

Retrospective of the CE-PCE Comparisons and a look to the future

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Outline

- Consumer Expenditures (CE) Overview
- Personal Consumption Expenditures (PCE) Overview
- The Comparison
- Retrospective
- Going Forward



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Consumer Expenditure Survey Overview

- CE Surveys collect the following data:
 - ▶ Expenditures
 - ▶ Demographics
 - ▶ Income
 - ▶ Assets and Liabilities
- The only nationally representative survey to collect the complete range of all three.

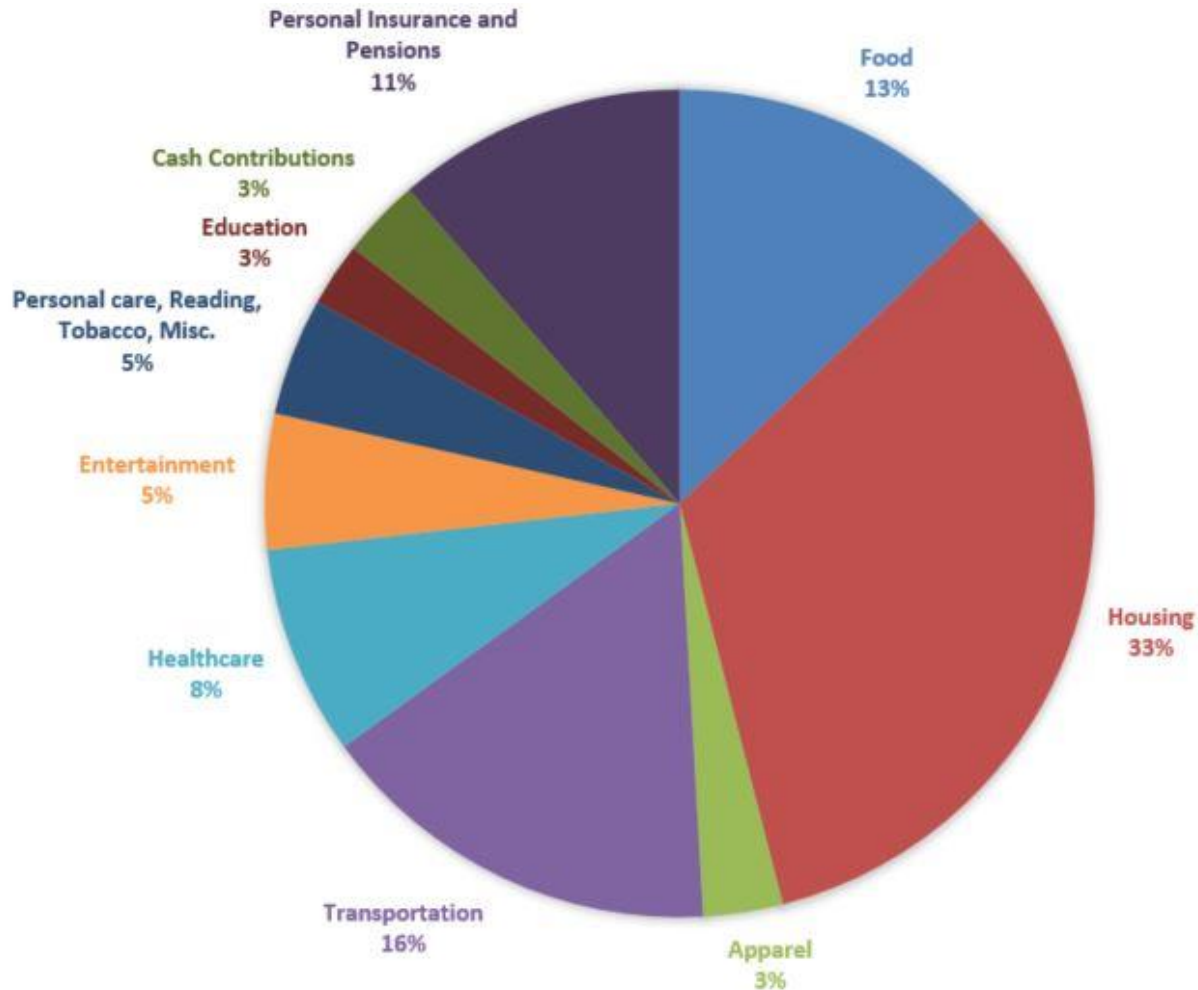


Consumer Expenditure Survey Overview

- The CE is a nationwide survey designed to represent the entire U.S. civilian noninstitutionalized population.
- Under contract, the BLS pays the U.S. Census Bureau to collect CE data from consumer units (CUs) or households - people living at one address who share living expenses.
- Survey participants report dollar amounts for all non-investment purchases. Business expenses and reimbursements are excluded.



Consumer Expenditures Overview



- CE provides survey weights for the Consumer Price Index.
- Relative importance of categories is derived from the share of total expenditures.

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Personal Consumption Expenditures Overview

- Consumer spending is the value of the goods and services purchased by, or on the behalf of, U.S. residents.
- Drawn from a mix of establishment and household surveys.
 - ▶ Economic Census
 - ▶ Services Annual Survey
 - ▶ Quarterly Services Survey
 - ▶ Annual Retail Trade Survey
 - ▶ Advance Monthly Retail Sales Survey
 - ▶ Consumer Expenditure Survey



Personal Consumption Expenditures Overview

- Produced and released monthly as a part of the National Income and Product Accounts (NIPA).
- The source data used for the PCE estimates are complete only for benchmark years (e.g., 2007, 2012)
- Extrapolation used to create the monthly values.
 - ▶ Retail control method for most goods is based on data from the Monthly Retail Trade Survey (MRTS)
 - ▶ The remaining items are estimated using other indicator series.
- End result is aggregate spending for the nation by category.
- Estimates going back a few years are adjusted with releases.
- A price index, used by the Fed, is generated from PCE data.



CPI and PCE Levels

Index 2000=100



Source: FRED, Federal Reserve Bank of St. Louis.

2014 data



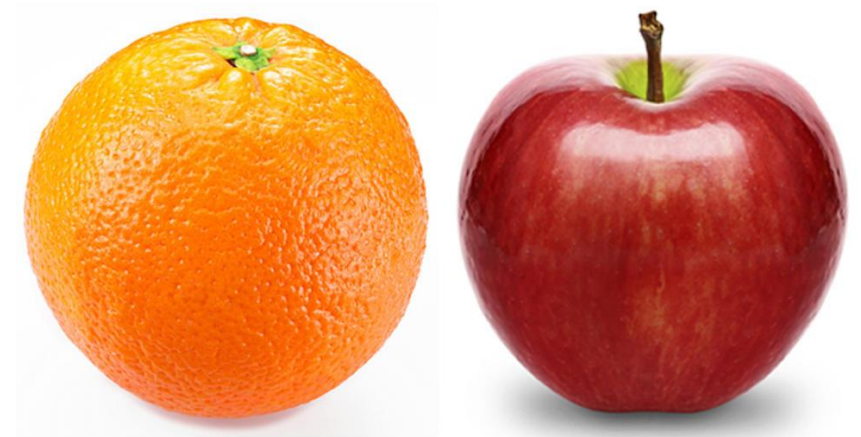
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The Comparison

- Both data sources purport to measure the same basic phenomenon—personal expenditures for consumers.
- Inherent differences are present between the two data sources.
 - ▶ Coverage
 - ▶ Definitional
 - ▶ Measurement



Coverage

■ Included in PCE but not in CE

- ▶ Nonprofit Institutions Serving Households (NPISH)
 - About 2 to 3 percent of PCE expenditures
- ▶ Institutionalized populations
- ▶ Domestic military on post
- ▶ Military stationed abroad
- ▶ U.S. citizens working abroad for less than 1 year who usually live in the U.S.

■ Included in CE but not in PCE

- ▶ Students
- ▶ Temporary workers
- ▶ Foreign nationals residing in the U.S. who are employees of other countries.



Definitional

- Households vs. Consumer Units
- Expenditures in PCE with no CE counterpart
 - ▶ Third party expenditures by government and employers
 - ▶ Financial Services and Insurance
- Insurance is often non-comparable
 - ▶ PCE measures this based on costs incurred by companies
 - ▶ CE measures this based on premiums paid by consumers
- Transfer payments in CE
 - ▶ Social Security, Charitable Contributions, and Donations

Measurement

- Underestimation by households in CE
 - ▶ Gambling, Alcohol, and Tobacco
 - ▶ Respondent underestimation of other household members' expenditures
- Sampling error in PCE source surveys
- Response rate decline in all surveys



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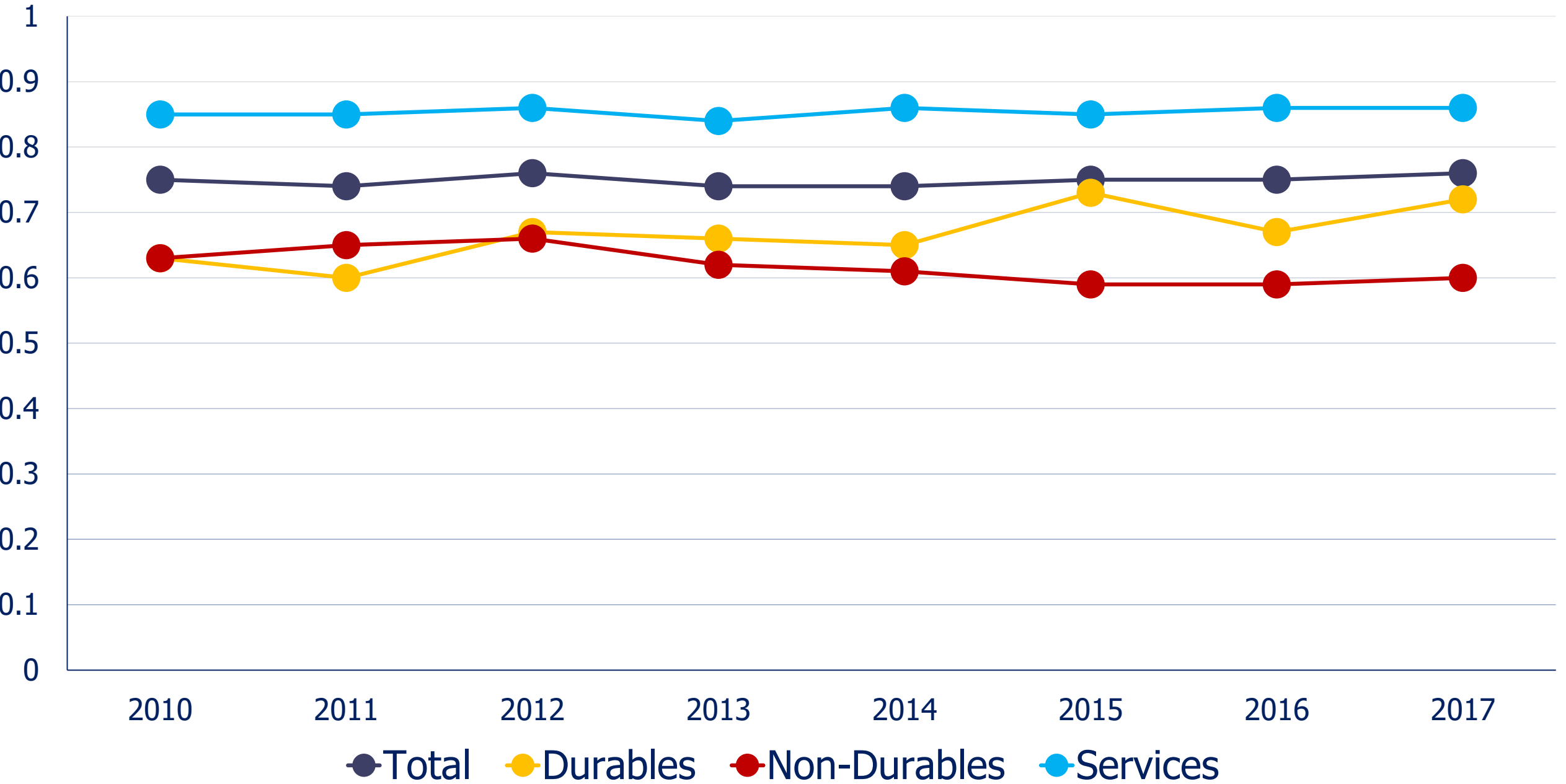


Retrospective

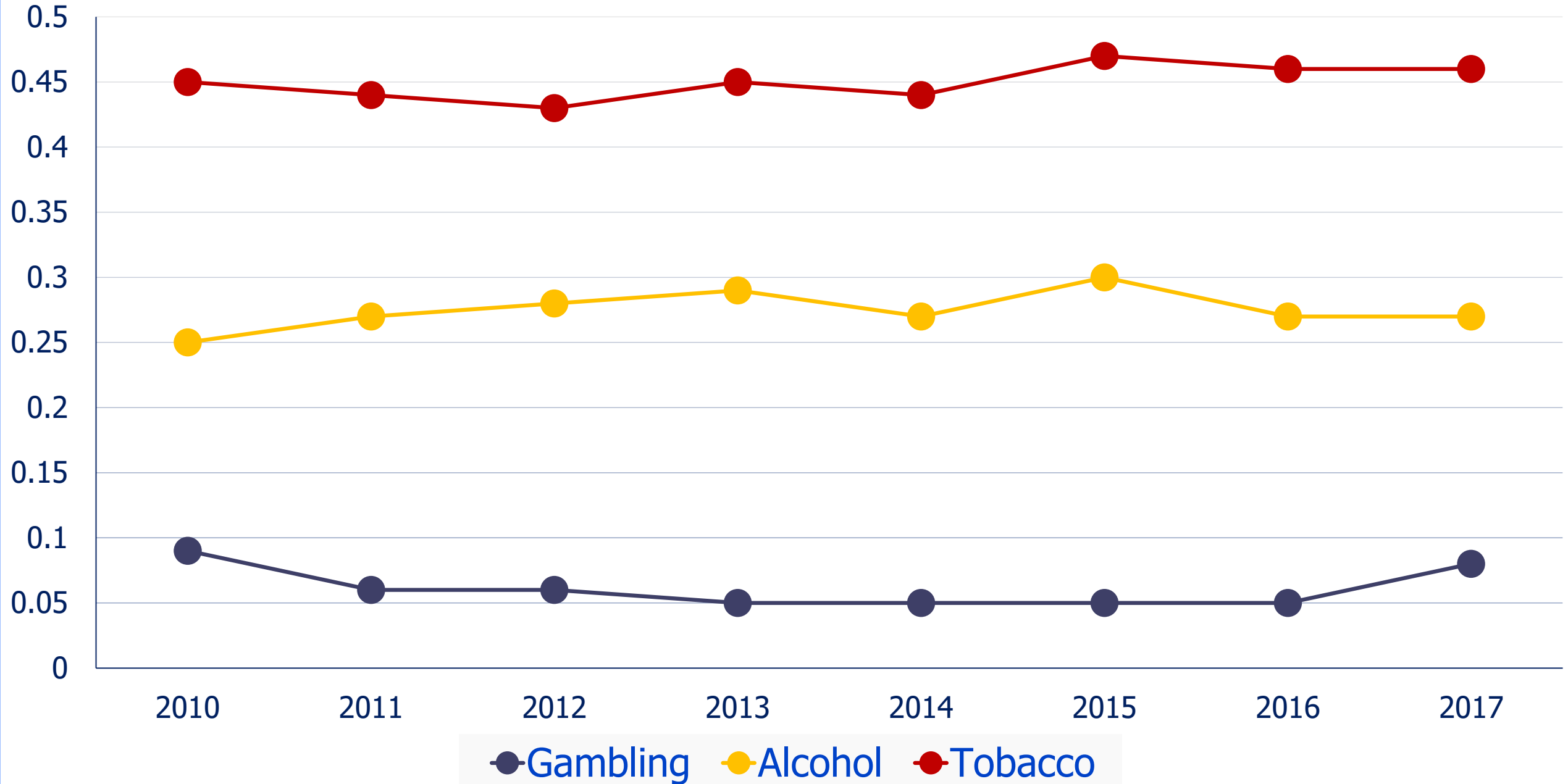
- Topline comparison of aggregate values, adjusted for comparability and population, produced a CE-PCE ratio of 77 percent for the most recent data (2017).
- Comparable categories are consistent over the last eight years.
- Durables ratio appears to be improving and services ratio appears to decrease, though changes may be due to variance alone.
- Re-benchmarking could potentially change the comparison values considerably.



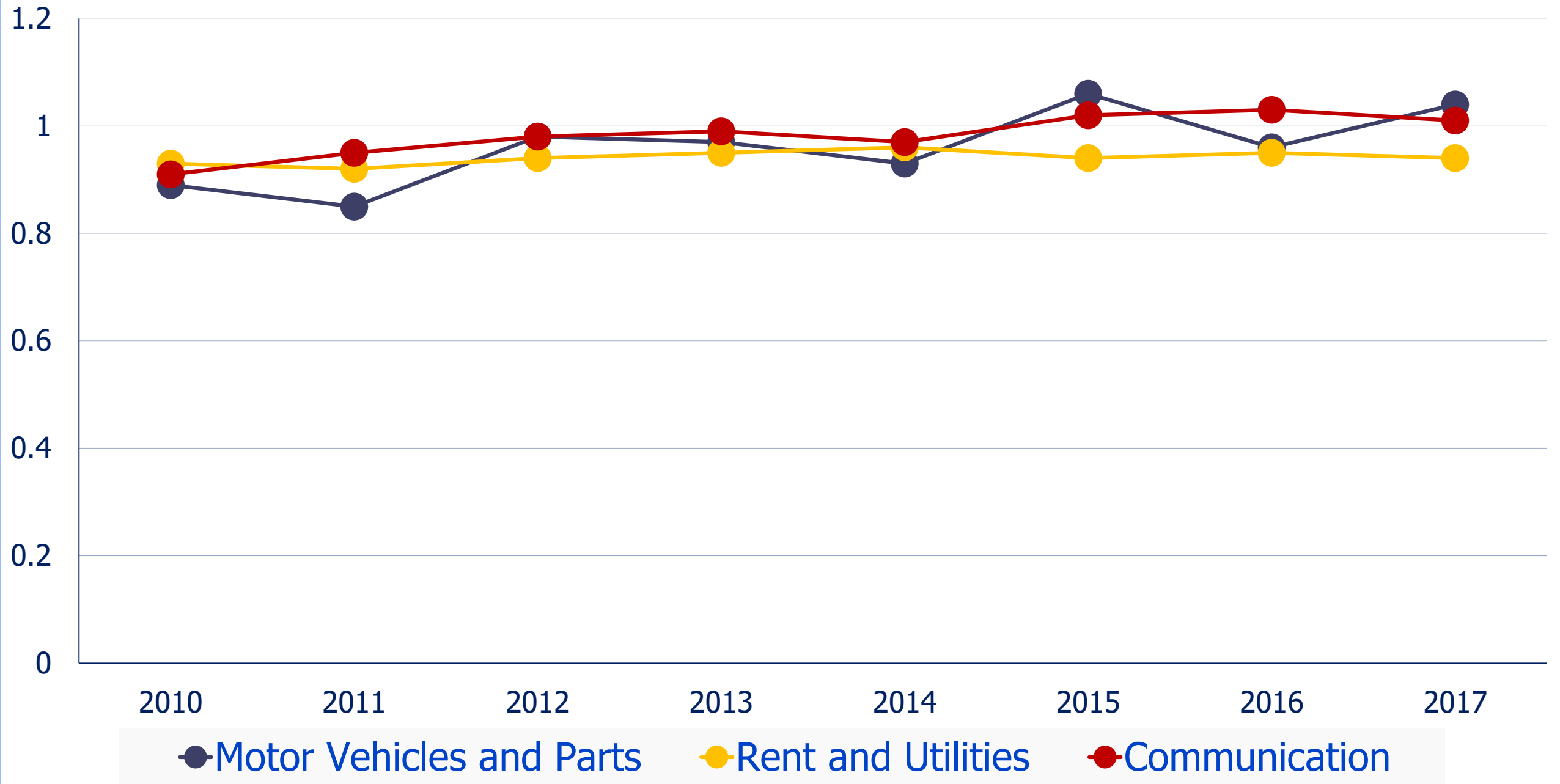
Comparable Ratios over Time



Comparable "Sin" Ratios over Time



Highly Comparable Ratios over Time



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Going Forward

- Benchmark Year
 - ▶ Updating the concordance
 - ▶ Shifting categories and reorganization of items
- Allocating previously unallocated expenditures can reduce the percentage of non-allocated items.
- Survey redesign may improve measurement issues on the CE side.



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