2 2015, down 0.6 percentage points from their 2.2 percentage point contribution to growth from Q2 2013 to Q2 2014. Low-income consumers 35 to 64 contributed 0.1 percentage points to growth from Q2 2014 to Q2 2015, down 0.5 percentage points from their 0.6 percentage point contribution to growth from Q2 2013 to Q2 2014. We attribute these smaller decreases in growth contribution to the slight drop in spending growth rate among younger consumers and to the small share of spending by low-income consumers 35 to 64. In contrast, high-income consumers 35 to 64 subtracted 0.3 percentage points from growth from Q2 2014 to Q2 2015, down 1.3 percentage points from their 1 percentage point contribution to growth from Q2 2013 to Q2 2014

Q2 2014. The contributions of middle-income consumers 35 to 64 and consumers 65 and older to local consumer commercial spending growth fell by a respective 1.2 and 1.1 percentage points over the same periods.

The contributions of middle- and high-income consumers 35 to 64 and consumers 65 and older declined by such large amounts because these segments were responsible for a large share of spending, and experienced significant decreases in spending growth over the two periods.

**Figure 4: 15 Metro LCC Spending Share by Age/Income Segment**



Figure 4 shows the share of local consumer commercial spending across these segments. Viewed through the lenses of age and income, consumer spending levels changed little from Q2 2014 to Q2 2015. However, middle- and high-income consumers were responsible for considerable amounts of spending. Middle-income consumers accounted for 25.8 percent of spending in Q2 2015, and high-income consumers 35 to 64 were responsible for 21.4 percent of spending in Q2 2015. At 22.2 percent, consumers under 35 also accounted for a large share of spending in Q2 2015.

Miami millennials like to spend. In Miami, consumers under the age of 25 made up 10% of the spending in 2015 Q2, more than in any other metro area.

**Figure 5: 15 Metro LCC Year-over-Year Growth Rate by Age/Income Segment**



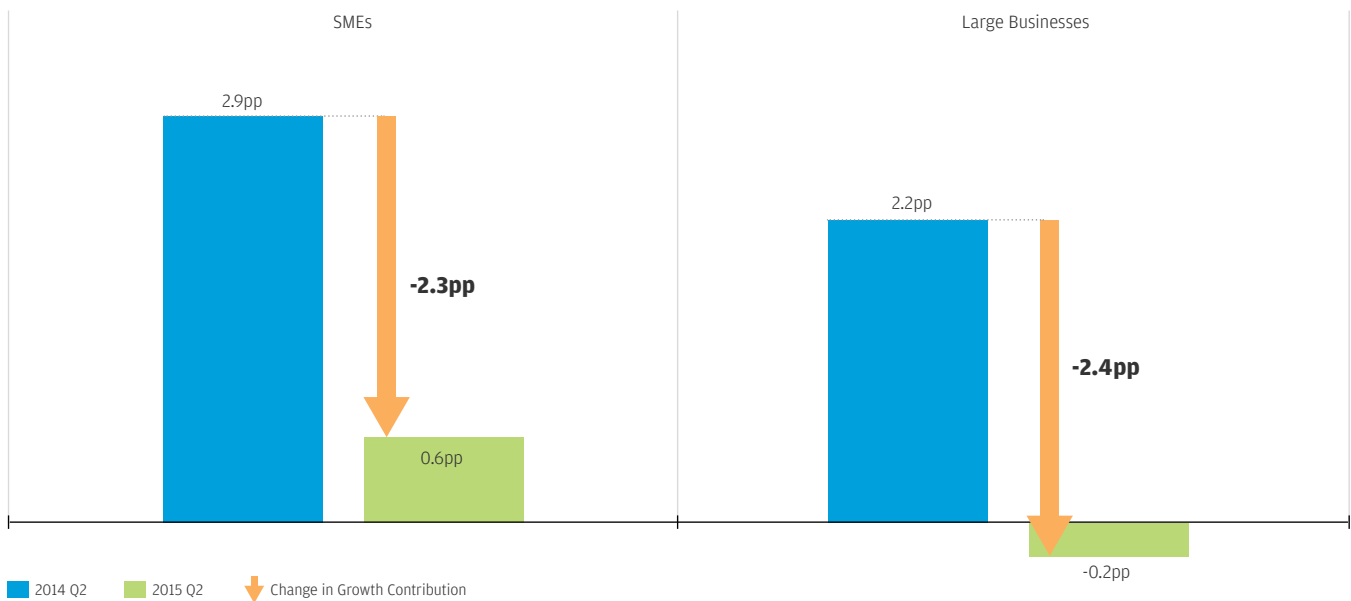
While percentage spending shares were relatively constant from Q2 2014 to Q2 2015, spending growth by age and income changed significantly. Figure 5 compares the spending growth of each segment from Q2 2013 to Q2 2014 with the spending growth of the same segment from Q2 2014 to Q2 2015. In each period, the spending of consumers under 35 grew more rapidly than the spending of those 35 to 64, and the spending of consumers 35 to 64 rose faster than the spending of those 65 and older. Moreover, the spending of each age and income segment grew more rapidly from Q2 2013 to Q2 2014 than it did from Q2 2014 to Q2 2015. This basic pattern of spending growth is consistent with a life-cycle model of consumption, which suggests that individuals' spending declines after age 40 (Gourinchas & Parker, 2002). However, the important difference between these two periods is the extent to which these growth rates differ. The spending of consumers under 35 increased 10 percent from Q2 2013 to Q2 2014, and 7.7 percent from Q2 2014 to Q2 2015—a difference of 2.3 percentage points. The spending of low-income consumers 35 to 64 grew 5.1 percent from Q2 2013 to Q2 2014 and 1 percent from Q2 2014 to Q2 2015—a difference of 4.1 percentage points. In contrast, the spending of high-income consumers 35 to 64 rose 4.4 percent from Q2 2013 to Q2 2014, but decreased 1.5 percent from Q2 2014 to Q2 2015—a difference of 5.9 percentage points. The decreases for middle-income consumers 35 to 64 and consumers 65 and over were similarly large—4.7 and 5.7 percentage points, respectively. While the spending growth rates of younger, lower-income consumers were relatively stable, older, higher-income consumers experienced pronounced decreases in spending growth rates.

**Finding  
Two**

Spending at large businesses shrunk more than spending at small- and medium-sized enterprises (SMEs), though SMEs accounted for almost as much of the slowdown in local consumer commercial spending as large businesses.

Spending growth at large businesses<sup>7</sup> fell sharply, from an increase of nearly 7 percent from Q2 2013 to Q2 2014 to a decline of almost 1 percent from Q2 2014 to Q2 2015. Spending growth at small- and medium-sized enterprises also slowed, though to a lesser extent. However, SMEs account for nearly 70 percent of local consumer commerce sales. As a result, SMEs contributed nearly as much to the slowdown in growth of local consumer commerce as large businesses.

Figure 6: Changes in 15 Metro LCC Year-over-Year Growth Contribution by Business Size

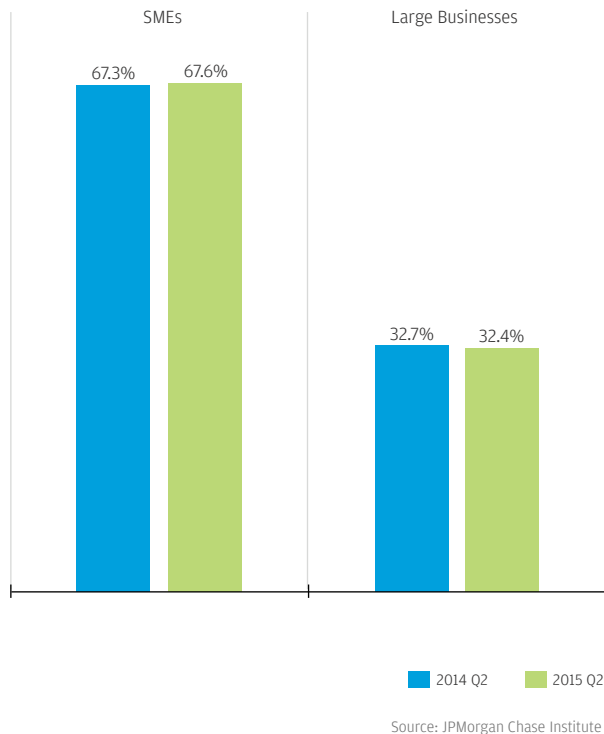


Source: JPMorgan Chase Institute

Figure 6 shows the contribution to local consumer commercial spending growth for large businesses and SMEs. The net change in contribution to growth was nearly evenly split across large businesses and SMEs. The contribution from large businesses dropped 2.4 percentage points, from a rise of 2.2 percentage points from Q2 2013 to Q2 2014 to a decline of 0.2 percentage points from Q2 2014 to Q2 2015. The net change in contribution to growth of SMEs was nearly as large, dropping 2.3 percentage points, from 2.9 to 0.6 percentage points.

Why did the growth contribution of large businesses and SMEs fall by similar amounts? The sharper drop in the growth rate of local commercial spending at SMEs and their relatively large share of overall local commercial spending results in substantial differences in the change in the growth contribution attributable to businesses of different sizes between Q2 2013 and Q2 2014 and Q2 2014 and Q2 2015.

**Figure 7: 15 Metro LCC Spending Share by Business Size**



**Figure 8: 15 Metro LCC Year-over-Year Growth Rate by Business Size**

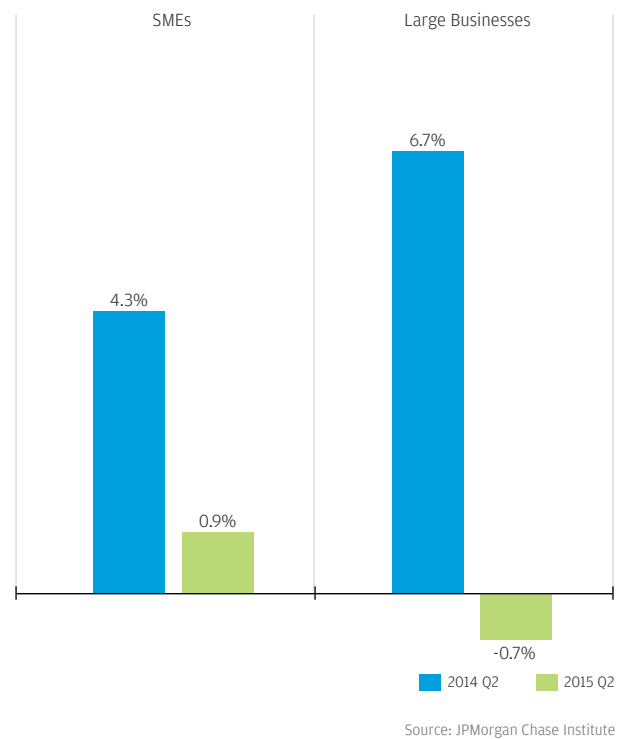


Figure 7 shows the share of local consumer commercial spending at large businesses and SMEs. The distribution of spending between large businesses and SMEs was mostly unchanged between Q2 2014 and Q2 2015, and consumers spent more at SMEs than they did at large businesses in both periods—67.3 percent in Q2 2014 and 67.6 percent in Q2 2015.

The large share of spending at SMEs magnified a significant drop in growth rates in local consumer commercial spending at SMEs from Q2 2014 to Q2 2015. Figure 8 illustrates the growth rates for local consumer commercial spending at large businesses and SMEs for Q2 2013 to Q2 2014 and Q2 2014 to Q2 2015. From Q2 2013 to Q2 2014, local consumer commercial spending grew 6.7 percent at large businesses, while it rose only 4.3 percent at SMEs. From Q2 2014 to Q2 2015, spending fell 0.7 percent at large businesses, but grew by 0.9 percent at SMEs.

New York City loves its bodegas and bookstores. Consumers in the Big Apple spent more at small and medium enterprises—roughly 75% of all spending in 2015 Q2—than in any other metro area.

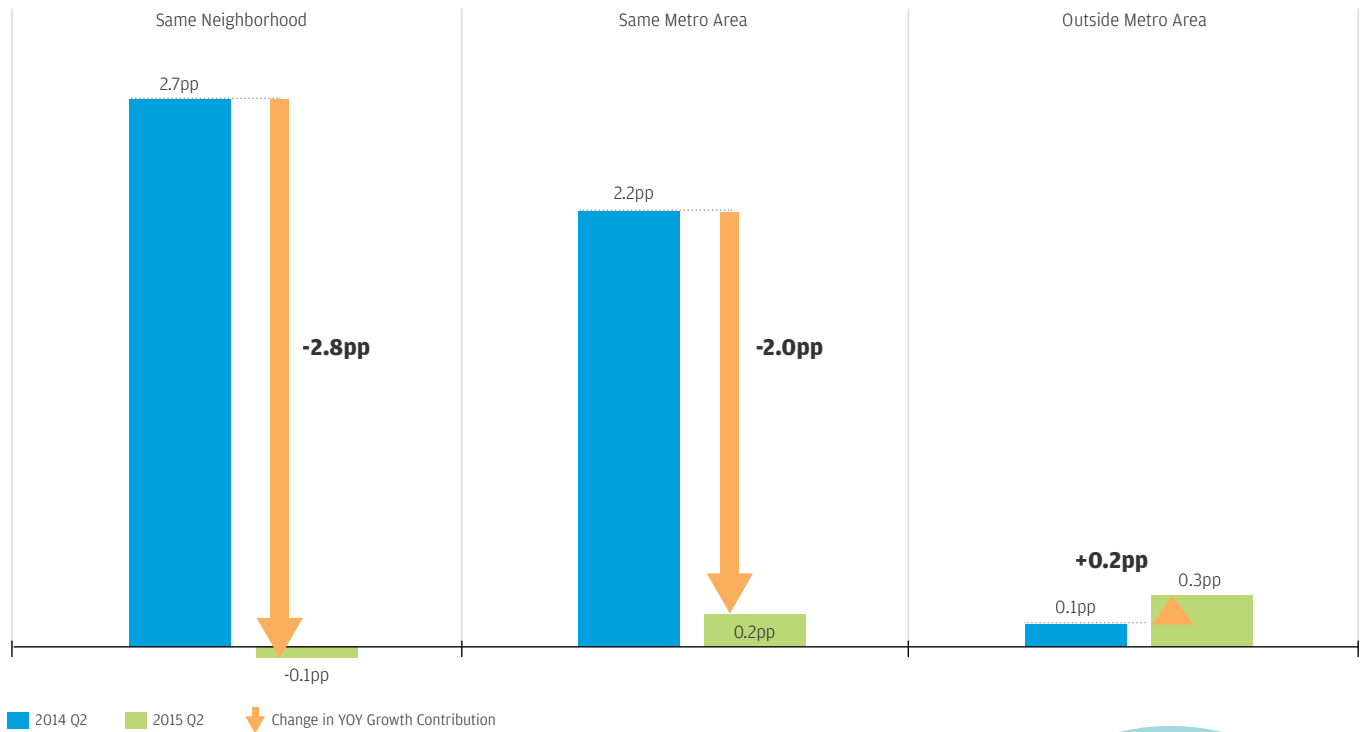
Big business is big in Ohio. Consumers spent more at large businesses in Columbus than in any other metro area, at 46% of total spending in 2015 Q2.

**Finding Three**

The growth of spending by consumers at businesses in their own metropolitan areas slowed the most, particularly at businesses in their own neighborhoods.<sup>8</sup>

We attribute the slowdown in spending growth to considerably fewer purchases by residents from businesses in their neighborhood—spending plummeted from a 9 percent growth rate to zero. Purchases by residents from businesses within the same metropolitan area (but not in the same neighborhood) also fell, but not as steeply. In contrast, spending by out-of-town consumers rose, although they represent a much smaller share of total metropolitan-area sales.

Figure 9: Changes in 15 Metro LCC Year-over-Year Growth Contribution by Consumer Residence



Source: JPMorgan Chase Institute

Figure 9 shows that consumers from the same neighborhood as the business contributed 2.7 percent to growth in local consumer commercial spending between Q2 2013 and Q2 2014, but that their contribution decreased 2.8 percentage points to a subtraction of 0.1 percentage points from Q2 2014 to Q2 2015. Similarly, consumers from the same metropolitan area as the business contributed 2.2 percentage points to growth from Q2 2013 to Q2 2014, but only 0.2 percentage points from Q2 2014 to Q2 2015, a decrease of 2 percentage points. In contrast, consumers from a different metropolitan area than the business increased growth by only 0.1 percentage points from Q2 2013 to Q2 2014,

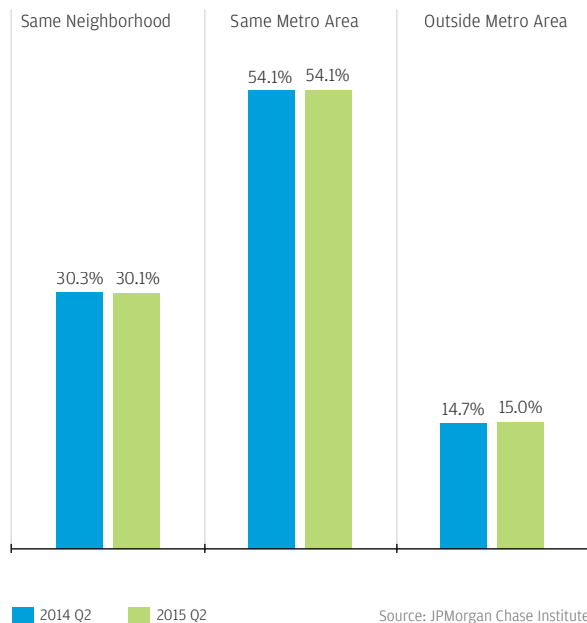
In Detroit, 43% of sales came from residents shopping in the same neighborhood where they live in 2015 Q2, more than in any other metro area.



but by 0.3 percentage points from Q2 2014 to 2015, an acceleration of 0.2 percentage points. While these consumers made only a small contribution to growth in either period, their change in spending behavior between Q2 2014 and Q2 2015 slightly offset the deceleration in growth of their local consumers.

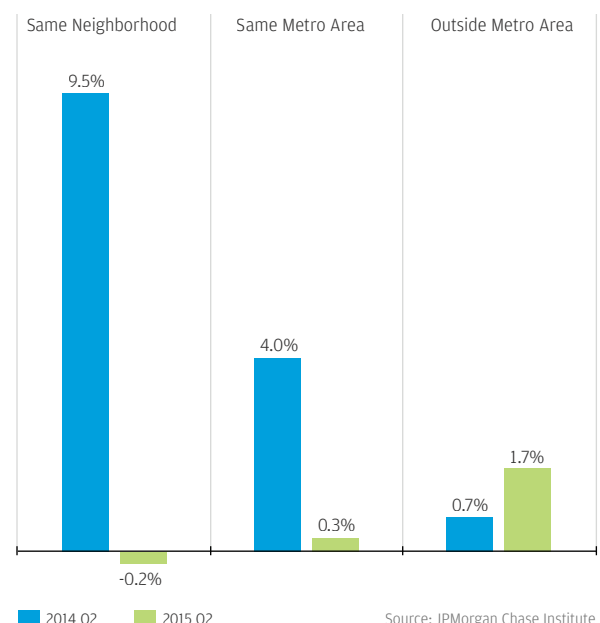
The decreased contribution of local consumers resulted from a combination of their large share of spending and an inversion in growth rates.

**Figure 10: 15 Metro LCC Spending Share by Consumer Residence**



Not surprisingly, most local consumer commerce occurs between consumers who live in the same metropolitan area as the businesses they frequent. Figure 10 shows the share of spending by the distance between the consumer and the business in Q2 2014 and Q2 2015, and illustrates the stability of this measure over the two periods. Specifically, 84.4 percent of spending came from consumers in the same neighborhood or metropolitan area as a business in Q2 2014, and 84.2 percent of spending originated with consumers in the same neighborhood or metropolitan area as a business in Q2 2015.

**Figure 11: 15 Metro LCC Year-over-Year Growth Rate by Consumer Residence**



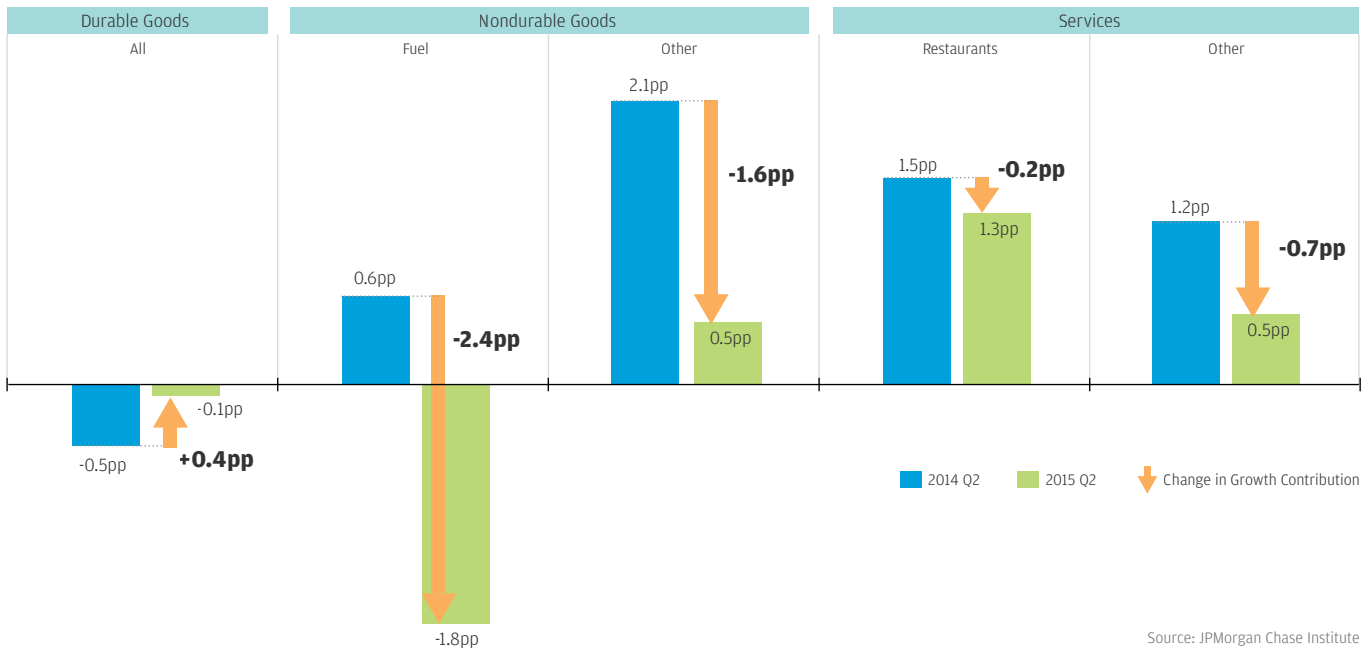
On the other hand, growth rates in spending changed significantly. Figure 11 shows the year-over-year growth rate of local consumer commercial spending for these groups of consumers. From Q2 2013 to Q2 2014, spending by consumers who live nearest to the business grew the most rapidly. Spending by consumers who live in the same neighborhood as a business rose 9.5 percent, spending by consumers who live in the same metropolitan area (but not the same neighborhood) increased 4 percent, and spending by consumers who live outside of the metropolitan area grew 0.7 percent. In contrast, from Q2 2014 to Q2 2015, spending by those consumers who live farthest from the business grew the most rapidly. Spending by consumers from the same neighborhood as the business was nearly flat, declining 0.2 percent; spending by consumers from the same metropolitan area grew only 0.3 percent; and spending by consumers from outside the metropolitan area rose 1.7 percent.

**Finding Four**

**Spending growth at businesses that sell fuel and other nondurable goods slowed dramatically, and not only because of price declines.**

We attribute the slowdown in spending growth to businesses that sell fuel and other nondurable goods. While fuel was a small share of total spending, the sharp decline in gas prices contributed significantly to the overall slowdown in local consumer commerce. Nearly as important was a slowdown in spending on other nondurables, notably apparel, food, medical commodities, and recreational goods. Among these other nondurables, price declines contributed only to slowing spending on apparel, and just in part. Restaurants and other services continued to see moderate, but leveling, growth.

**Figure 12: Changes in 15 Metro LCC Year-over-Year Growth Contribution by Product Type**



Source: JPMorgan Chase Institute

Figure 12 shows the contribution to growth by product type from Q2 2013 to Q2 2014 compared with Q2 2014 to Q2 2015. Nondurable goods played a substantial part in the slowdown of local consumer commercial spending. In total, nondurable goods added 2.7 percentage points to local consumer commercial spending growth from Q2 2013 to Q2 2014, but decreased it by 1.3 percentage points from Q2 2014 to Q2 2015—a drop of 4 percentage points. Of this decrease, 2.4 percentage points are attributable to decreased spending on fuel, but a substantial 1.6 percentage points came from lower spending on other nondurable goods. While declining spending on fuel helps explain a large part of the deceleration of local spending, falling growth in other nondurable goods also played an important role.

Durables in Denver are strong. Consumers in Denver had the largest share of total spending on durable goods with 20% of total spending in 2015 Q2.

In contrast, the acceleration of spending on the durable goods that we observe as local consumer commerce slightly offset the overall deceleration in spending growth. These goods subtracted 0.5 percentage points from growth from Q2 2013 to Q2 2014 but only 0.1 percentage points from growth from Q2 2014 to Q2 2015, a net gain of 0.4 percentage points.

Services contributed to the slowdown of local consumer commercial spending, although much less so than nondurable goods. Restaurants added 1.5 percentage points of growth between Q2 2013 and Q2 2014, but only 1.3 percentage points of growth from Q2 2014 to Q2 2015, decelerating growth by a net 0.2 percentage points. Other services contributed 1.2 percentage points to growth from Q2 2013 to Q2 2014, but only 0.5 percentage points from Q2 2014 to Q2 2015. The slowdown in spending on other services subtracted a net 0.7 percentage points from overall local consumer commercial spending growth.

**Figure 13: Nominal and Real 15 Metro LCC Year-over-Year Growth Rate for Detailed Nondurable Goods**

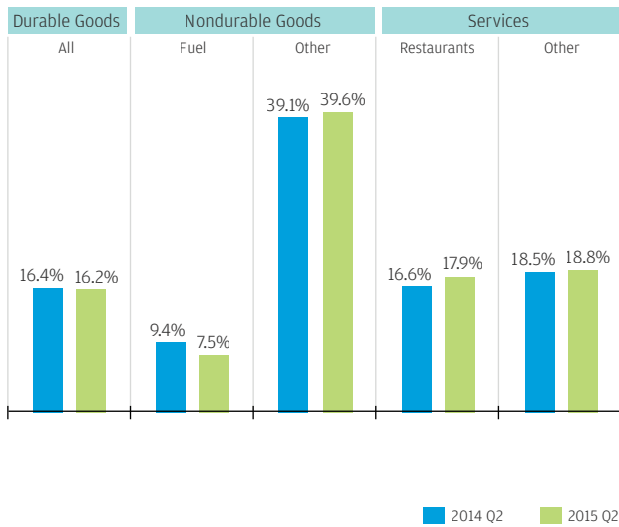


Sources: U.S. Bureau of Labor Statistics, JPMorgan Chase Institute

The significant decreases we observe in fuel spending growth are largely a result of the well-documented fall in gas prices rather than a decline in consumption (Farrell and Greig, 2015). However, our analyses suggest that price changes explain only 1 percentage point of the 4.2 percentage point change, or 19 percent of the slowdown in spending on other nondurable goods. Figure 13 indicates that in nominal terms, spending on other nondurable goods grew 6 percent from Q2 2013 to Q2 2014, and 0.8 percent from Q2 2014 to Q2 2015. In real terms, local consumer commercial spending on other nondurable goods rose only 4.0 percent from Q2 2013 to Q2 2014.<sup>9</sup> However, other nondurable goods decreased by 0.2 percent from Q2 2014 to Q2 2015 in real terms, a drop of 4.2 percentage points. While not quite as large as the 5.2 percentage point deceleration in nominal local consumer commercial spending on other nondurable goods, this result suggests that price changes played only a small role in the slowdown of spending growth on nondurables.

Why did spending on nondurable goods play such a large role in the slowdown of local consumer commercial spending growth? First, a relatively large share of local consumer commercial spending is on nondurable goods, and spending growth rates decreased more for nondurable goods than they did for other product types. Second, prices for nondurable goods decreased, although price effects explain only a small amount of the slowdown.

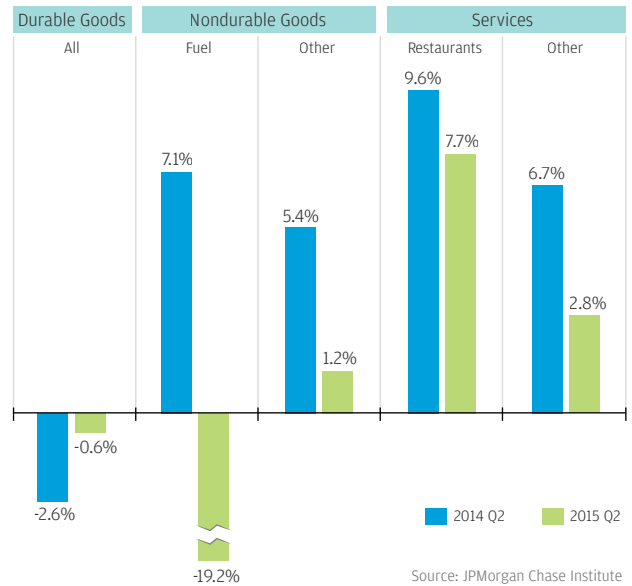
**Figure 14: 15 Metro LCC Spending Share by Product Type**



Source: JPMorgan Chase Institute

Figure 14 shows the share of spending by product type for each period. Consumers spent the most on nondurable goods. The share of spending on fuel eased, from 9.4 percent in Q2 2014 to 7.5 percent in Q2 2015, and the share of other nondurable goods was stable, edging up from 39.1 percent in Q2 2014 to 39.6 percent in Q2 2015. Consumers also spent a large amount on services. The share of spending on restaurants increased from 16.6 percent to 17.9 percent, and the share of spending on other services rose from 18.5 percent to 18.8 percent. The share of spending on the durable goods we observe as local consumer commerce<sup>10</sup> slipped from 16.4 percent in Q2 2014 to 16.2 percent in Q2 2015.

**Figure 15: 15 Metro LCC Year-over-Year Growth Rate by Product Type**



Source: JPMorgan Chase Institute

Figure 15 illustrates the growth of local consumer commercial spending by product types from Q2 2013 to Q2 2014 and Q2 2014 to Q2 2015. Spending on durable goods fell 2.6 percent from Q2 2013 to Q2 2014 but only 0.6 percent from Q2 2014 to Q2 2015. The rate of spending growth on services slowed slightly from Q2 2014 to Q2 2015, although from a relatively high level. Spending on restaurants grew 9.6 percent from Q2 2013 to Q2 2014, while spending on other services rose 6.7 percent over the same period. Spending growth on restaurants eased 1.9 percentage points, to 7.7 percent from Q2 2014 to Q2 2015, while spending growth on other services dropped 3.9 percentage points, to 2.8 percent.

Are Angelenos' appetites larger than the rest of the U.S.? Consumers in Los Angeles had the largest share of total spending—20%—on restaurants in 2015 Q2.

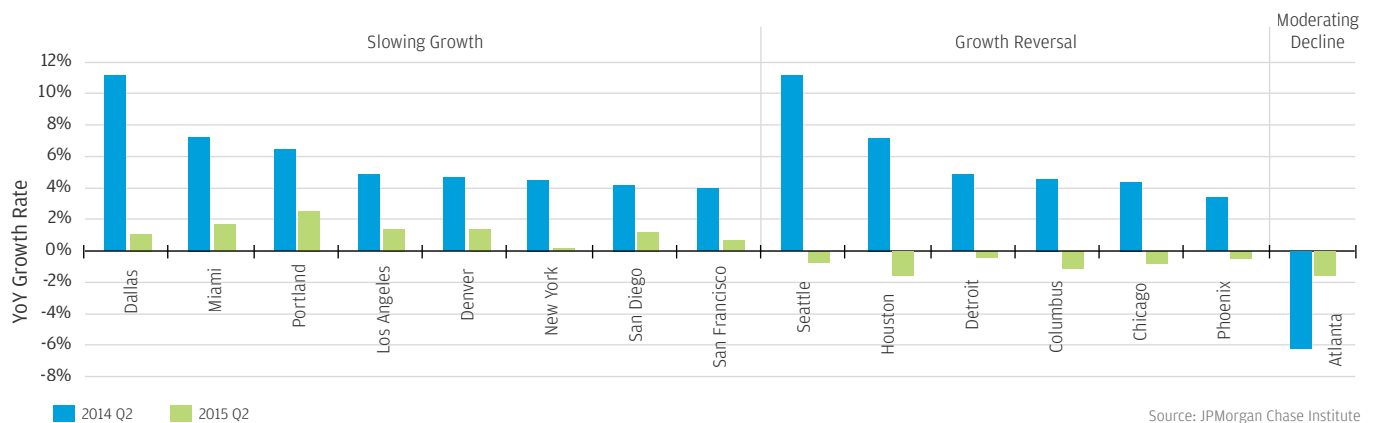
In contrast, the growth of spending on nondurable goods slowed substantially across these two periods. Spending on fuel grew 7.1 percent from Q2 2013 to Q2 2014, but declined 19.2 percent from Q2 2014 to Q2 2015, a 26.3 percentage point fall consistent with the well-documented drop in gas prices. In addition, the growth of spending on other nondurable goods also slowed significantly over this period. Spending on other nondurable goods grew 5.4 percent from Q2 2013 to Q2 2014, but only 1.2 percent from Q2 2014 to Q2 2015, a 4.2 percentage point drop.

**Finding  
 Five**

**Strong and diverse growth across most metropolitan areas from Q2 2013 to Q2 2014 has slowed to tepid growth across the board from Q2 2014 to Q2 2015.**

We find weaker spending in nearly all 15 metropolitan areas, with no city experiencing particularly strong growth. Local consumer commercial growth among the 15 cities ranged from -1.5 percent to 2.6 percent between Q2 2014 and Q2 2015. In contrast, spending growth rates rose in most of the cities between Q2 2013 and Q2 2014, with a range of 2.7 percent to 11.2 percent. Atlanta was the exception, showing a decline in local consumer commerce in both periods.

**Figure 16: Year-over-Year Growth Rates by Metropolitan Area**

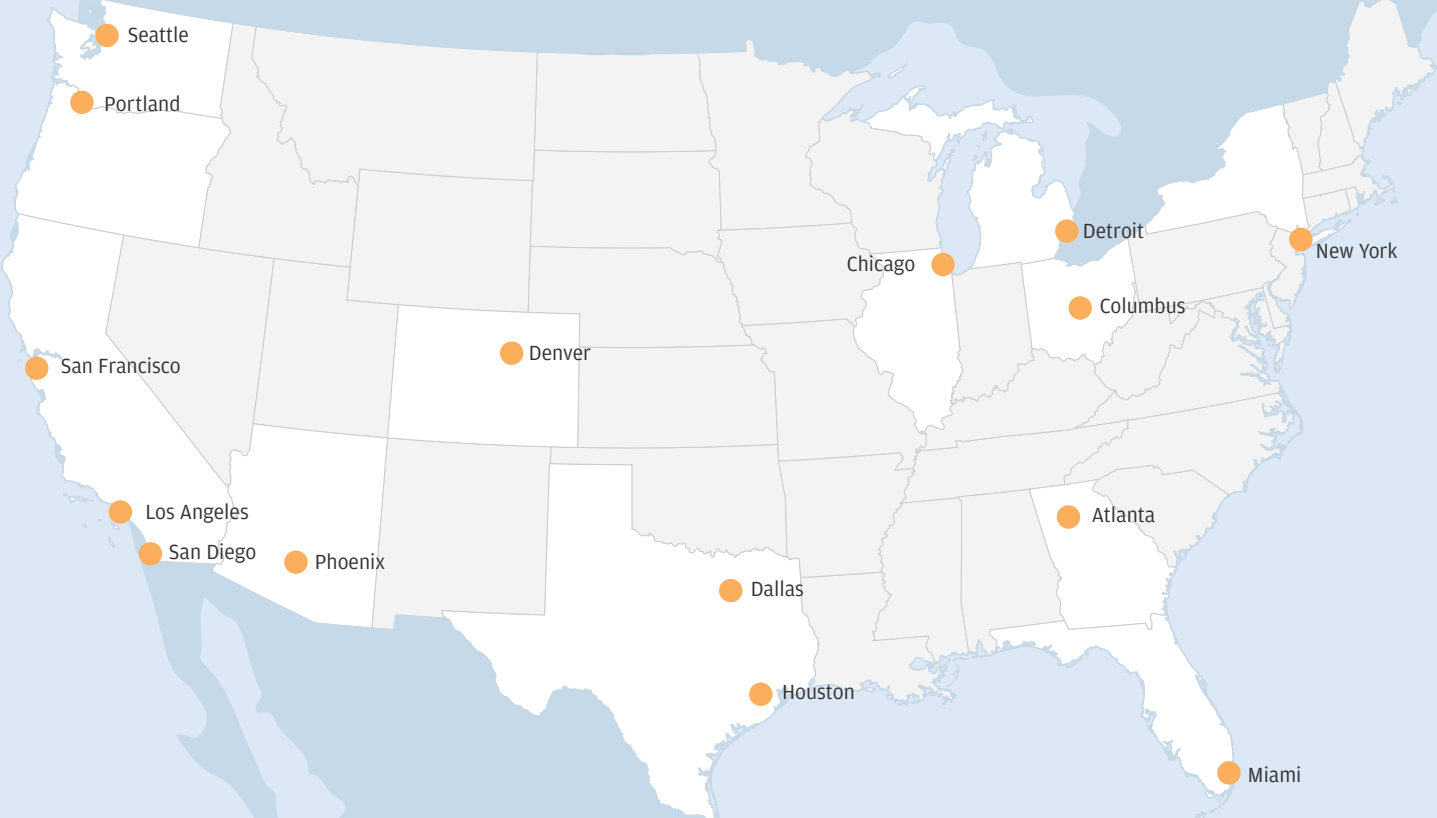


Most of the 15 U.S. metropolitan areas in our study experienced slower consumer commercial spending growth from Q2 2013 to Q2 2014 compared with Q2 2014 to Q2 2015, and the changes came in three distinct patterns. Figure 16 shows what happened in each area. The Dallas, Miami, Portland, Los Angeles, Denver, New York, San Diego and San Francisco metropolitan areas exhibited slowing growth. Local consumer commercial spending grew in each area in the periods from Q2 2013 to Q2 2014 and Q2 2014 to Q2 2015. Nevertheless, each area saw slower growth in the latter period than in the earlier period. The Seattle, Houston, Detroit, Columbus, Chicago and Phoenix metropolitan areas suffered a growth reversal. Local consumer commercial spending rose in each one from Q2 2013 to Q2 2014, but decreased from Q2 2014 to Q2 2015. Finally, the Atlanta metropolitan area experienced a moderating decline. Local consumer commercial spending dropped from Q2 2013 to Q2 2014 and Q2 2014 to Q2 2015. However, Atlanta had a less sharp fall between Q2 2014 and Q2 2015 than it did between Q2 2013 and Q2 2014.

In addition, the metropolitan areas that had the greatest increases in local consumer commercial spending from Q2 2013 to Q2 2014 had the biggest slowdown from Q2 2014 to Q2 2015. Specifically, local consumer commercial spending in the Dallas metropolitan area grew 11.2 percent from Q2 2013 to Q2 2014; spending rose 11.2 percent in the Seattle metropolitan area over the same period. Then, the growth rate in Dallas fell 10.1 percentage points to 1.1 percent from Q2 2014 to Q2 2015, while the growth rate in Seattle dropped 11.9 percentage points to a 0.7 percent decline in Q2 2015. In contrast, the growth rate in Atlanta rose 4.7 percentage points, from a negative 6.2 percent from Q2 2013 to Q2 2014 to a negative 1.5 percent from Q2 2014 to Q2 2015.

This result may be explained in part by reversion to the mean. To the extent that spending in the Dallas and Seattle metropolitan areas grew strongly in the 12 months to Q2 2014 (or that spending in the Atlanta metropolitan area decreased sharply in the same period), we might expect these areas to return to more typical growth rates in the 12 months to Q2 2015. Nonetheless, the differences highlight the distinct ways in which consumers and businesses in these communities experienced the nationwide deceleration in commercial spending growth.

# The 15 Cities of the Profiles of Local Consumer Commerce

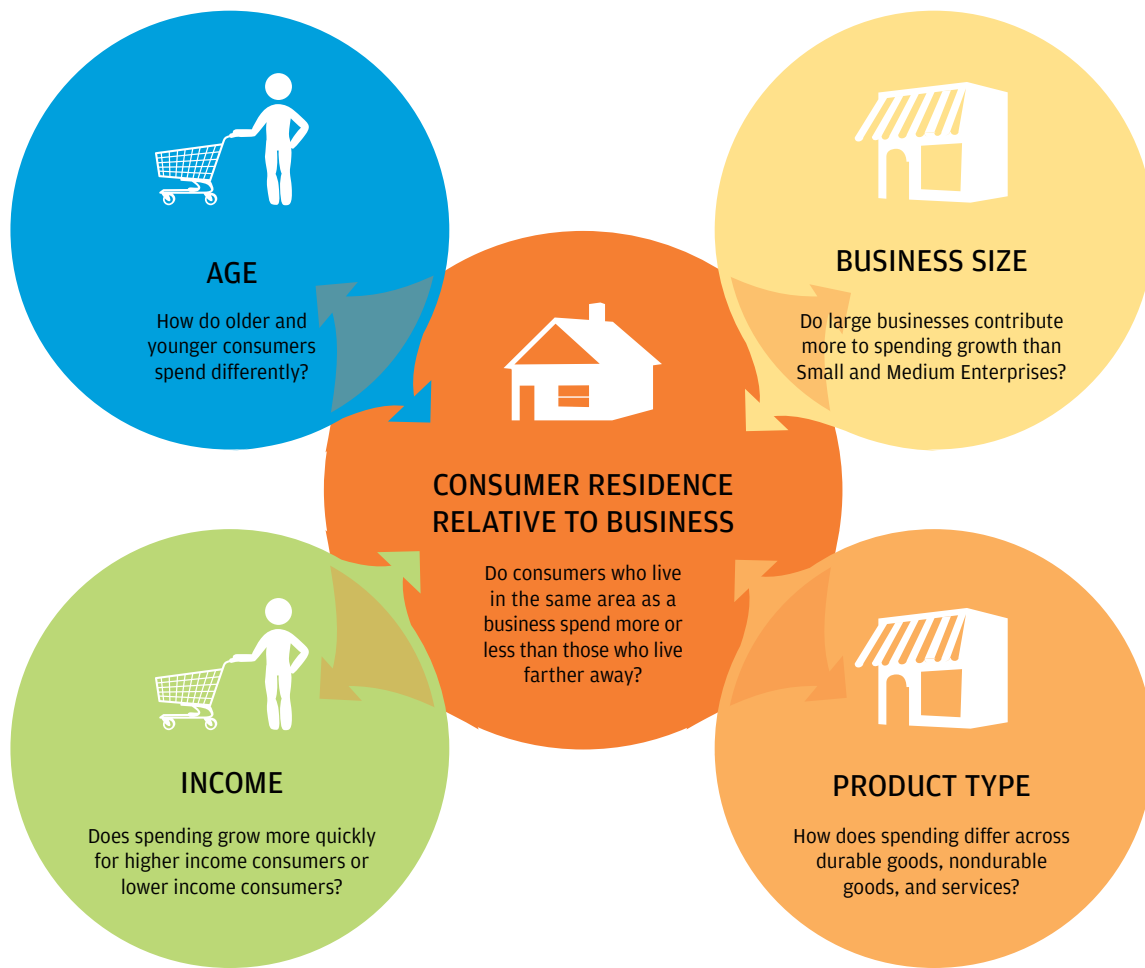


# Local Consumer Commerce: April–June 2015

We base Profiles of Local Consumer Commerce on the 12.4 billion anonymized credit and debit card transactions of 48 million JPMorgan Chase customers in 15 U.S. metropolitan areas completed from October 2012 to July 2015.

What makes Profiles of Local Consumer Commerce different from other sources of economic data? It's the unparalleled look that our data series offers into local consumer commercial conditions. By contrast, analysts and policymakers today rely on a retail-only view of commercial activity that provides only a limited perspective on national trends in consumer spending.

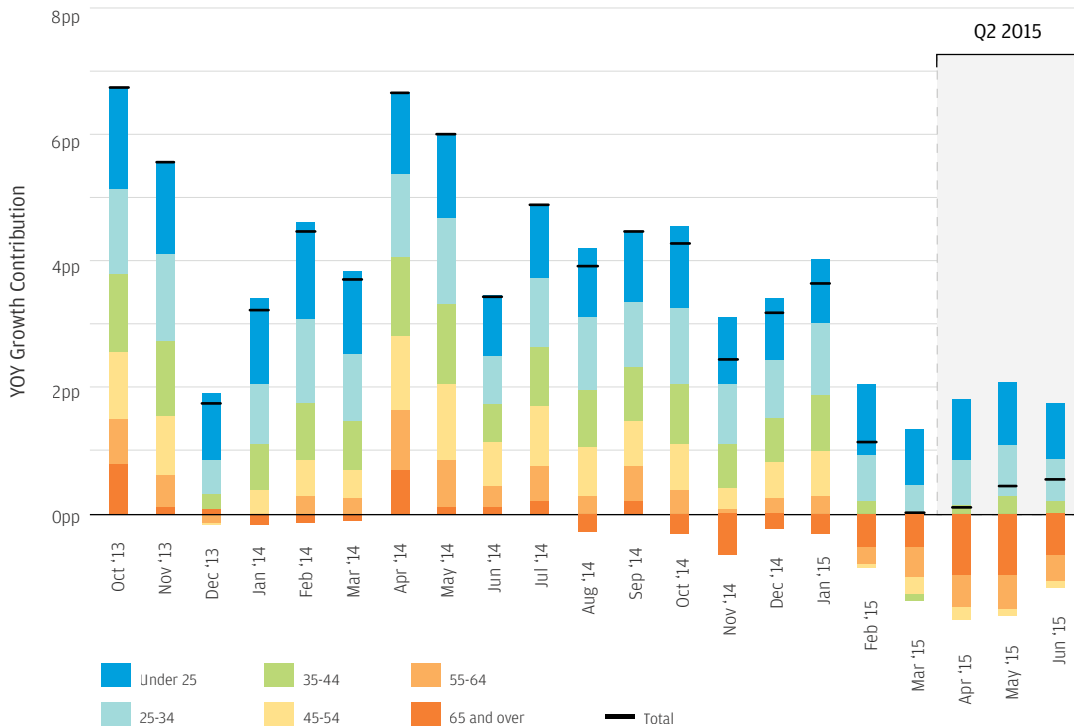
In the first part of this report, we used this data series to analyze a specific phenomenon—the marked slowdown in local consumer commercial spending from Q2 2014 to Q2 2015 compared with Q2 2013 to Q2 2014. In this section, we share insights about local consumer commerce growth from April to June 2015. We focus on the use of the data series to view local consumer commerce through five important lenses: two consumer, two business, and the residence of consumers relative to the location of the business. For each lens, we show how different segments contributed to year-over-year spending growth for each month for all fifteen metropolitan areas in aggregate. We publish detailed data series for each metropolitan area on our website.





## Spending by Age

Figure 17: 15 Metro LCC Year-over-Year Growth Contribution by Consumer Age



Source: JPMorgan Chase Institute

Figure 17 shows how consumers of different ages contributed to monthly local consumer commercial spending growth across all 15 metro areas. Consumers under 35 have continued to make stable contributions to spending growth. From May 2014 to May 2015, consumers under 25 contributed 0.9 percentage points to growth, a strong contribution given their relatively low share of spending and the overall slowdown in spending growth from Q2 2014 to Q2 2015. In contrast, consumers 65 and over subtracted 0.9 percentage points from growth from April 2014 to April 2015 and 0.9 percentage points from growth from May 2014 to May 2015—the largest subtractions by any age group over the past 12 months.

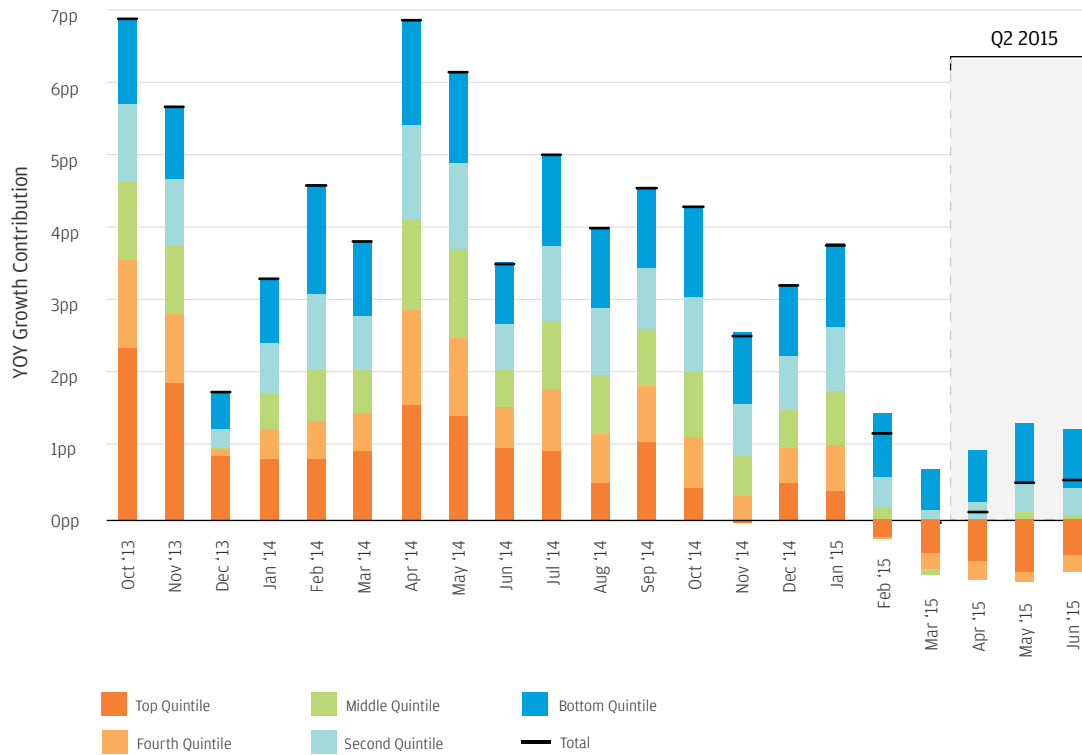






## Spending by Income

Figure 18: 15 Metro LCC Year-over-Year Growth Contribution by Consumer Income



Source: JPMorgan Chase Institute

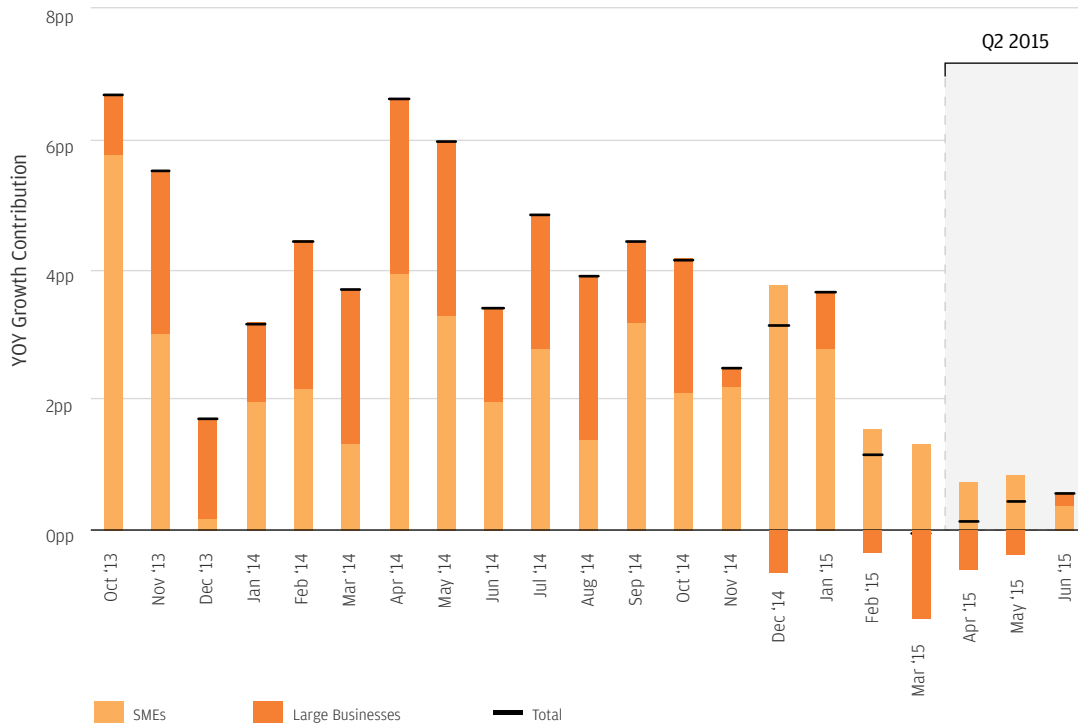
Figure 18 shows how consumers in different income quintiles contributed to monthly local consumer commercial spending growth across all 15 metro areas. Again, the pattern maps closely to that which we observe for consumers of different ages. Consumers in the lowest 20 percent by income made stable contributions to spending growth. These consumers contributed 0.7 percentage points to growth from April 2014 to April 2015—a notable decrease from the 1.2 percentage points this group contributed from October 2014 to October 2015, but still strong. In contrast, consumers in the top 20 percent by income subtracted 0.5 percentage points from growth from April 2014 to April 2015 and 0.6 percentage points from growth from May 2014 to May 2015—the largest subtractions by any income quintile over the past 12 months.





## Spending by Size of Business

Figure 19: 15 Metro LCC Year-over-Year Growth Contribution by Business Size



Source: JPMorgan Chase Institute

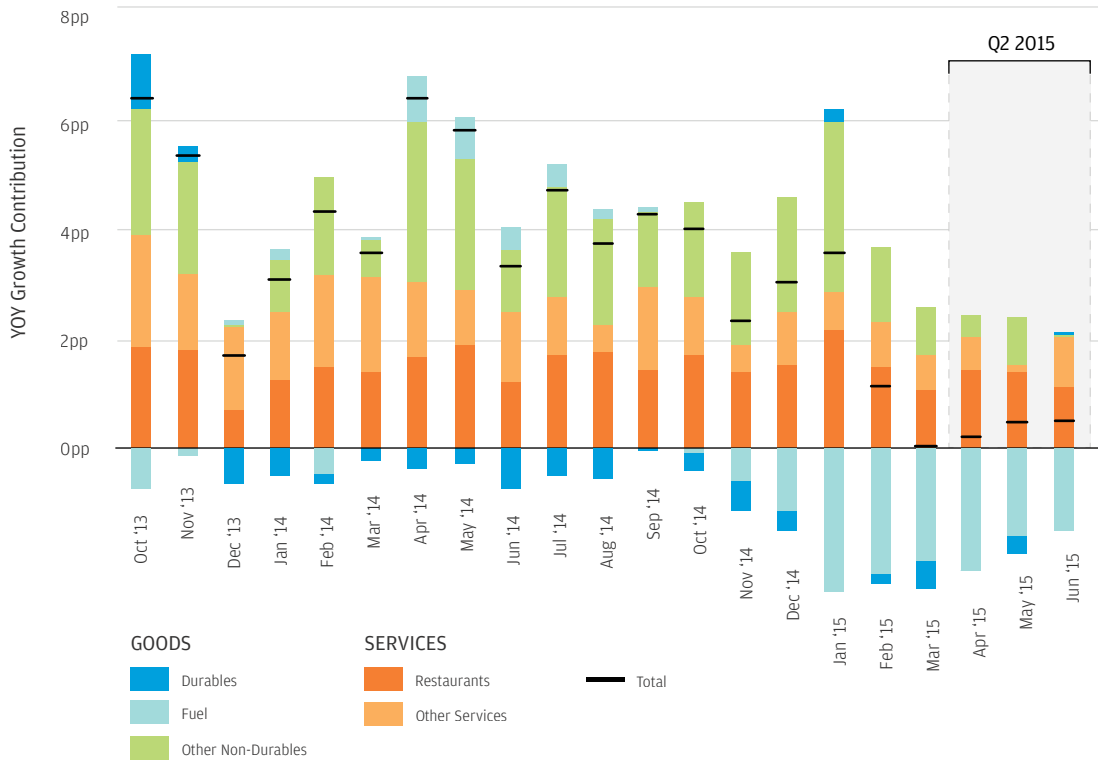
Figure 19 presents a monthly view of the contribution to local consumer commerce growth by large businesses and SMEs across all 15 metro areas. Large businesses have an outsize impact on local consumer commercial activity. They account for less than 1 percent of establishments but generate 33 percent of observed local consumer commercial spending. Nonetheless, from April 2014 to April 2015, large businesses subtracted 0.6 percentage points from the growth of local consumer commerce. In contrast, for most months in the year from July 2014 to June 2015, SMEs have made significant positive year-over-year contributions to growth. However, from Q2 2014 to Q2 2015, SMEs made relatively small contributions to growth, and contributed only 0.3 percentage points to growth from June 2014 to June 2015.





## Spending by Product Type

Figure 20: 15 Metro LCC Year-over-Year Growth Contribution by Product Type



Source: JPMorgan Chase Institute

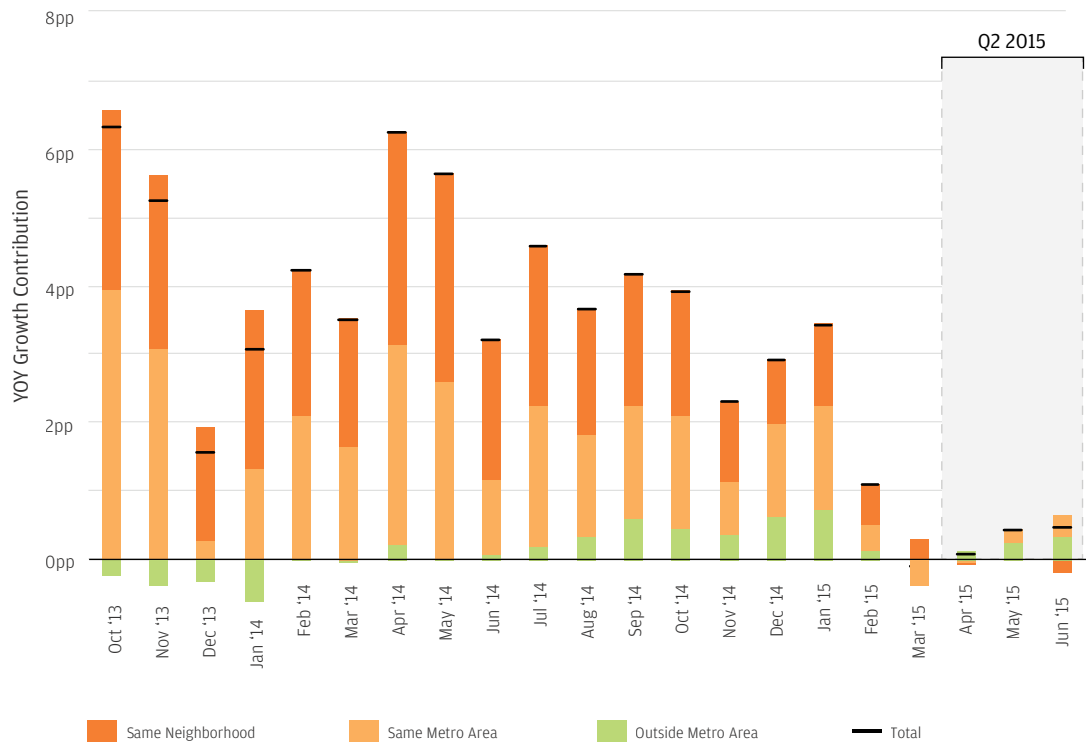
Figure 20 presents a monthly view of the contribution to local consumer commerce growth by product type across all 15 metro areas. Retailers selling nondurable goods other than fuel contributed 0.1 percentage points to local consumer commerce growth from June 2014 to June 2015, the lowest contribution by this product type since December 2013. Fuel retailers subtracted 1.5 percentage points from growth from June 2014 to June 2015, a slight uptick from subtractions of 1.6 percentage points from May 2014 to May 2015 and 2.2 percentage points from April 2014 to April 2015, and a more significant increase from the 2.6 percentage point subtraction from January 2014 to January 2015. Restaurant operators continued to deliver strong growth in Q2 2015, although the 1.1 percentage points these businesses contributed from June 2014 to June 2015 was significantly lower than the 2.1 percentage point contribution by restaurants from January 2014 to January 2015. Notably, contributions to growth from other services were considerably lower in Q2 2015. These businesses added only 0.1 percentage points from growth from May 2014 to May 2015, continuing a slow but steady decline from a peak contribution of 2 percentage points from October 2012 to October 2013.





## Spending by Consumer Residence

Figure 21: 15 Metro LCC Year-over-Year Growth Contribution by Consumer Residence



Source: JPMorgan Chase Institute

Not surprisingly, most local consumer commerce is local. Eighty-four percent of local consumer commercial spending at a business comes from consumers who live in the same metropolitan area, and within that 84 percent, nearly 30 percent comes from consumers who live in the same neighborhood.

Figure 21 depicts the monthly contribution to local spending by consumers who reside in different locations across all 15 metro areas. From April to June 2015, the year-over-year growth contributions of consumers from outside the neighborhood have recovered modestly from a sharp decrease from January to March. Spending by consumers from the same metropolitan area accelerated the most. These consumers subtracted 0.4 percentage points from March 2014 to March 2015, but contributed 0.3 percentage points from June 2014 to June 2015—a net gain of 0.7 percentage points. In contrast, the contribution of consumers from the same neighborhood fell 0.5 percentage points, from contributing 0.3 percentage points from March 2014 to March 2015 to subtracting 0.2 percentage points from June 2014 to June 2015.



# Data and Methodology

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Profiles of Local Consumer Commerce seeks to better inform decision makers about the drivers of growth in the everyday purchases of goods and services in metropolitan areas across the United States. We base our estimates of spending growth on JPMorgan Chase's internal customer data on 12.4 billion transactions of the 48 million anonymized US customers who made debit card and credit card purchases in the 15 metropolitan areas we study from October 2012 to June 2015. As the first financial institution to use this wealth of information for the public good, JPMorgan Chase & Co. put strict privacy protocols and strong guardrails in place to protect personal information throughout the creation and analysis of this data. A description of these protocols is available on our website.

## Data Privacy

The JPMorgan Chase Institute has adopted rigorous security protocols and checks and balances to ensure all customer data are kept confidential and secure. Our strict protocols are informed by statistical standards employed by government agencies and our work with technology, data privacy and security experts who are helping us maintain industry-leading standards.

There are several key steps the Institute takes to ensure customer data are safe, secure and anonymous:

- Before the Institute receives the data, all unique identifiable information—including names, account numbers, addresses, dates of birth and Social Security numbers—is removed.
- The Institute has put in place privacy protocols for its researchers, including requiring them to undergo rigorous background checks and enter into strict confidentiality agreements. Researchers are contractually obligated to use the data solely for approved research, and are contractually obligated not to re-identify any individual represented in the data.
- The Institute does not allow the publication of any information about an individual consumer or business. Any data point included in any publication based on the Institute's data may only reflect aggregate information.
- The data are stored on a secure server and can be accessed only under strict security procedures. The data cannot be exported outside of JPMorgan Chase's systems. The data are stored on systems that prevent them from being exported to other drives or sent to outside email addresses. These systems comply with all JPMorgan Chase Information Technology Risk Management requirements for the monitoring and security of data.

The Institute provides valuable insights to policymakers, businesses and nonprofit leaders. But these insights cannot come at the expense of consumer privacy. We take precautions to ensure the confidence and security of our account holders' private information.

## Measuring Local Consumer Commerce

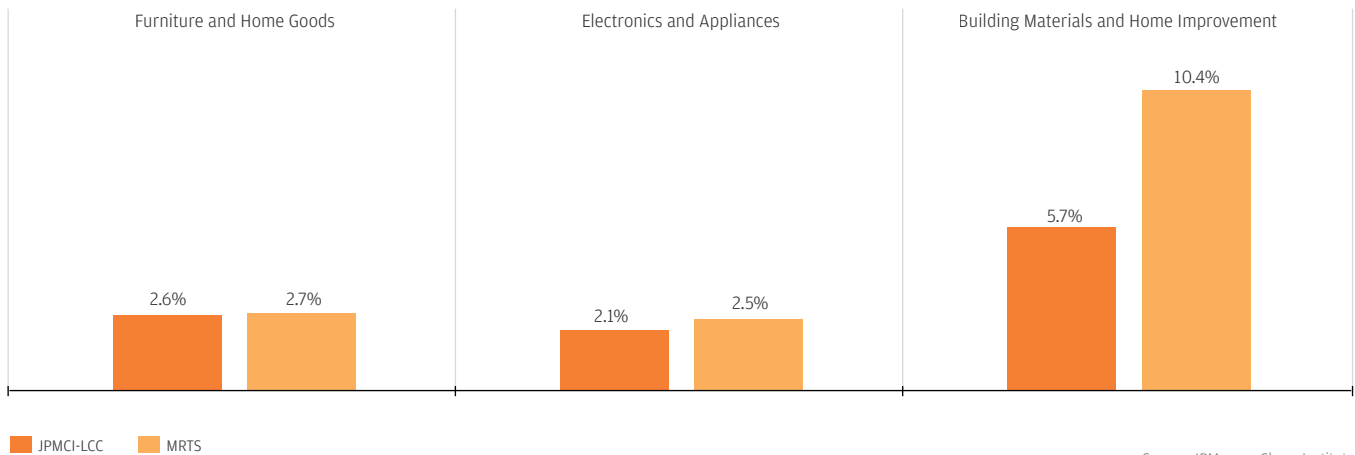
Local consumer commerce is the everyday spending of individuals on goods and services that impacts a local community. We observe local consumer commerce through the anonymized credit- and debit-card transactions of JPMorgan Chase customers for which we can establish a geographic location. This approach shares some conceptual similarities with other established measures (for example, the U.S. Census Bureau Monthly Retail Trade Survey and the U.S. Census Bureau Quarterly Services Survey), but differs in several significant ways.

In particular, our card-based perspective captures another important sector of commerce: spending at non-employer businesses, new businesses, and other small businesses that are often difficult to reach through establishment surveys. Moreover, in addition to restaurant spending observed by other data sources, our approach captures spending on a wide range of individual consumption-oriented services, including the barber and beauty shops, doctors and dentists,<sup>12</sup> hotels, gyms, and local transportation providers that play a significant role in local economies.

Our card-based approach offers a detailed view of the types of products consumers purchase. However, this view does not capture spending by consumers through cash, checks, electronic transfers, or purchase orders. Importantly, the extent to which consumers use credit and debit cards to purchase services and goods varies significantly across product categories. In particular, differences in payment methods by product type lead us to a different perspective on the consumption of durable goods.

Our data series provides a different lens on durable goods because consumers are less likely to use credit or debit cards to purchase them. Consumers are much more likely to use loans or store financing to purchase higher-value durable goods than they are to purchase everyday items such as fuel or groceries. In particular, consumers rarely purchase vehicles with a credit or debit card—automobiles and parts spending make up just less than 3 percent of all spending in our series, while they account for more than 20 percent of all goods and restaurant purchases in the MRTS. As a result, our data better represent everyday spending, as consumers often save for and finance the purchase of bigger-ticket durable goods.

Figure 22: Durable Goods as a Share of Total Spending excluding Automobiles, Q2 2015



To illustrate the differences, Figure 22 compares the spending we observe in our data series with that reported in the MRTS. The figure shows the June 2015 spending in each of three major durable goods categories as a share of the total spending (excluding automobile purchases). Our data series closely matches the MRTS for electronics and furniture and home furnishings. However, we observe a lower share of spending on building materials and home improvement purchases compared with the MRTS, with our data accounting for just over 60 percent of the spending in the government series. Similar to automobiles, many large home improvements are financed through home improvement loans and thus do not appear on cards. Additionally, independent contractors—who may be less likely to accept credit and debit card payments and would not appear as durable goods in our data—account for a substantial share of consumers’ home improvement and building materials spending.

Another advantage of measuring local consumer commerce using debit and credit card data is that they often include information on the location of the transaction. This information plays a central role in allowing us to analyze the impact of local consumer commerce on metropolitan areas, cities, and neighborhoods. When a consumer uses a debit or credit card to purchase a good or service in person at a single-establishment business, we observe the location of this transaction unambiguously. However, many businesses organize the production and delivery of goods and especially services across multiple establishments. For example, when a consumer uses a telecommunications service, we may geographically associate the transaction with the establishment that houses the billing function for the business. We choose to characterize this service activity as part of local consumer commerce, as it likely has an impact on the economy where the billing is processed.

## Measuring Spending Growth

To estimate the growth of spending in U.S. metropolitan areas, we identify a subset of JPMorgan Chase customers whose spending behavior most closely models that of people engaging in local consumer commerce in the same metropolitan areas. Specifically, we want to ensure that our measures of spending growth are not biased by changes in the bank’s market share, or by changes in the extent to which customers use their Chase debit and credit cards compared with cards from other banks.

To this end, we base our analyses of year-over-year growth on stable cohorts of JPMorgan Chase customers. A customer is identified as being a member of a stable cohort in a given period if he or she has at least 10 credit and/or debit card transactions in that period, and at least 10 credit and/or debit card transactions in the period exactly one year before. An important concept in these analyses is that a given customer is represented twice in a stable cohorts view:

1. A current representation of the spending of that customer in the focal month
2. A lagged representation of the spending of that customer in the month one year before

When calculating growth, we compare spending of those customers who would be included in the aggregate in their current representation with the spending of those customers who would be included in the aggregate in their lagged representation. In many cases, these are not the same customers. For instance, when calculating the spending growth of consumers at businesses in the Houston CBSA for March 2015, we compare the spending of current consumers (using the characteristics of consumers who had more than 10 transactions in March 2015 who also had more than 10 transactions in March 2014) at establishments in Houston in March 2015 with the spending of lagged consumers (using the characteristics of consumers who had more than 10 transactions in March 2014 who also had more than 10 transactions in March 2015) at establishments in Houston in March 2014. If a consumer purchased goods or services in Houston in March 2015 but not March 2014, we include her in the current aggregate but not the lagged aggregate.

One caveat is our treatment of customer age. All else equal, we would have computed the growth associated with an age band by comparing spending by customers who were members of the age band in the lagged month with customers who were members of the age in the focal month. However, our data set only contains records for customers aged 18 and over. Accordingly, our design would produce spending for 18-year-old customers in the lagged month, but never in the current month. To be 18 in the current month, the customer would have been 17 in the lagged month, and thus excluded from a stable cohort. Were we to follow this approach, our growth estimates would always compare the spending of 18- to 24-year-old customers in the lagged period with

Houston had the highest proportion of spending from consumers who live in the same metro area as the business at 94% in 2015 Q2.

Consumers in the top income quintile in San Francisco made up the greatest proportion of total spending at 36% in 2015 Q2.

the spending of 19- to 24-year-old customers in the current period. This would downwardly bias our estimated spending growth for this age band. Instead, we chose to compare the spending of customers of a given age in the current month with the spending of customers exactly one year younger in the lagged month. For instance, our estimate of spending growth of 25- to 34-year-old customers in June 2015 compares the spending of 25- to 34-year-old customers in June 2015 to the spending of 24- to 33-year-old customers in June 2014.

Having identified stable cohorts of Chase customers, we then scale customer spending to better match known spending levels by Core Based Statistical Area (CBSA), and known population distributions by income quintile and age by CBSA. We use external data from 2012, the latest available from the U.S. Census Bureau. We use these data to scale against total spending by customers in our series for the 2014 calendar, the most recent complete year we have available.

Finally, we measure the contribution to growth as the extent to which spending in the relevant segment would have grown, year-over-year, had all other spending in the segment stayed constant (for example, how much would spending have grown in the Houston CBSA from May 2014 to May 2015 if only the spending behavior of 25- to 34-year-olds had changed).

### Age and Income Segments

Our data suggest that a consumer’s age interacts with her income to shape her spending behavior. The spending behavior of many consumers is influenced by the income they receive from their jobs, and the income most people receive from their work changes as they age.

Figure 23: Spending Shares in Q2 2014

	Bottom Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Top Quintile
<25	4.2%	2.0%	1.0%	0.6%	0.2%
25-34	2.9%	3.9%	3.6%	2.9%	1.9%
35-44	1.6%	2.9%	4.0%	5.0%	6.2%
45-54	1.5%	2.4%	3.8%	5.4%	8.7%
55-64	1.2%	2.0%	3.1%	4.3%	7.0%
65+	2.0%	3.1%	3.5%	4.0%	5.4%

Figure 24: Growth Rates in Q2 2014

	Bottom Quintile	Second Quintile	Middle Quintile	Fourth Quintile	Top Quintile
<25	14.3%	15.7%	17.9%	18.3%	18.4%
25-34	8.1%	6.9%	6.6%	6.7%	9.3%
35-44	6.4%	5.5%	4.7%	4.3%	5.2%
45-54	6.2%	5.1%	4.4%	3.8%	4.2%
55-64	4.4%	3.5%	3.5%	3.2%	3.9%
65+	2.5%	1.5%	1.3%	1.3%	1.3%

	Low Income	Mid Income	High Income
Under 35 Years		23.1%	
Ages 35 to 64	11.6%	25.4%	21.9%
65 and Older		18.0%	

	Low Income	Mid Income	High Income
Under 35 Years		10.0%	
Ages 35 to 64	5.1%	4.0%	4.4%
65 and Older		1.5%	

Source: JPMorgan Chase Institute

Source: JPMorgan Chase Institute



Figures 23 and 24 illustrate our assignment of consumers to these segments in Q2 2014. First, we identify a segment of younger consumers under 35. To the extent that these consumers are labor force participants, they are likely to be in the early stages of their career, or completing their education and moving into a first job. Figure 23 shows that most spending in this segment comes from consumers in the lower 40 percent of the income distribution—consistent with the view that these consumers have lower income associated with the early stages of a career. In contrast, Figure 24 shows that the spending of these consumers rose 10 percent from Q2 2013 to Q2 2014—the highest rate of growth of any segment. The spending of these consumers—new members of the local commercial economy—appears to rise quickly from relatively low starting levels.

At the upper end of the age range, we identify a segment of consumers 65 and over. To the extent that these consumers had participated in the workforce, they are likely to exit it while they are in this segment. Figure 23 suggests these consumers had higher incomes than younger workers in Q2 2014. In contrast, Figure 24 shows that they had significantly lower spending growth from Q2 2013 to Q2 2014. The spending of consumers 65 and older rose 1.5 percent from Q2 2013 to Q2 2014, the lowest growth rate of spending of all five segments.

We identify three segments among consumers 35 to 64. If consumers in this age range participate in the labor force, they are likely to be in a stable stage of their careers. Within this age group, income is a particularly strong determinant of local consumer commercial spending behavior, so we divide this age group into three segments. We first identify a segment of low-income consumers 35 to 64 in the lower 40 percent of all consumers by income. We next identify a segment of middle-income consumers 35 to 64 in the next highest 40 percent of all consumers by income. Finally, we identify a segment of high-income consumers 35 to 64 in the top 20 percent of all consumers by income. Figure 23 shows that collectively, these consumers generated 59 percent of all local consumer commercial spending in Q2 2014, 22 percent by high-income consumers alone.

## Selected Geographies

We built our local consumer commercial spending database by identifying transactions that were geographically located in the CBSA associated with each of fifteen cities: Atlanta, Chicago, Columbus, Dallas, Denver, Detroit, Houston, Miami, Los Angeles, New York, Phoenix, Portland (OR), San Diego, San Francisco, and Seattle. We chose these cities in part because they had sufficient numbers of JPMorgan Chase credit and debit card customers for us to estimate local consumer commercial spending growth. These cities also provide broad geographic and economic coverage of larger metropolitan areas across the United States. Figure 25 shows the amount of retail spending reported in the 2012 U.S. Economic Census for each of these CBSAs, as a percentage of the total retail spending across all CBSAs.

Figure 25: Percent of U.S. Retail Spending by Metro Area

Metro Area	% of U.S. Retail
New York, NY	6.7%
Los Angeles, CA	4.1%
Chicago, IL	3.2%
Dallas, TX	2.4%
Miami, FL	2.2%
Houston, TX	2.1%
Seattle, WA	2.0%
Atlanta, GA	1.7%
San Francisco, CA	1.6%
Phoenix, AZ	1.5%
Detroit, MI	1.4%
San Diego, CA	1.0%
Denver, CO	0.9%
Columbus, OH	0.8%
Portland, OR	0.7%

Source: US Census Bureau 2012 Economic Census

# Endnotes

- 1 We selected these cities to include large- and medium-size metropolitan areas that provided good geographic and economic coverage of the United States. The sample was also limited to cities where JPMorgan Chase had a sufficient customer base.
- 2 The 15 Core Based Statistical Areas (CBSAs) covered by our portfolio represented 32.3 percent of retail sales in 2012 (United States Census Bureau, 2012). See Data and Methodology for additional details about these 15 CBSAs.
- 3 The U.S. Bureau of Economic Analysis Personal Consumption Expenditures survey reports a recent peak in spending growth of 5 percent in August 2014, which dropped to 3.5 percent by June 2015, and 3.4 percent by September 2015.
- 4 We compute real retail spending by deflating seasonally adjusted retail sales and food services, excluding motor vehicles and parts dealers, by the Consumer Price Index for All Urban Consumers: All Items.
- 5 Q2 (second quarter of the year) comprises total local commercial spending in the months of April, May, and June.
- 6 Growth contribution is the extent to which aggregate spending would have grown if the spending of the specified segment had changed while all other segments had constant spending. For example, from Q2 2013 to Q2 2014, if the spending of consumers under 35 changed exactly as it did while all other consumers had constant spending, aggregate spending would have increased by 2.2 percent.
- 7 We identify large businesses as those capturing 8 percent or more of spending within their merchant category code or merchant category code group within a Core Based Statistical Area in a period. We define SMEs as all other businesses.
- 8 By living outside a metropolitan area, we mean consumers residing in a different Core Based Statistical Area. We define a neighborhood as the set of zip codes that most closely correspond to a Census Public Use Microdata Area, on a population-weighted basis.
- 9 We compute real growth in other nondurable goods by disaggregating our observed spending on nondurables into five categories: apparel, food, healthcare, recreation, and other. We multiply the spending we observe in each of these categories by the CPI-All Urban Consumers index for apparel, food at home, medical commodities, recreation, and all items excluding energy, respectively. We then compute real growth from the total sales of each of these disaggregated real spending series.
- 10 As a result of our card-based perspective on spending, our data capture a very small share of auto purchases, and a relatively small share of white goods purchases, particularly larger investment-oriented products that consumers are likely to purchase with the assistance of other financing mechanisms. See Data and Methodology for further details.
- 11 The ratio of spending between primary-account holders in the highest income quintile and the lowest income quintile is about 2 in our data. Comparable estimates from Aguiar and Bils (2015) using survey data suggest a ratio of at least 2.6 for households. We believe this gap is explained by measurement error in our income estimates.
- 12 We observe the out-of-pocket card-based spending of consumers at healthcare providers.

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