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Holiday gift giving in retreat

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ABSTRACT

Using US cross-section data, holiday gift giving is a normal good whose income elasticity of demand is about 0.5. As income rose 1914–2000, aggregate holiday gift expenditure grew as well. Since 2000, however, holiday giving has fallen in real terms as income has continued to rise. While gift giving remains normal in household cross sections, it behaves like an inferior good in the post-2000 national time series.

1. Introduction

Since Engel (1895), economists have classified goods with positive income effects as "normal" and those with negative income effects are "inferior". These attributes are not inherent: As economies develop, the roles of particular goods can change. For example, some studies show that rice in Asia and beer in Germany have evolved from normal to inferior goods over time (Ito et al., 1989; Volland, 2012). What sort of a good is holiday gift giving in the US, and how has it changed over time?

I first document the relationship between household income and holiday gift giving implicit in cross-sectional Gallup survey data, confirming that holiday gift giving is a normal good with an income elasticity of roughly 0.5. I then examine a century's data on per capita income and holiday gift giving (inferred from the December bump in retail sales). I show that holiday gift giving rose with income until 2000 and has since fallen in real terms even as income has continued to grow. Although gift giving is normal in cross sections of US households, it behaves like an inferior good in the national time series since 2000.[1]

2. Data

I have two broad kinds of data for documenting volumes of gift giving and income. First, I have aggregate information from surveys reflecting the US cross-household relationship between income and holiday gift expenditures. Second, I have aggregate US data on annual income and monthly retail sales covering 1914–2020.

2.1. Gallup data on giving intentions

While official statistics lack information on holiday gift giving *per se*, Gallup has repeatedly asked respondents for their holiday gift-spending intentions. I have these data annually for 2002–2010, as well as for 2015, 2018, and 2020. In 2018 and earlier, Gallup reported the average amount households intended to give for three income categories: below $30,000, $30,000-$75,000, and over $75,000.[2] For 2020 the analogous cutoffs were $40,000 and $100,000. I obtain the average income in these groups using Census data on the distribution of income.[3]
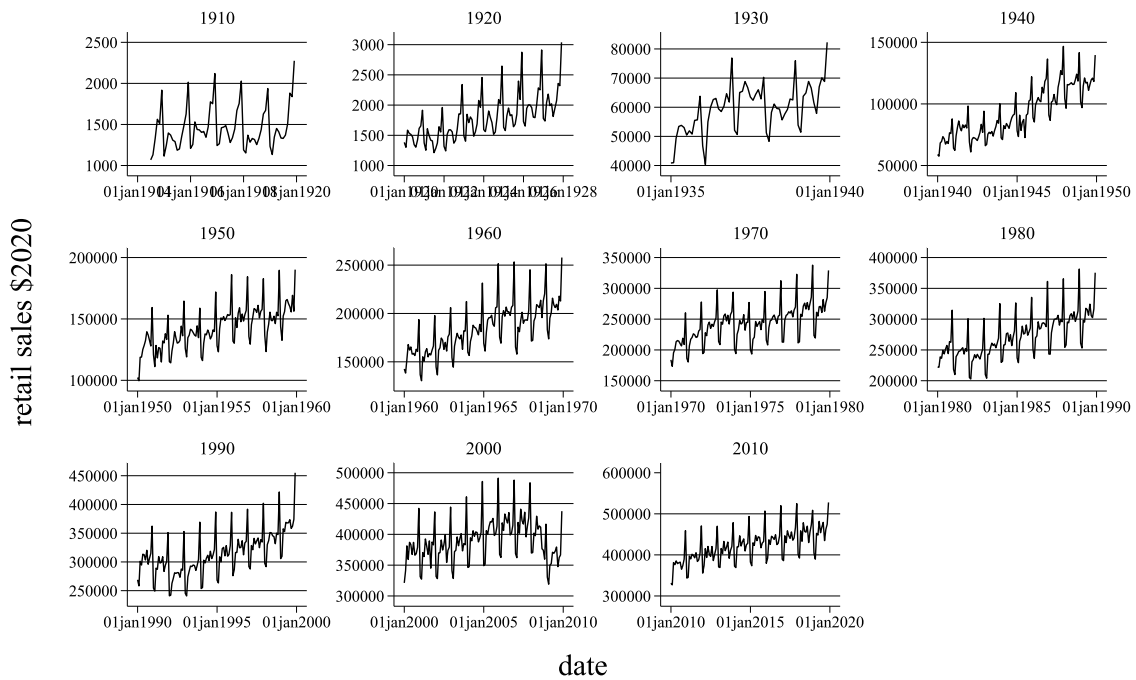
2.2. Aggregate time series data

To estimate the relationship between income and expenditure in a category, I need a measure of expenditure on the good in question, along with a measure of income. Income is relatively straightforward: I use real per capita disposable income and real per capita GDP, which I obtain from the Saint Louis Federal Reserve Economics Data (FRED) site for 1929–2020.[4] I transform these measures into real per capita terms using data on the price level for 1913–2020 from the Minneapolis Federal Reserve Bank, as well as population data from FRED.[5]

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[1] I note the analogy to the Getzen (2000) observation, discussed below, that health care is an "individual necessity and a national luxury".

[2] See, for example, https://news.gallup.com/poll/124745/11th-hour-surge-americans-christmas-spending-intentions.aspx.

[3] See https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-hinc/hinc-06.2020.html.

[4] See https://fred.stlouisfed.org/series/DSPI and https://fred.stlouisfed.org/series/GDPA.

[5] See https://www.minneapolisfed.org/about-us/monetary-policy/inflation-calculator/consumer-price-index-1913- for the price data, and see https://fred.stlouisfed.org/series/B230RC0A052NBEA and https://fred.stlouisfed.org/series/A067RC1A027NBEA for population.

Fig. 1. The December retail sales bump.

Measuring holiday gift spending is more challenging. While some types of products – toys, jewelry – are more common than others as gifts, the monthly retail sales data are presented in categories that cover types of stores rather than types of products. Some types of stores are product-specific, but others, such as online retail, sell many types of products. Because many different kids of items can serve as gifts, holiday giving is better distinguished by its timing rather than by the category of products sold. Retail sales data are available monthly in non-seasonally adjusted form. I obtain this series for 1935–2020 as well as a monthly retail trade index (1919=100) for 1914–1927.[6]

Fig. 1 shows monthly retail sales data without seasonal adjustment. It is clear that December's retail sales far exceed the sales in surrounding months; and this has been true for a century in the US, presumably because of spending on Christmas. I construct my basic of measure of holiday gift spending by subtracting November's retail sales from December's.[7]

3. The relationship between income and holiday gift expenditures

3.1. The contemporary cross-sectional relationship

The Gallup data showing holiday gift-spending intentions by income group, along with Census data on the distribution of household income, allow me to calculate rudimentary income elasticities of demand for holiday giving by regressing log giving expectations on log household income in each year and income category. As Table 1 shows, the resulting coefficient is 0.476 (with a standard error of 0.023). I obtain a nearly identical coefficient including year fixed effects in column (2). As column

Table 1
Cross sectional holiday giving income elasticities.

Variables	(1) log Xmas	(2) log Xmas	(3) log Xmas
log inc × year=2002			0.385 (0.054)
log inc × year=2003			0.429 (0.053)
log inc × year=2004			0.547 (0.053)
log inc × year=2005			0.460 (0.052)
log inc × year=2006			0.536 (0.052)
log inc × year=2007			0.359 (0.053)
log inc × year=2008			0.615 (0.053)
log inc × year=2009			0.493 (0.052)
log inc × year=2010			0.544 (0.052)
log inc × year=2015			0.439 (0.050)
log inc × year=2018			0.510 (0.049)
log inc × year=2020			0.408 (0.050)
log income	0.476 (0.023)	0.477 (0.019)	
Constant	1.450 (0.254)	1.571 (0.208)	2.563 (0.579)
Observations	36	36	36
R-squared	0.924	0.968	0.989

Standard errors in parentheses

Notes: Regressions of log real holiday spending intentions for an income cell (e.g. under $30,000) on log average income in the cell. Columns (2) and (3) include year fixed effects.

(3) shows, the coefficient is quote stable over time. The cross-sectional data reveal that holiday gift giving is a normal good, so one might expect that as households get richer over time, holiday gift expenditures would grow.

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[6] See https://www.census.gov/retail/index.html for monthly retail sales and https://fred.stlouisfed.org/series/M0601BUSM326NNBR and https://fred.stlouisfed.org/series/M0601AUSM327NNBR for the index.

[7] In Section 4 I show that the results arise measuring holiday gift spending as December less each month from the previous September to the following March.
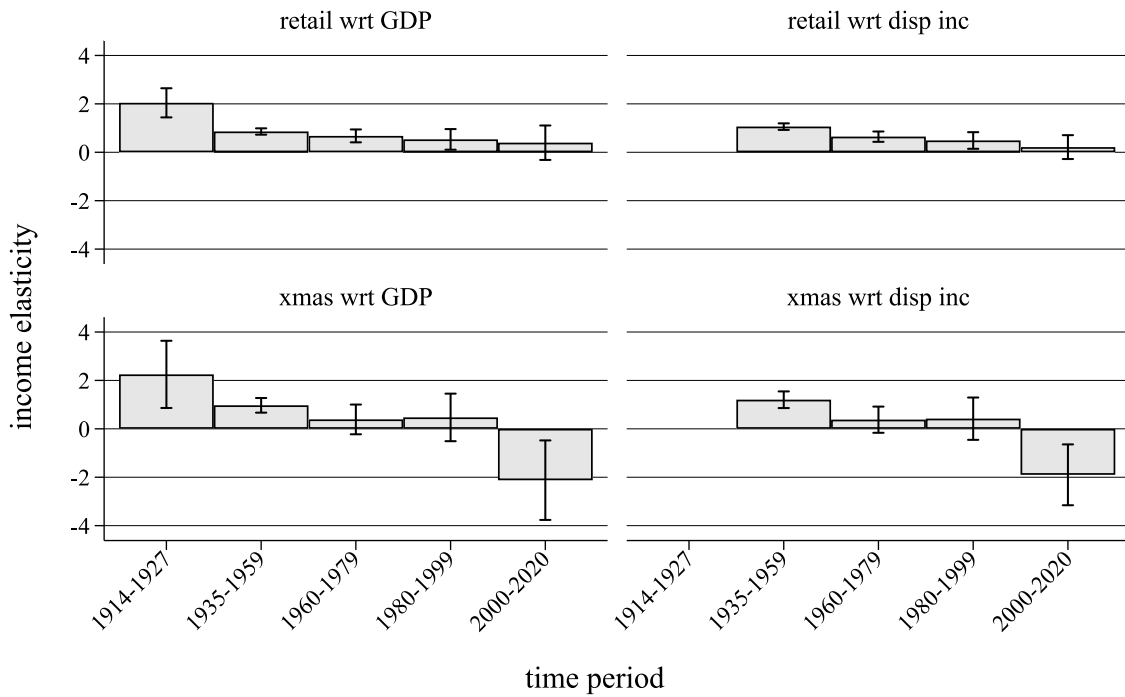
Fig. 2. Gift expenditure income elasticities by period.
Note: The bars show the coefficients from regressions of per capita log expenditures (total and gift) on per capita log disposable income or log per capita GDP.
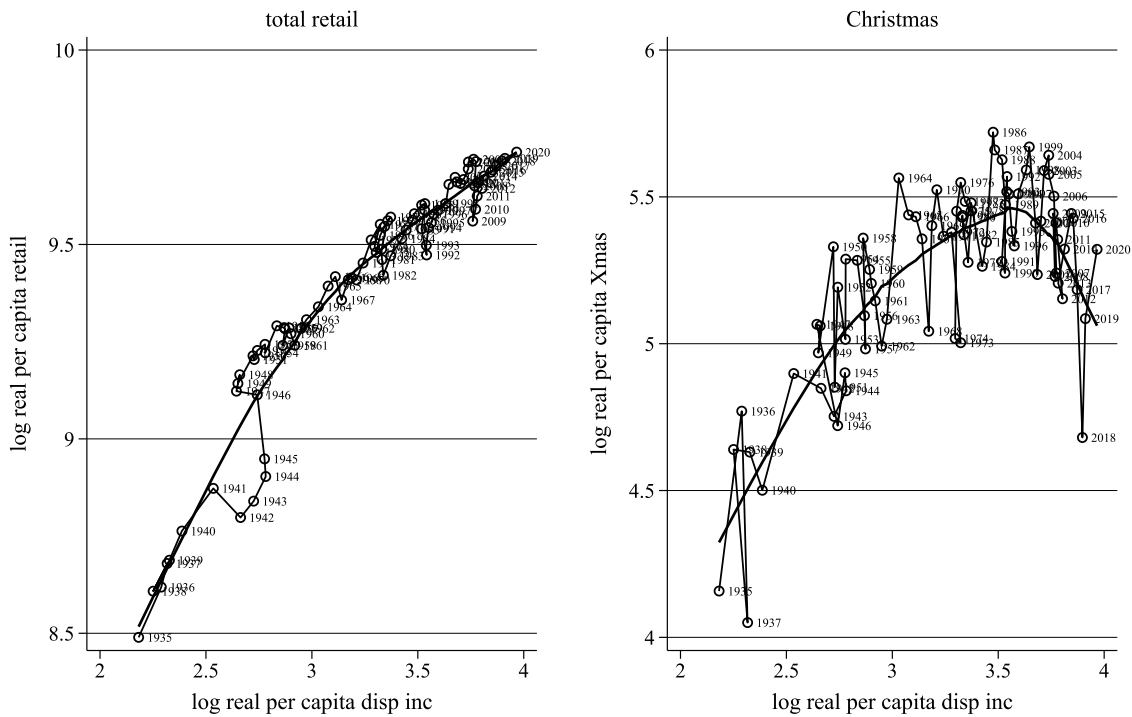

Fig. 3. Income and expenditure: total retail vs Christmas.
Note: The figures show the sequences of per capita log retail and log holiday gift expenditure (on the *y*-axis) against log per capita disposable income on the *x*-axis. The slopes of the relationships reflect income elasticities of demand.

3.2. The time series relationship over a century

Over the past century, real per capita income has grown substantially. Between 1929 and 2020, disposable income grew from $10,000 to over $50,000 in 2020 dollars, or by a factor of nearly five. Between 1914 and 2020, per capita GDP grew from just over $10,000 to over $60,000 or by more than six times.

How have retail sales in general, and spending on holiday gifts in particular, evolved as income has risen? I summarize the relationship with income elasticities of demand estimated on the time series data. My approach is similar to that of Basker (2011),
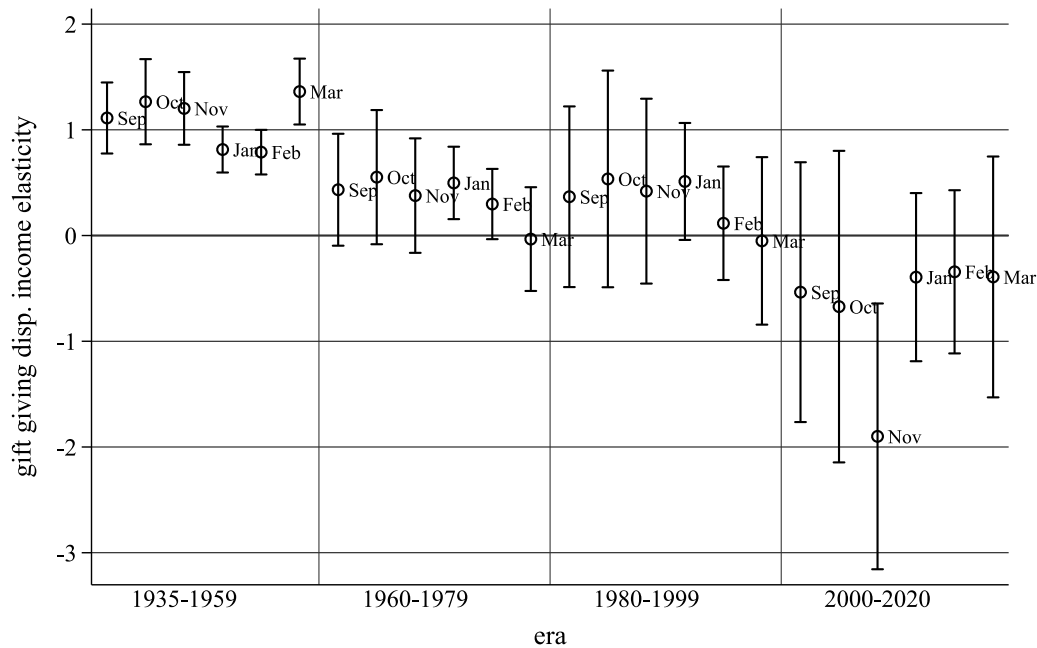
Fig. 4. Robustness to holiday giving definition.
Note: Income elasticity coefficients from regressions of log gift spending on log disposable income, using different gift spending definitions. For example, "Nov" means that gift spending is measured as December less November. January, February, March refer to the months following December, not those earlier in the year.

who estimates elasticities of demand for products sold at Target and Wal-mart using quarterly data on their respective sales per store, along with quarterly data on real disposable income.

I separately regress annual measures of log real per capita retail sales, and on holiday gift expenditures, on log real per capita disposable income for subsets of the century. Fig. 2 reports the resulting estimated income elasticities. I run separate regressions for four periods: 1935–1959, 1960–1979, 1980–1999, and 2000–2020. The overall retail elasticity is positive for all periods of the century, although it declines over time. The gift giving elasticities also fall systematically over time. Moreover, they fall more quickly than the total retail elasticity, and the estimated gift giving elasticity is negative for the period since 2000.

The right side of Fig. 2 repeats the analysis using per capita GDP rather than disposable income, which allows me to include an additional time period: 1914–1927. The pattern of falling income elasticities emerges here too, and the gift giving elasticity for the earliest period is over one.[8]

Fig. 3 presents the data flexibly, with a scatter plots of the relationships between log expenditure (overall and for gifts) and log income. Because income rises over time, the points for successive years tend to be farther to the right along the *x* (log per capita disposable income) axis. As income rises, retail sales (in the left panel) tend to rise as well. The right figure shows the exercise for holiday gift expenditures. For 1935 through about 2000, gift expenditures rise with disposable income. Thereafter, gift giving falls as disposable income continues to rise. This reversal confirms the falling and eventually negative income elasticities in Fig. 2.

4. Discussion

The changing time-series income elasticity of demand for holiday gift giving suggests that giving has shifted from a luxury to an inferior good over time, but the contemporary cross-sectional

information shows that higher-income households spend more on gifts. Given that holiday giving is normal in contemporary cross sections, shifting attitudes – rather than inferiority *per se* – may be a better description of the temporal pattern.

It is not uncommon for studies using different units of analysis to suggest different income elasticities. For example, based on about a century's data on income and spending, Fogel (1999) estimates the elasticities of demand for health care, education, and leisure to exceed unity. Implied elasticities for food, clothing, and shelter are positive but less than one. In health care, the contrast between income elasticities based on comparisons across individuals and across countries (or time periods) has led Getzen (2000) to describe health care as an "individual necessity and a national luxury". One might similarly argue that in the 21st century, holiday gift giving in the US has become an individual necessity and a national inferior good.

The decline in holiday gift giving has some other possible explanations. First, one might be concerned that declining gift expenditures stem from a contracting population of children as the baby boom ages.[9] Yet, when I redo the analysis in Fig. 3 replacing population with under-20 population, the result remains: The overall retail income elasticity rises, while the gift giving elasticity rises until about 2000, then falls and becomes negative.[10]

Second, one might be concerned that my definition of holiday gift spending (December less November nonseasonally adjusted retail sales) drives the results. Fig. 4 explores this by estimating income elasticities of demand for holiday gift giving using the approach in the lower-left panel of Fig. 2 but altering the definition of holiday gift spending. "Sep" indicates that holiday giving is measured as December less September retail sales, and so on. Across a range of gift-spending definitions, the elasticity

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[8] The finding of a declining income elasticity of demand for holiday gifts recalls findings related to other goods, such as rice in Asia (Ito et al., 1989) or beer in Germany (Volland, 2012).

[9] See https://www.census.gov/library/stories/2021/08/united-states-adult-population-grew-faster-than-nations-total-population-from-2010-to-2020.html.

[10] I obtain data on the population under age 20 since 950 from the OECD (https://data.oecd.org/).

is roughly 1 for the period before 1960, it is roughly 0.5 for the period 1980–1999, and it is negative for the period since 2000.[11]

One can make a distinction between gift items chosen by givers for recipients and giving more generally. If one purchases an item during December to give as a gift on Christmas, that will be part of December retail sales. If one gives cash or gift cards as gifts, those do not contribute to retail sales until the recipient spends the money or redeems the gift cards. The rather substantial growth in the use of gift cards as holiday gifts (Offenberg, 2007) provides a possible explanation of reduced December retail sales since 2000.[12]

Despite possible shifts in the timing of gift spending, survey data on giving intentions also show decline. Gallup annually asks: "Looking ahead for a moment to the Christmas holiday season, [r]oughly how much money do you think you personally will spend on Christmas gifts this year?"[13] In real 2020 dollars, giving has fallen from roughly $1300 in 1999 to about $800 in the period since 2010. This suggests that overall giving, and not just the volume of spending on items chosen by givers for recipients, is falling.

The role of holiday giving in the US economy has changed over time. Early in the 20th century, giving grew faster than income. In the second half of the century, giving continued to grow with income, albeit less quickly than income. In the period since 2000, while giving intentions continued to be higher for higher-income households at each point in time, overall giving has declined as income has continued to rise. Holiday gift giving is in retreat in the US. While it is normal across households, it behaves like an inferior good in the national time series since 2000.

Data availability

Data are all public, and sources are linked in article.

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[11] Basker (2005) uses the sum of December and November less the sum of October and September. Using the monthly real retail sales for the entire time period, October and November are indistinguishable in my data, which leads me to treat December as the month in which gift spending occurs.

[12] Growth of interest in "experience gifts" provides another reflection of possible shifts away from giving particular items in December. Between 2004 and 2014 the Google search intensity averaged 9.5 for months between January and November and 27.3 for December, reflecting elevated use of experience gifts at the holidays. Since 2014 the non-December intensity rose 80 percent to 17.3, while the December search intensity rose 131.1 percent to 63.1, reflecting a rising interest in experience gifts.

[13] See https://news.gallup.com/poll/326654/americans-holiday-spending-intentions-strengthen-november.aspx.