A GLOBAL THINK TANK DEDICATED TO DELIVERING DATA-RICH ANALYSES AND EXPERT INSIGHTS FOR THE PUBLIC GOOD

JPMorgan Chase & Co.

INSTITUTE

Who we are

- JPMCI research is **public facing** for public consumption: primary audience is decision-makers: policy makers, businesses, and non-profit leaders
  - Public impact
- **Independent research agenda** from commercial operations; leverage bank expertise and data
- Team of **social scientists and data scientists** (economics to sociology to finance to computer science)
  - Mix of PhDs, grads, undergrads
  - Current part-time PhD students through PhD fellowship
- **DC and NYC headquartered**

Our data and insights leverage the expansive breadth of the JPMorgan Chase window on the world

A relationship with **50% of households** in the U.S. (58 million customers)

Presence in **60 countries; economic** forecasting for **39 countries**

Services provided to over **550 public entities** in over **100 countries**

$2.4 Trillion in assets spanning individuals, businesses, governments

JPMCI data and research approach

Consumers

Using anonymized Chase customer transaction data

- US Consumer financial behavior and consumers' financial lives
- Income and consumption volatility; financial shocks and financial health
- Impact of gas prices, impact of out-of-pocket healthcare spending, impact of unemployment insurance

Business

Using anonymized CCB individual customer data, Chase business banking data, and eventually CB data (Middle markets)

- Interactions between consumers and businesses and impact on local economies; how businesses (small and large) behave, grow and thrive
- Impact of everyday spending in neighborhoods, cities, and nationally
- Relationship of growth of small businesses and volatility of cash flows

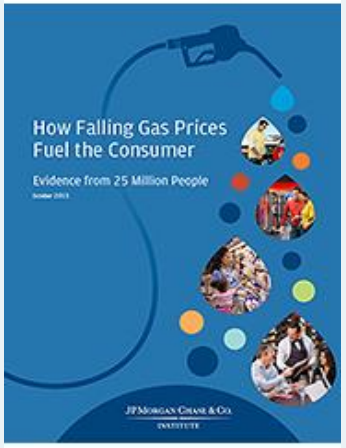
Financial Markets

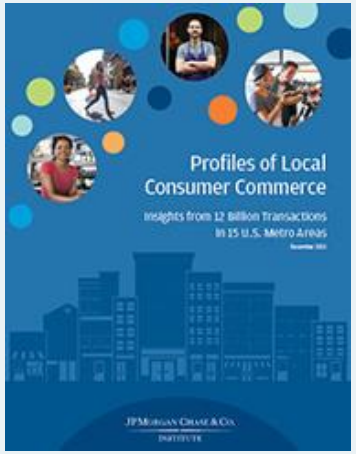
Using anonymized CIB markets transaction data; eventually GIM transaction data

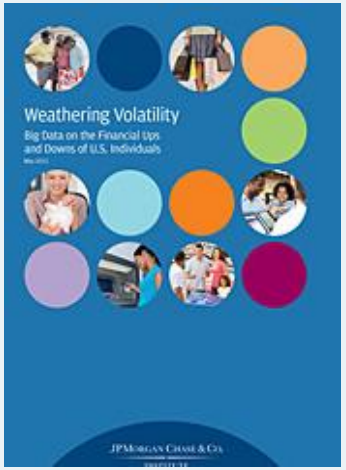
- Interactions between financial market activities, policies and economic outcomes
- Understanding institutional investor behavior and impact on financial markets and impact of policy changes and other points in time
- Mapping of asset holdings, mapping of global capital flows

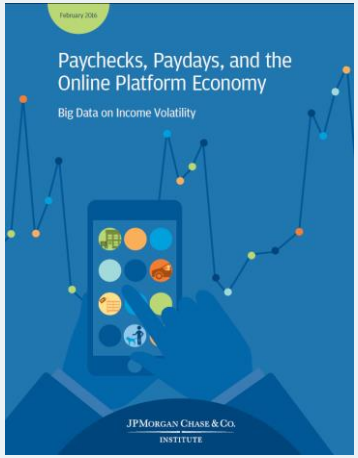
Existing Institute Research

Reports

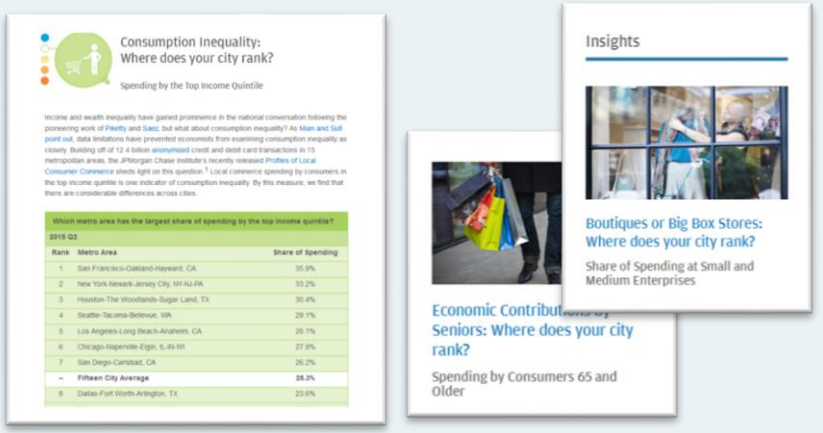








Research Briefs



Indices and Data Visualizations

March 2016

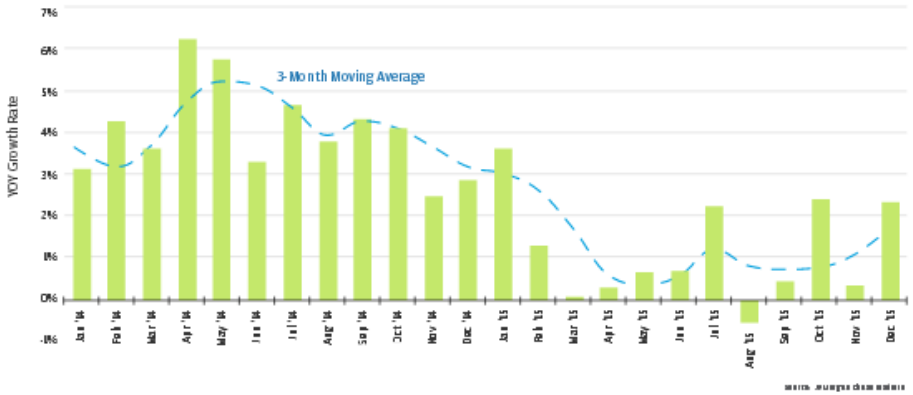
Local Consumer Commerce

December 2015

DEC 2015 ↑ 2.3%

The Local Consumer Commerce Index (LCCI) increased 2.3 percent year-over-year in December 2015.

Figure 1: Local Consumer Commerce Index (LCCI)



The JPMorgan Chase Institute's LCCI is a measure of the monthly year-over-year growth rate of everyday debit and credit card spending. The LCCI is constructed from over 14 billion anonymized credit and debit card transactions from over 50 million Chase customers across 15 U.S. cities: Atlanta, Chicago, Columbus, Dallas, Denver, Detroit, Houston, Miami, Los Angeles, New York, Phoenix, Portland (OR), San Diego, San Francisco, and Seattle. Unlike many existing sources of data on consumer spending, the LCCI captures actual transactions, instead of self-reported measures of how consumers think they spend. The LCCI's geographically specific data provide a granular and timely view of how cities and their surrounding metro areas are faring on a monthly basis. 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. The index captures economic activity in consumer facing retail and services sectors that previously have not been well understood by other data sources. These include activities in sectors such as food trucks, new businesses, and personal services. The LCCI is a powerful tool for city development officials, businesses and investors, and statistical agencies to better understand the everyday economic health of consumers, businesses, and the places they care about.

This report analyzes the growth of local consumer commerce across all 15 metro areas in aggregate and in each of the 15 metro areas individually. It also presents a view of local consumer commerce through five important lenses: consumer age and income, business size and product type, and consumer residence 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 covered by the series.

15 Cities

51 Million

Anonymized JPMorgan Chase Customers

14.4 Billion

Debit & Credit Card Transactions

39 Months

October 2012 to December 2015

We use 14.4 billion credit and debit card transactions of 51 million JPMorgan Chase customers conducted over 39 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.

Age

How do older and younger consumers spend differently?

Income

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

Business Size

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

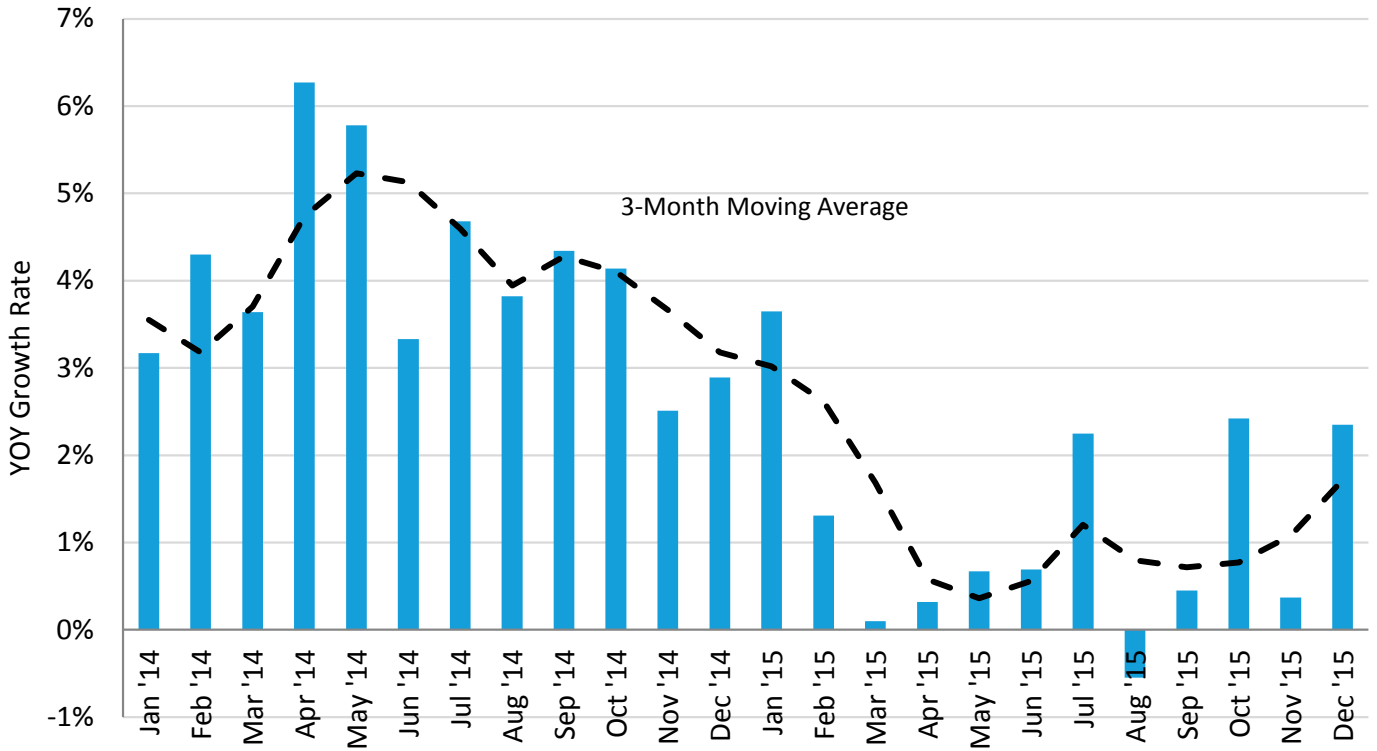
Product Type

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

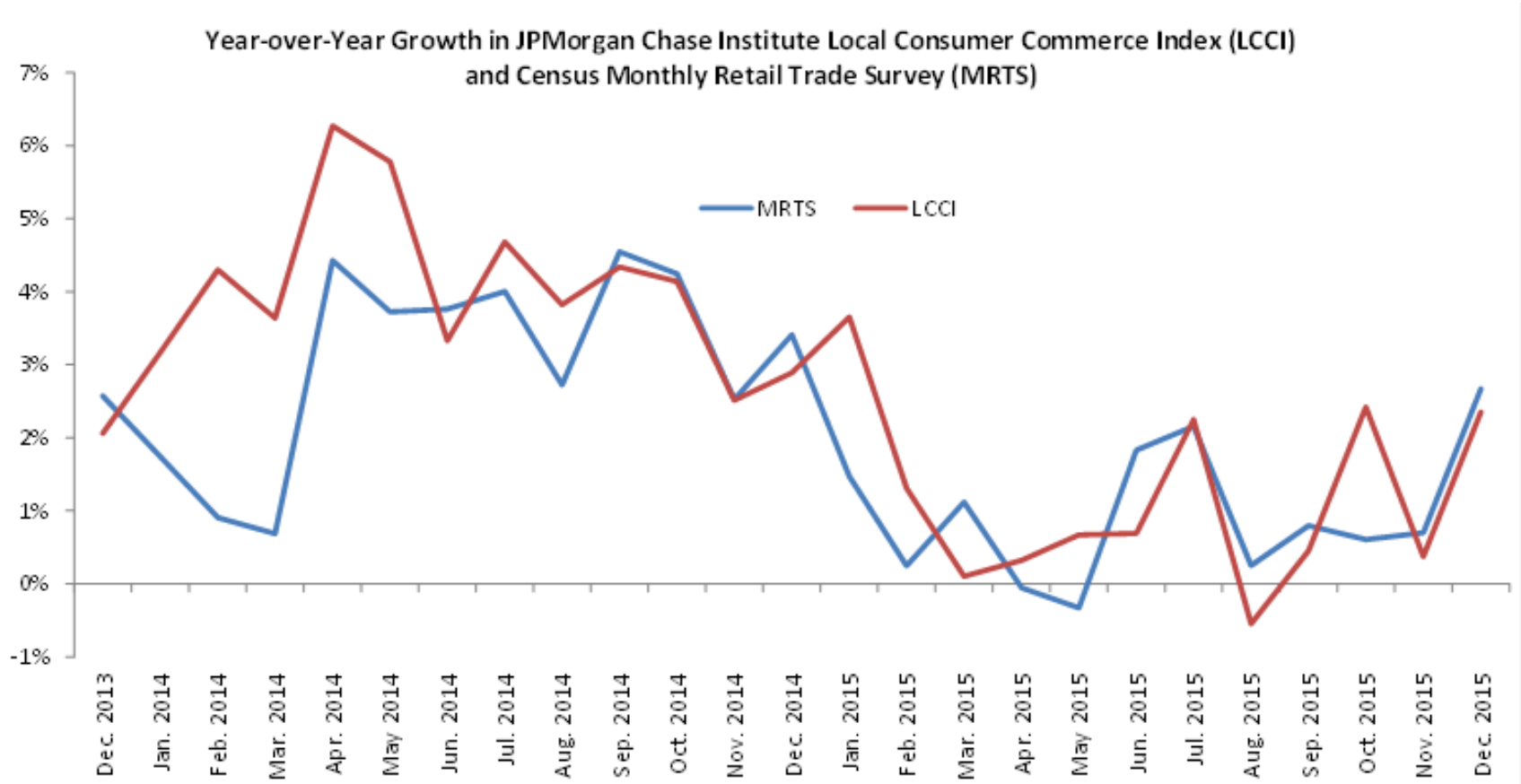
Consumer Residence

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

JPMCI LCC Data drive the Local Consumer Commerce Index – a view on local commercial activity in urban areas



The JPMCI LCC Index tracks the Census MRTS well enough to suggest that we measure something conceptually similar



Source: JPMorgan Chase Institute and U.S. Census Bureau.
Note: We use the Census series for retail sales and food services excluding motor vehicles and parts.

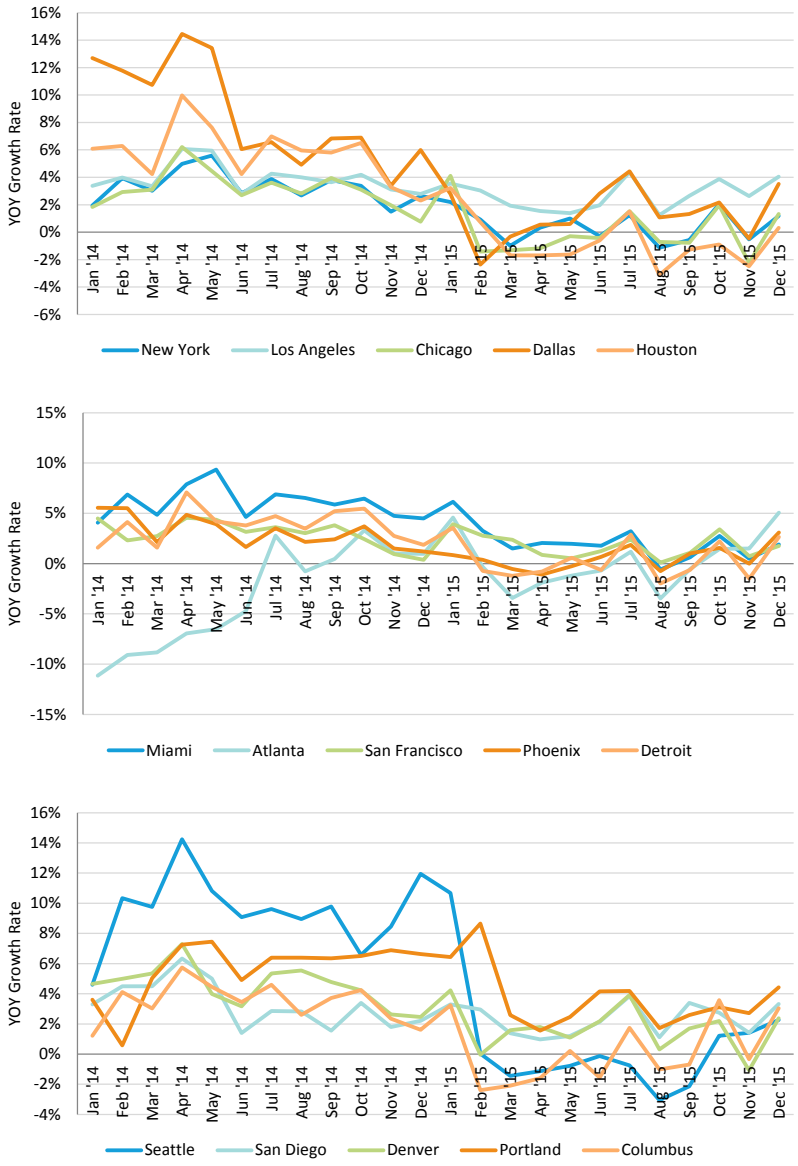
The Local Consumer Commerce Index can help build a picture of commercial activity in the US through its unique lens on consumer attributes

What do we see from 14.4 billion transactions?

UNIQUE LCC VIEW

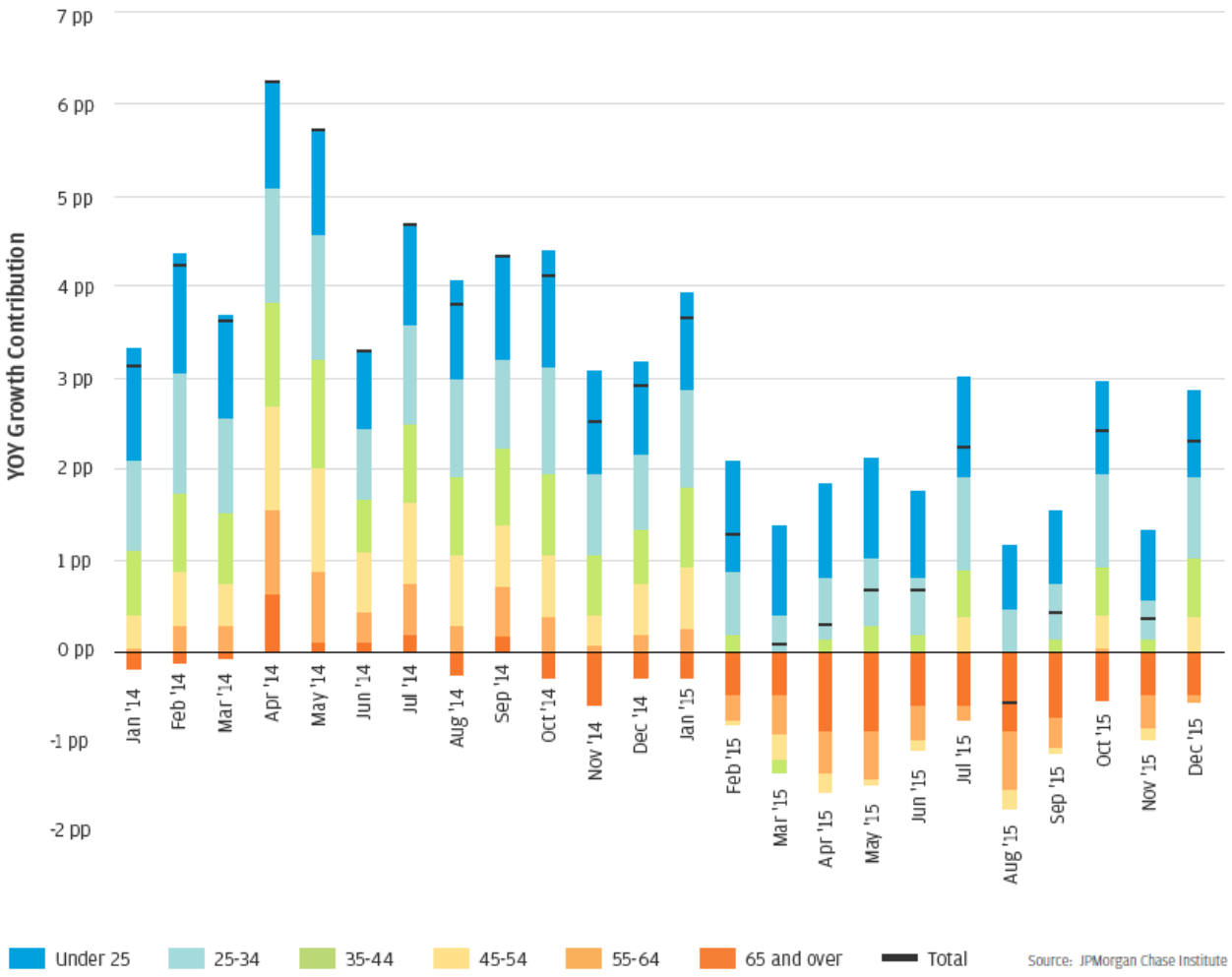
Date	October 2013
Customer Age	35-44 years old
Customer Income	$75,000
Customer Zip Code	75201
Business Zip Code	75043
Amount	$160.00
Business Merchant Code	7225 (Restaurant)

Our detailed geographic identifiers allow the Local Consumer Commerce Index to provide a very local view of spending growth

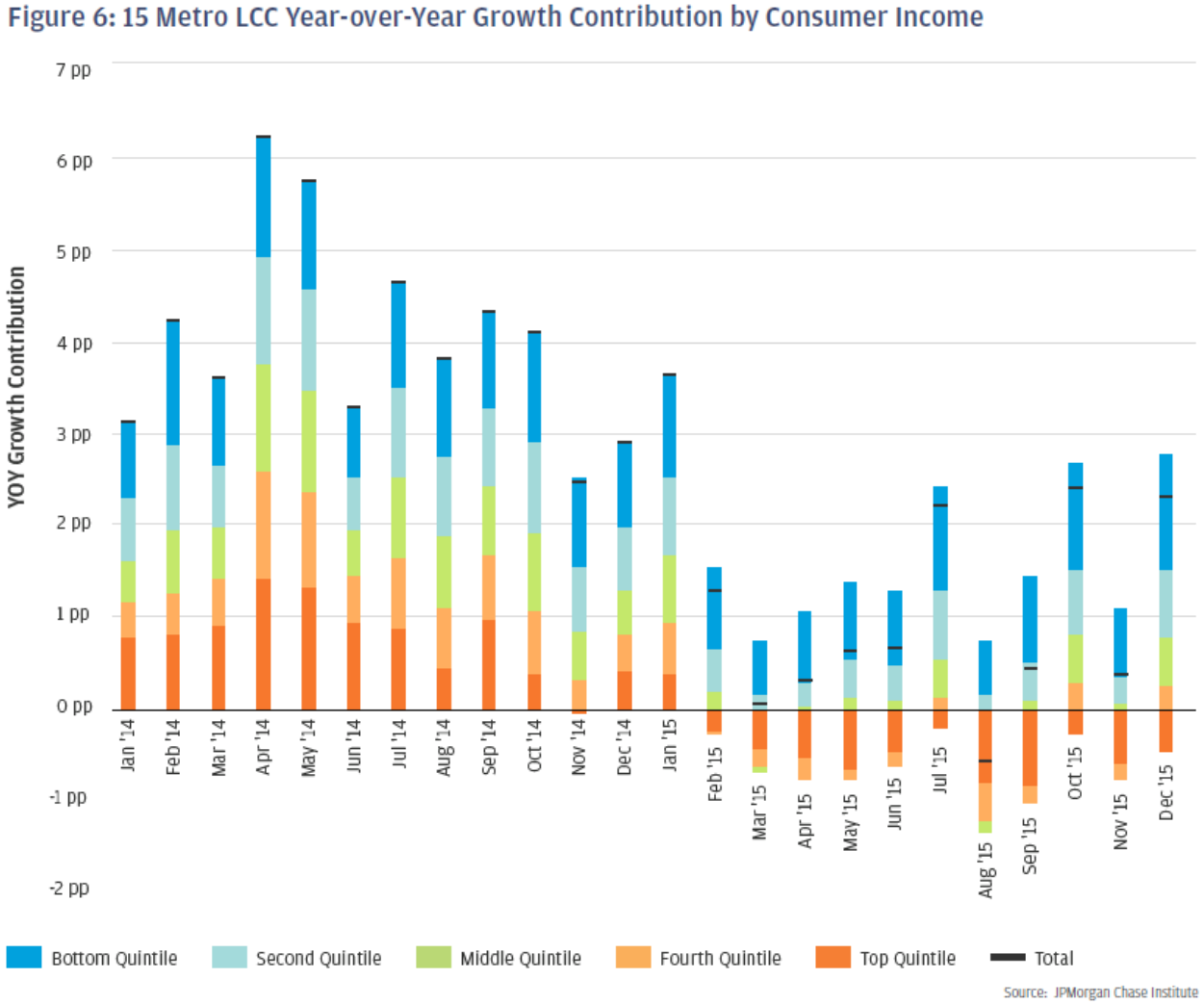


Younger consumers have made consistent contributions to overall LCC growth

Figure 5: 15 Metro LCC Year-over-Year Growth Contribution by Consumer Age

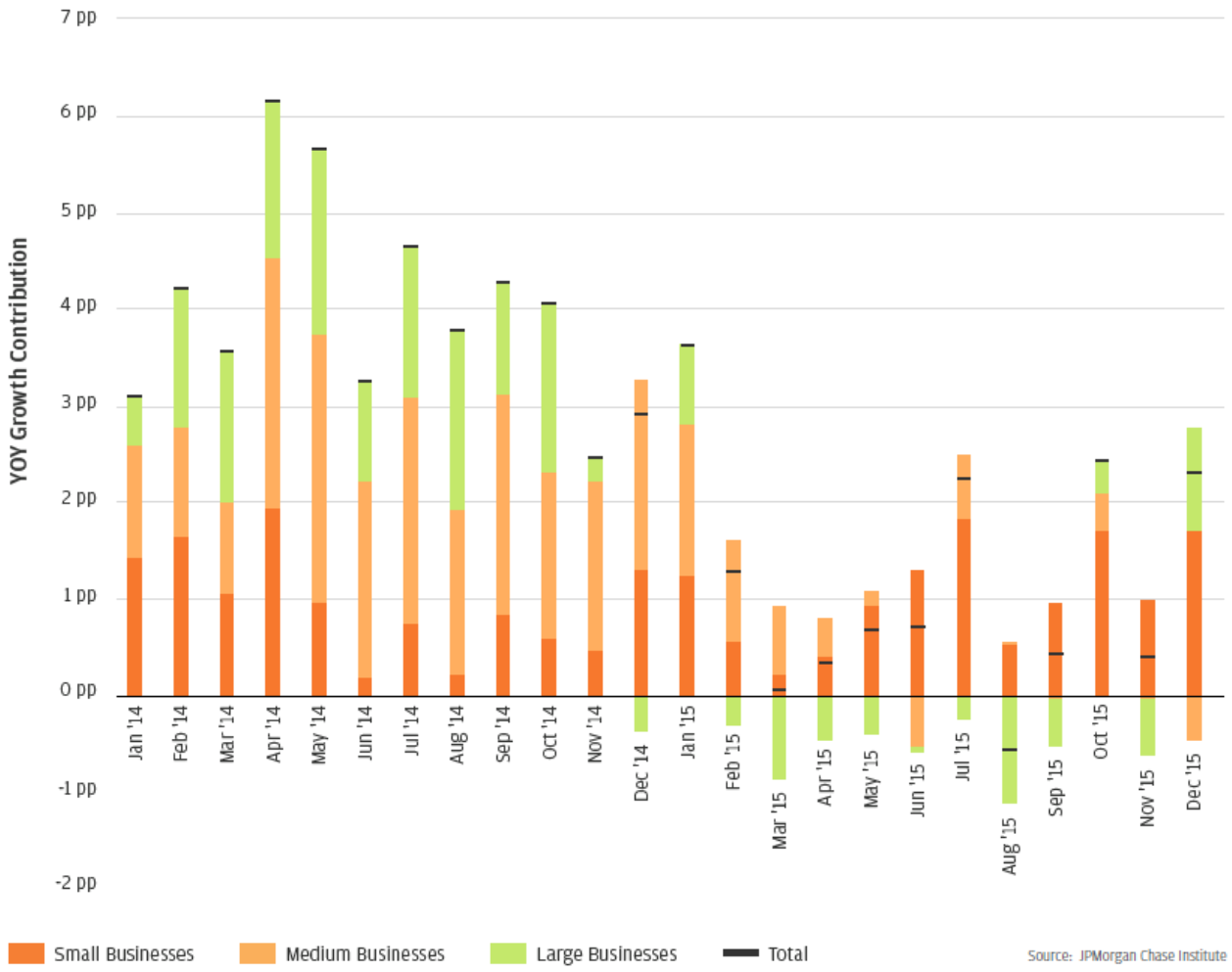


Lower income consumers have made consistent contributions to overall LCC growth



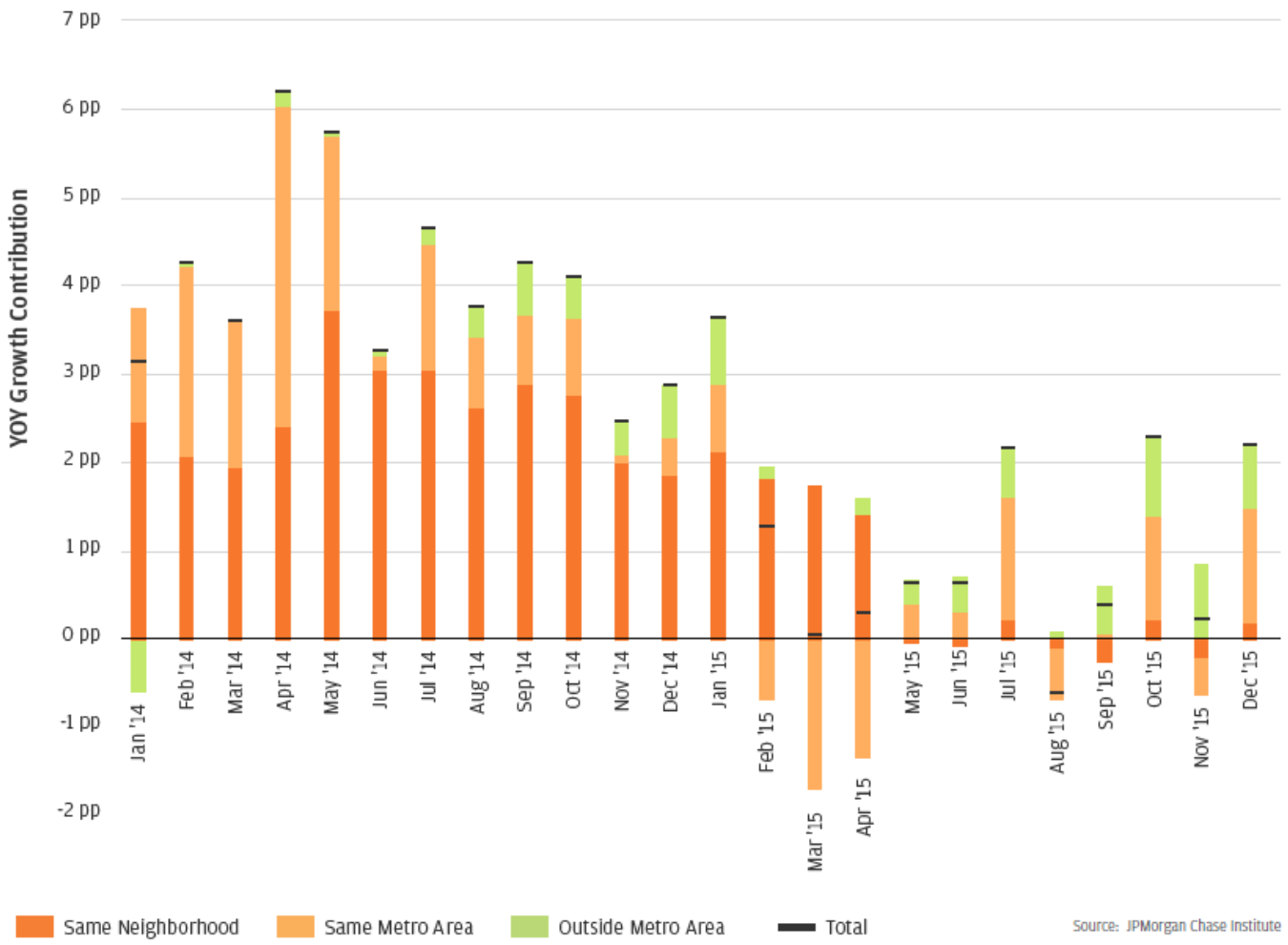
Much of the variation in LCC growth is driven by spending at larger businesses

Figure 7: 15 Metro LCC Year-over-Year Growth Contribution by Business Size



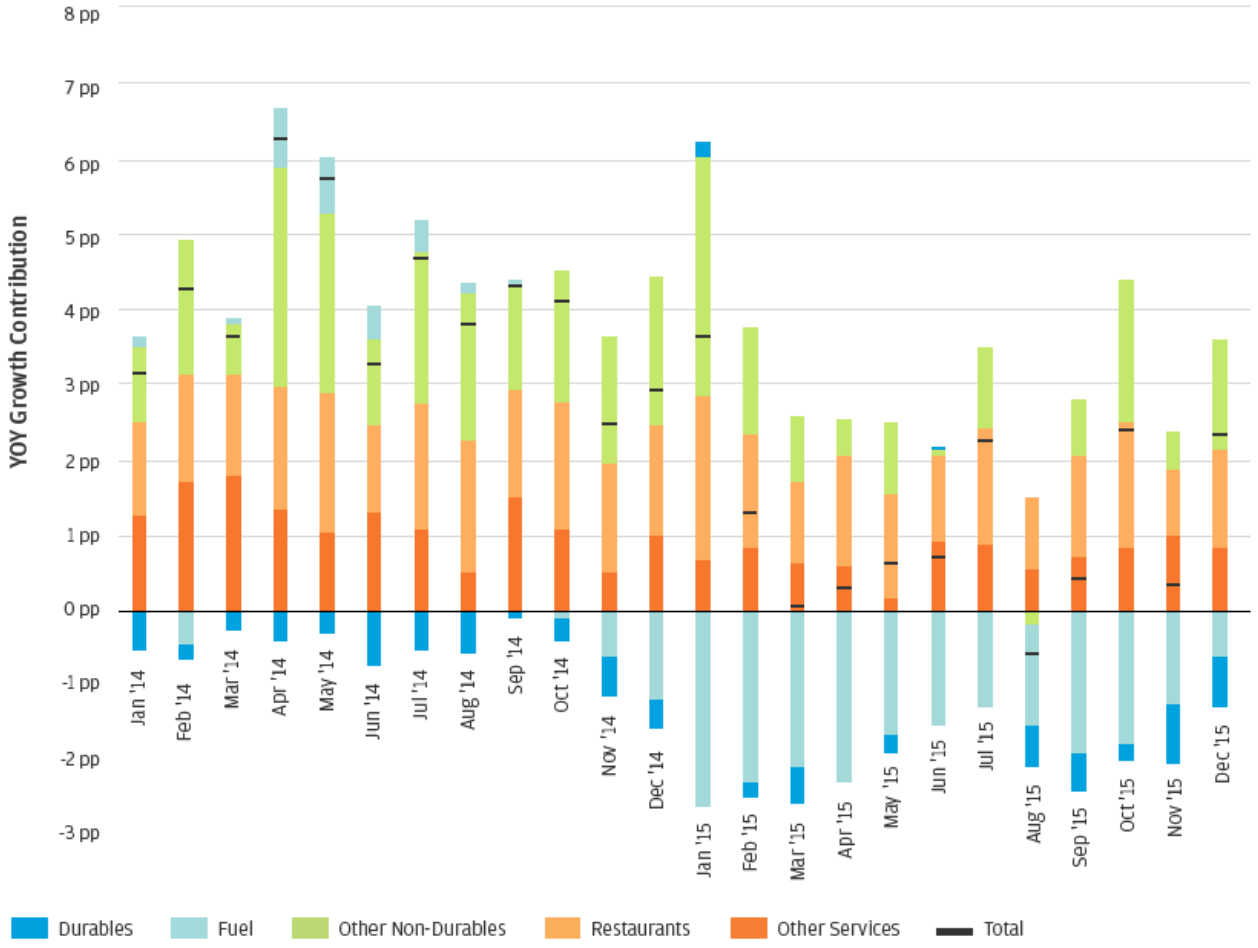
Out-of-metro spending sustained LCC growth in the second half of 2015

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



Restaurants and other services continue to contribute more strongly to growth than durable and nondurable goods

Figure 8: Year-over-Year Growth Contribution by Product Type



Source: JPMorgan Chase Institute

Geographic detail plus a multi-lens view on commercial activity allows LCC to produce otherwise hard-to-see insights (1)

December 2015 Spending

Consumers under 35			Consumers aged 35-44			Consumers aged 45-54		
Rank	City	Growth Rate	Rank	City	Growth Rate	Rank	City	Growth Rate
1	San Francisco, CA	21.5%	1	San Francisco, CA	5.2%	1	Seattle, WA	5.4%
2	**Detroit, MI**	**13.7%**	2	San Diego, CA	4.8%	2	San Francisco, CA	5.2%
3	Portland, OR	13.5%	3	Seattle, WA	4.5%	3	San Diego, CA	3.8%
4	Seattle, WA	10.1%	4	Portland, OR	3.6%	4	Dallas, TX	2.7%
5	Los Angeles, CA	10.0%	**5**	**Detroit, MI**	**3.5%**	5	Los Angeles, CA	2.7%
	Fifteen City Average	*9.6%*	6	Dallas, TX	2.5%	6	Portland, OR	2.4%
6	Atlanta, GA	9.3%	7	Columbus, OH	2.5%	7	Chicago, IL	2.2%
7	Phoenix, AZ	9.1%		*Fifteen City Average*	*2.3%*	8	Columbus, OH	1.8%
8	San Diego, CA	8.9%	8	Los Angeles, CA	2.1%	9	New York, NY	1.6%
9	Denver, CO	8.5%	9	Phoenix, AZ	1.9%		*Fifteen City Average*	*1.6%*
10	New York, NY	8.3%	10	Denver, CO	1.5%	10	Phoenix, AZ	0.9%
11	Chicago, IL	7.3%	11	Miami, FL	1.4%	11	Miami, FL	0.1%
12	Dallas, TX	7.0%	12	Atlanta, GA	1.3%	12	Atlanta, GA	-0.1%
13	Columbus, OH	6.7%	13	New York, NY	0.9%	13	Denver, CO	-0.8%
14	Miami, FL	6.5%	14	Chicago, IL	0.4%	14	Houston, TX	-1.6%
15	Houston, TX	4.2%	15	Houston, TX	-2.0%	**15**	**Detroit, MI**	**-1.8%**

Source: JPMorgan Chase Institute

Geographic detail plus a multi-lens view on commercial activity allows LCC to produce otherwise hard-to-see insights (2)c

December 2015 Spending at Small Businesses

Rank	City	Growth Rate	Rank	City	Share of Spending
1	**Detroit, MI**	**8.3%**	**1**	**Detroit, MI**	**58.4%**
2	Columbus, OH	6.8%	2	Los Angeles, CA	44.3%
3	Chicago, IL	6.7%	3	Atlanta, GA	41.0%
4	Denver, CO	6.4%	4	New York, NY	40.1%
5	Atlanta, GA	6.4%	5	Portland, OR	39.9%
6	Miami, FL	6.4%	6	San Francisco, CA	36.4%
7	Dallas, TX	6.3%		*Fifteen City Average*	*36.3%*
8	Portland, OR	6.2%	7	Miami, FL	35.2%
9	San Diego, CA	6.1%	8	San Diego, CA	35.1%
10	Houston, TX	5.8%	9	Denver, CO	34.6%
11	New York, NY	5.8%	10	Chicago, IL	33.7%
	Fifteen City Average	*5.7%*	11	Seattle, WA	33.4%
12	Los Angeles, CA	5.1%	12	Houston, TX	29.5%
13	Phoenix, AZ	4.5%	13	Phoenix, AZ	29.3%
14	San Francisco, CA	4.3%	14	Columbus, OH	27.5%
15	Seattle, WA	1.0%	15	Dallas, TX	25.4%

Source: JPMorgan Chase Institute

Questions / Recommendations for FESAC

1. Leveraging private and / or sensitive data for public purposes
    a. What architecture(s) support data sharing in support of public objectives when data owners have competitive interests?
    b. Is it appropriate for public sector entities to incentivize private data owners to share data? If so, what incentives might be most effective?
2. Measurement, economic constructs, and new data sources
    a. To what extent have we chosen to focus on the measurement of economic constructs that lend themselves to survey methods?
    b. What other constructs might we focus on if data were produced though administrative processes (e.g. economic production through massively distributed supply chains)?
3. JPMCI Local Consumer Commerce Index
    a. In what ways are these data most helpful to providers of public data?
    b. Are there ways in which these data are not helpful?

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