# Household Composition and The Transmission of Aggregate Shocks*

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**Abstract**

We document that married households exhibit substantially larger consumption responses to monetary policy shocks than single households. This gap persists after accounting for standard demographic and balance-sheet characteristics, as well as labor-market dynamics. Married households dedicate a larger budget share to highly elastic luxuries and exhibit stronger responses within this category, jointly accounting for 81 percent of the response gap. We build a quantitative heterogeneous-agent model with non-homothetic preferences and consumption sharing in married households that matches these empirical patterns. By reducing the burden of basic needs, consumption sharing shifts expenditure composition toward luxuries and raises the within-good intertemporal elasticity of substitution, endogenously generating the aggregate response gap. Counterfactual experiments suggest that the secular decline in marriage has attenuated the aggregate consumption response to monetary policy.

*JEL codes:* E21, E32, E52, G51, J12

*Keywords:* Household composition, marriage, monetary policy, heterogeneous agents

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# 1. Introduction

Household composition in the United States has changed dramatically over the past several decades. In 1930, married households accounted for roughly 80 percent of U.S. households. By 2024, this share had fallen to 49 percent, a decline not completely explained by rising cohabitation or population aging. Although the causes and long-run consequences of this transformation are well documented, its implications for business-cycle fluctuations and stabilization policy remain much less understood. If married and single households adjust consumption differently in response to aggregate shocks, the secular decline in marriage can alter the transmission and effectiveness of monetary policy.

This paper provides new evidence that married households increase consumption more sharply than single households following business-cycle shocks. We combine identified monetary policy shocks with detailed expenditure data from the Consumer Expenditure Survey (CEX) to estimate consumption responses separately for married and single households. Following a 25-basis-point expansionary shock, single households do not exhibit a statistically significant response at any horizon over the subsequent four years. In contrast, married households' consumption increases significantly, with their cumulative consumption response peaking at approximately 0.4 percent after three years. This gap is robust to standard demographic and balance-sheet controls, and generalizes beyond monetary policy to other aggregate shocks.

The larger consumption response of married households is surprising because two natural explanations—differences in labor-market exposure and liquidity constraints—would predict the opposite. Labor income responses are similar across the two groups, while unemployment falls more among single households, consistent with spousal risk sharing reducing married households' exposure to business cycles. Single households are also more likely to be hand-to-mouth, which should make their consumption more responsive to aggregate shocks. Neither labor-market exposure nor liquidity therefore explain the observed response gap.

What then accounts for the larger consumption response of married households? Our evidence points to differences in what households buy and how readily they adjust those expenditures. We begin in the cross-section, using Engel curves to classify goods as necessities or luxuries and then estimate expenditure elasticities separately for married and single households. Two key findings emerge. First, married households spend less per person on necessities and devote a larger share of their budget to luxuries. Second, they also exhibit higher expenditure elasticities for most categories classified as luxuries. Crucially, these differences persist after conditioning on demographic and economic differ-

ences across the two groups. Luxury goods therefore emerge as a natural candidate for explaining the differential response. Returning to the time-series exercise, we indeed find that luxuries account for roughly 81 percent of the married–single consumption response gap.

We rationalize these findings in a Heterogeneous-Agent New Keynesian (HANK) model featuring additively separable preferences over necessities and luxuries, along with Stone–Geary subsistence requirements. Rather than imposing ex-ante differences in tastes or elasticities, we let married and single households differ only in the extent to which they can share consumption. This single mechanism amplifies married households' effective intertemporal elasticity of substitution (IES) in two ways that directly mirror our empirical findings. First, shared consumption leads to more rapidly declining marginal utility for necessities, which shifts the budget toward highly elastic luxuries. This compositional shift raises their effective IES. Second, sharing lowers the per-person subsistence requirement. Because married households operate further above subsistence, they have a higher effective IES especially for luxuries and, consequently, higher expenditure elasticities for luxury goods. Together, these two forces allow the model to endogenously generate married households' higher luxury expenditure shares, greater luxury expenditure elasticities, and ultimately, a higher aggregate consumption response.

Motivated by the secular decline in marriage over the past century, we use the model to quantify how changing household composition has altered monetary policy transmission. Comparing counterfactual economies calibrated to 2024 versus 1930 household composition reveals a substantial macroeconomic shift: the response of aggregate consumption to a 25-basis-point expansionary monetary policy shock increases from 0.41 percent under the modern marriage share to 0.50 percent under the historical share, representing a 21 percent amplification. This difference reflects both direct compositional effects, as a larger share of the population consists of married households with stronger consumption responses, and general equilibrium feedback through the aggregate demand channel. Our counterfactuals therefore imply that the decline in marriage has materially attenuated the effectiveness of monetary policy over time.

**Related literature.** This paper contributes to the literature on heterogeneity in monetary policy transmission across households. Existing work documents distributional effects of monetary policy on household consumption (Coibion et al., 2017), as well as differences in household consumption responses associated with mortgage debt and housing tenure (Cloyne, Ferreira, and Surico, 2020; Flodén et al., 2021), income (Andersen et al., 2023), liquid asset holdings (Holm, Paul, and Tischbirek, 2021), and age (Berg et al., 2021;

Wong, 2019). We document a distinct dimension of heterogeneity: marital status. Married households exhibit larger consumption responses than single households, even after conditioning on demographic and balance-sheet characteristics.

Second, we connect to the empirical literature on marginal propensities to consume (MPCs). Our findings expand on patterns briefly noted in the literature suggesting that larger households (Coibion, Gorodnichenko, and Weber, 2020; Fagereng, Holm, and Natvik, 2021; Jappelli and Pistaferri, 2014), those with children (Colarieti, Mei, and Stantcheva, 2025), and married households (Lewis, Melcangi, and Pilossoph, 2026) exhibit higher MPCs out of positive income shocks. We instead document that differences associated with marital status extend to consumption responses to aggregate shocks. Crucially, because monetary policy shocks induce direct responses to interest rates, the consumption dynamics we document need not be driven solely by differences in MPCs.

Third, we add a new dimension to the growing literature on families in macroeconomics (Doepke and Tertilt, 2016). Existing work highlights how marriage provides insurance against labor-market risk through income pooling and adjustments in spousal labor supply (e.g., Bardóczy, 2022; Birinci, 2024; Blundell, Pistaferri, and Saporta-Eksten, 2016; Wu and Krueger, 2021). We introduce a complementary mechanism operating through the expenditure side, connecting the literature on consumption economies of scale (Browning, Chiappori, and Lewbel, 2013; Hsieh, Lewbel, and Pendakur, 2024; Lewbel and Pendakur, 2008) to macroeconomic work on non-homothetic preferences. This literature exploits differences between necessities and luxuries to study consumption inequality (Aguiar and Bils, 2015), the role of luxuries in business cycles (Andreolli, Rickard, and Surico, 2025), and inflation inequality (Orchard, 2025). Closely related to our mechanism, Attanasio and Browning (1995) find that the elasticity of intertemporal substitution rises with the level of consumption, while Browning and Crossley (2000) show that luxuries are more responsive to intertemporal price changes. Our model links these two margins: consumption economies of scale within marriage move households further above subsistence and shift expenditure toward luxuries, thereby raising their effective IES.

Finally, our analysis contributes to work studying the aggregate economic consequences of changing marriage patterns. Existing work shows that changes in marriage shape homeownership among young households (Fisher and Gervais, 2011), prime-age male labor supply (Blandin, Jones, and Yang, 2025), and economic inequality (Greenwood et al., 2014; Kearney, 2022). We add a stabilization-policy dimension to this literature by showing that the secular decline in marriage has attenuated the aggregate consumption response to monetary policy.

The remainder of this paper proceeds as follows. In Section 2, we describe the house-

hold survey data, document the secular decline in marriage in the U.S., and characterize cross-sectional differences between married and single households. In Section 3, we describe the identification of monetary policy shocks and our empirical approach before presenting the consumption and labor-market responses of married and single households. In Section 4, we document differences in married and single households' consumption of necessities and luxuries and show that luxuries account for much of the differential consumption response. In Section 5, we develop a HANK model with non-homothetic preferences and consumption sharing that rationalizes the observed differences in expenditure patterns and consumption responses between married and single households. We conclude in Section 6.

# 2. Data and Descriptive Statistics

In this section, we describe the main sources of household survey data and document key facts about household composition in the United States. We begin by showing that marriage rates have declined steadily since 1930, with the decline driven by lower marriage rates among recent cohorts. We then present cross-sectional evidence on how married and single households differ in income, consumption, balance-sheet characteristics, and demographics. We return to these differences when discussing our empirical strategy in Section 3.

## 2.1. Household Survey Data

Our analysis combines four household surveys that together provide information on the consumption, income, employment, and balance sheets of married and single households. We briefly summarize the construction of key variables and the sample restrictions below; see Appendix A.1 for additional details.

**Data sources.** To study long-run changes in household composition, we use decennial Census microdata from 1880 to 2000, relying on the 1 percent sample in each Census year. We extend the data with American Community Survey (ACS) 5-year samples ending in 2010, 2020, and 2024, which allow us to characterize more recent trends.

Next, we measure consumption using the Consumer Expenditure Survey (CEX), which reports monthly expenditures across detailed categories for a representative sample of U.S. households. The CEX also records household composition and a rich set of demographic and economic characteristics, including age, income, and housing tenure. These

variables allow us to compare married and single households while conditioning on other observable differences across the two groups. Appendix A.1.1 describes the construction of the consumption categories in more detail.

We measure monthly earnings and employment using the Outgoing Rotation Group of the Current Population Survey (CPS). Finally, to study household balance sheets, we use the Survey of Consumer Finances (SCF), which provides detailed information on assets, liabilities, and net worth.

**Marital status definitions.** We refer to the observational units in each dataset as households for ease of exposition.[1] We classify a household as married if the reference person reports being married, and as single otherwise.[2] Single households therefore include those whose reference persons are never married, separated, divorced, or widowed, as well as unmarried cohabiting couples. Our baseline definition is based on marriage because it captures a formal margin of within-household financial risk sharing. In robustness checks, we show that our main findings persist when we disaggregate single households by marital history or broaden the married category to include unmarried cohabiting couples.

**Sample construction.** Our baseline sample runs from January 1982 to December 2019, excluding the Covid-19 period because of atypical consumption patterns. We restrict the sample to households whose reference person is between ages 18 and 80. All economic variables are expressed in per capita terms to make households of different sizes comparable, though our results are robust to using alternative equivalence scales. We deflate all nominal variables to 2019 dollars using the consumer price index.

## 2.2. Long-Run Trends in Household Composition

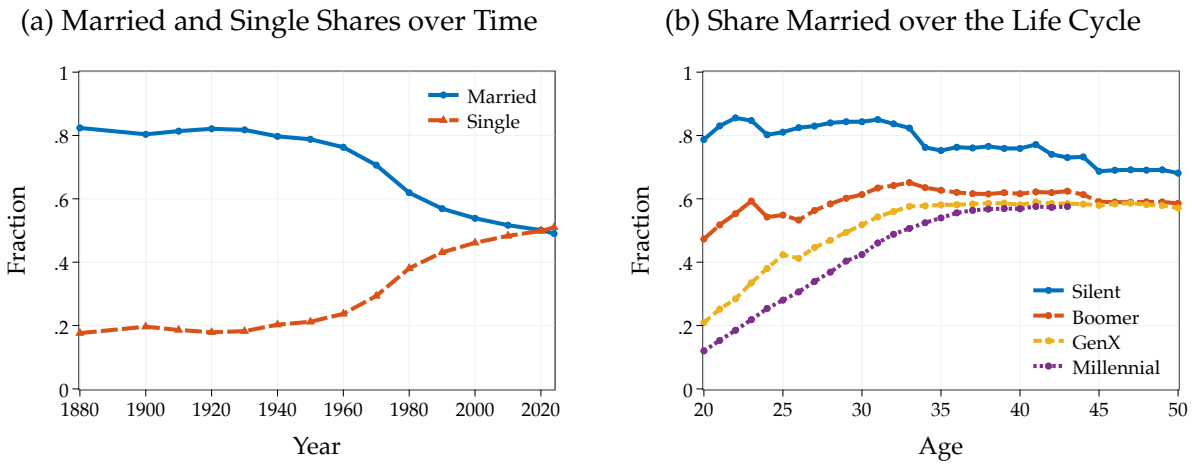
We begin by briefly documenting long-run trends in household composition. Figure 1a plots the share of married households from 1880 to 2024. Between 1880 and 1930, approximately 80 percent of households were married, with little variation over time. Since 1930, however, the share of married households has declined steadily, reaching roughly 49 per-

[1] The precise unit varies across surveys: the CEX *consumer unit* groups individuals who share expenses, the SCF *primary economic unit* includes the economically dominant individual or couple and financially interdependent household members, and the CPS and Census *household* includes everyone who shares a housing unit, regardless of financial arrangements or family relationships.

[2] We use the term *reference person* as a shorthand for the survey-designated individual, whose characteristics are used to classify the household. For example, in the CEX, CPS, and Census, this individual is one of the people in whose name the housing unit is owned or rented.

cent by 2024—a 31 percentage point decline over nine decades. The decline in marriage has not been offset by a corresponding increase in cohabitation. A recent rise in cohabitation accounts for only a small fraction of this overall decline (Appendix Figure B.1).

Figure 1: Trends in Household Composition




*Notes:* Panel (a) plots the share of households classified as married or single in each year. Panel (b) plots the share of married households at each age, separately by birth cohort.

The decline in marriage is concentrated among more recent birth cohorts. Figure 1b plots the share of households classified as married over the life cycle, separately by generation. The share of married households is lower for more recent generations at comparable ages, with the largest differences appearing early in adulthood. This pattern suggests that the aggregate decline in marriage reflects changes in household formation across cohorts.

These trends are relevant for monetary and fiscal policy because marital status may shape how households respond to aggregate shocks. If married and single households adjust consumption differently in response to shocks, then changes in household composition can affect the transmission and effectiveness of policy. Before estimating these differential responses, we first document observable differences between married and single households that could confound the role of marital status if left unaccounted for.

## 2.3. Household Characteristics by Marital Status

Marital status is correlated with several household characteristics that are central to the transmission of aggregate shocks. Existing work documents heterogeneity in consumption responses to aggregate shocks by age (Berg et al., 2021; Wong, 2019), income (Andersen et al., 2023; Känzig, 2023), housing tenure (Cloyne and Surico, 2017; Cloyne, Ferreira,

and Surico, 2020), and liquid assets (Holm, Paul, and Tischbirek, 2021). A comparison of married and single households may therefore confound differences associated with marital status with differences along these other dimensions. We begin by documenting the cross-sectional characteristics of the two groups, which guide the controls in the empirical analysis that follows. Appendix A provides detailed variable definitions.

Table 1 reports descriptive statistics for married and single households in 2019. Panel A documents substantial demographic differences between the two groups. The median married household contains three members, compared with one member for the median single household. Married households are also more likely to be college graduates and to be middle aged: 43 percent have completed college and 53 percent are between ages 35 and 59, compared with 32 and 38 percent, respectively, among single households.

Despite these compositional differences, Panel B shows that median annual consumption per capita is remarkably similar across the two groups: $19,174 for married households and $18,910 for single households. The composition of expenditures differs somewhat, with single households spending slightly more on nondurables and married households spending more on durables and services. The labor-market outcomes reported in Panel C exhibit larger differences. Married households have higher median earnings per employed adult and a lower unemployment rate than single households.

The sharpest differences arise in housing tenure and household balance sheets, reported in Panel D. Approximately 51 percent of married households hold a mortgage, compared with 26 percent of single households, while single households are substantially more likely to rent. Married households also hold considerably more liquid and illiquid wealth. Consistent with their thinner liquidity buffers, 27 percent of single households are hand-to-mouth, compared with 14 percent of married households.

These characteristics generate competing predictions for the transmission of aggregate shocks. Greater mortgage exposure may make married households more sensitive to changes in interest rates and therefore predict a stronger consumption response among them. By contrast, higher unemployment and the greater prevalence of hand-to-mouth status among single households would ordinarily predict a stronger consumption response to changes in income among singles. We next examine how married and single households adjust consumption in response to aggregate shocks.

# 3. Consumption Response to Monetary Policy

In this section, we describe the identification strategy and empirical framework used to estimate the consumption responses of married and single households. We rely on two

Table 1: Descriptive Statistics on Married and Single Households

| | (a) Aggregate | (b) Single | (c) Married |
|---|---|---|---|
| *Panel A: Household Demographics (CEX)* | | | |
| *Household composition* | | | |
| Median household size (persons) | 2.0 | 1.0 | 3.0 |
| *Householder education (%)* | | | |
| Less than high school | 8.6 | 9.2 | 8.0 |
| High school | 53.9 | 58.9 | 49.3 |
| College graduate | 37.5 | 31.9 | 42.7 |
| *Householder age (%)* | | | |
| 18–34 | 23.3 | 30.2 | 17.0 |
| 35–59 | 45.6 | 37.9 | 52.8 |
| 60+ | 31.0 | 31.9 | 30.2 |
| *Panel B: Consumption (CEX)* | | | |
| *Median annual expenditure ($ per capita)* | | | |
| Total consumption | 19,106 | 18,910 | 19,174 |
| Nondurables | 3,560 | 3,629 | 3,539 |
| Durables | 659 | 526 | 740 |
| Services | 13,026 | 12,753 | 13,147 |
| *Panel C: Labor Market Outcomes (CPS)* | | | |
| Median annual earnings ($ per employed adult) | 46,060 | 39,351 | 50,413 |
| Unemployment rate (%) | 3.2 | 4.5 | 2.5 |
| *Panel D: Housing and Balance Sheets* | | | |
| *Housing tenure (CEX, %)* | | | |
| Mortgage holder | 38.6 | 25.5 | 50.7 |
| Outright owner | 23.3 | 19.9 | 26.3 |
| Renter | 38.1 | 54.5 | 23.0 |
| *Median assets (SCF, $ per capita)* | | | |
| Liquid financial assets | 2,018 | 844 | 3,591 |
| Illiquid assets | 59,986 | 14,330 | 90,380 |
| *Liquidity constraints (SCF)* | | | |
| Hand-to-mouth (%) | 21.0 | 27.2 | 13.9 |

*Notes:* Statistics are based on 2019 survey data. Column (a) reports statistics for the full sample, and Columns (b) and (c) report statistics for single and married households, respectively.

complementary designs. First, we use time-series local projections to estimate the consumption response of each group to a monetary policy shock. Second, we use panel local projections to estimate the differential response between married and single households, conditional on other observable characteristics. Both designs yield the same finding: married households exhibit a stronger consumption response to monetary policy shocks.

## 3.1. Identification Strategy

We use monetary policy surprises as a source of plausibly exogenous variation in aggregate demand. Our baseline follows the identification strategy of Gertler and Karadi (2015), which in turn builds on Kuttner (2001) and Gürkaynak, Sack, and Swanson (2005). The monetary policy surprises are measured using changes in interest-rate futures prices within a narrow window around FOMC announcements. The identifying assumption is that economic conditions are known and priced into financial markets before the announcement and are unlikely to change within this narrow window. Movements in futures prices during the window therefore capture the unexpected component of the policy announcement, reducing concerns about reverse causality.

In robustness checks, we re-estimate the consumption responses using three alternative monetary policy shocks. First, we address the predictability of conventional high-frequency surprises by using the measure of Bauer and Swanson (2023), which orthogonalizes the surprises to macroeconomic and financial information available before the announcement. Second, we address the possibility that FOMC announcements reveal information about the economic outlook by using the measure of Miranda-Agrippino and Ricco (2021), which isolates monetary policy news from central-bank information. Finally, we assess whether our findings depend on market-based high-frequency identification by using the narrative shocks of Romer and Romer (2004). Our results are robust across these alternative measures.

Although high-frequency surprises can be used directly as instruments for interest rates in a local projection instrumental-variables framework, they are available only over a shorter sample. Following Andreolli, Rickard, and Surico (2025), we instead use the high-frequency surprise as an external instrument in a proxy-VAR (Stock, 2008; Mertens and Ravn, 2013; Stock and Watson, 2018). This approach uses the shorter sample of high-frequency surprises to identify the contemporaneous effects of a monetary policy innovation and then recovers a monthly series of structural shocks over the longer VAR sample. In robustness checks, we show that our results are similar when using an LP-IV framework.

Our monetary VAR includes the one-year Treasury yield, industrial production, consumer prices, the excess bond premium, and commodity prices. We estimate the VAR at a monthly frequency with 12 lags over 1976 to 2019. We normalize the shock to lower the one-year Treasury yield by 25 basis points on impact. Throughout the paper, all reported responses therefore correspond to an expansionary monetary policy shock. Appendix Sections A.2 and A.3 provide further details on the data and estimation strategy.

Appendix Figure A.1 reports the responses of the aggregate variables to the identified shock. A monetary easing lowers the one-year Treasury yield and the excess bond premium, raises industrial production with a lag, and leads to a modest increase in consumer prices. These responses provide an aggregate benchmark for the household-level analysis that follows.

## 3.2. Time-Series Specification

We begin by estimating the dynamic consumption responses to a monetary policy shock separately for married and single households.[3] For each group $g \in \{\text{single}, \text{married}\}$ and horizon $h = 0, \ldots, 48$ months, we estimate the following local projection à la Jordà (2005):

$$\log y_{g,t+h} - \log y_{g,t-1} = \alpha_{g,h} + \theta_{g,h}\varepsilon_t + \boldsymbol{\beta}'_{g,h}\mathbf{x}_{g,t-1} + \nu_{g,t+h} \tag{1}$$

where $y_{g,t}$ denotes the average per capita consumption expenditure for group $g$, and $\varepsilon_t$ denotes the identified monetary policy shock. The vector $\mathbf{x}_{g,t-1}$ contains 12 lags of consumption growth for group $g$ and 12 lags of the aggregate controls.[4] We also include calendar-month indicators to account for seasonality in consumption and a linear time trend. The coefficient $\theta_{g,h}$ therefore measures the cumulative response of consumption for group $g$ through horizon $h$ to a monetary policy shock that lowers the one-year Treasury yield by 25 basis points on impact. For inference, we use heteroskedasticity-robust standard errors following the lag-augmentation approach of Montiel Olea and Plagborg-Møller (2021).

Figures 2a and 2b report the estimated consumption responses for single and married households, respectively, over the four years following the monetary easing. Single households show little evidence of a consumption response: the estimates are not statis-

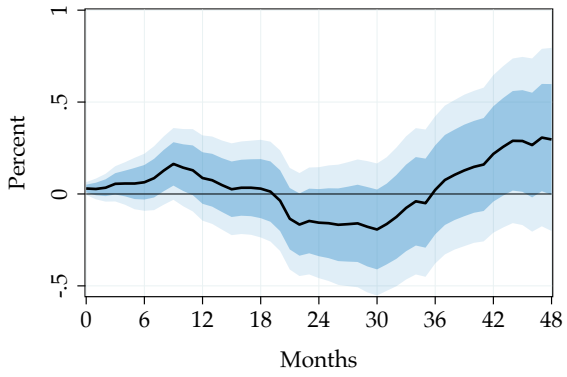
[3] Following Cloyne, Ferreira, and Surico (2020), we construct a monthly consumption time series for each group by averaging consumption expenditures across all households within that group, each month. We normalize these series using the aggregate PCE-to-CEX ratio and smooth them using a backward-looking moving average constructed from the current quarter and the preceding three quarters. Appendix A.1.1 provides further details.

[4] The aggregate controls are the same variables included in the monetary VAR: the one-year Treasury yield, industrial production, consumer prices, commodity prices, and the excess bond premium.

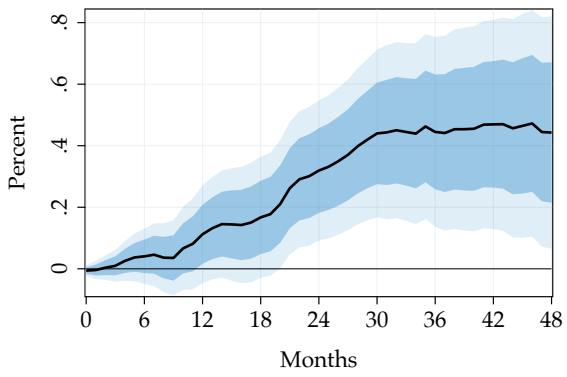
Figure 2: Consumption Responses to a Monetary Policy Shock

**Time-Series Responses by Marital Status**

(a) Single Households

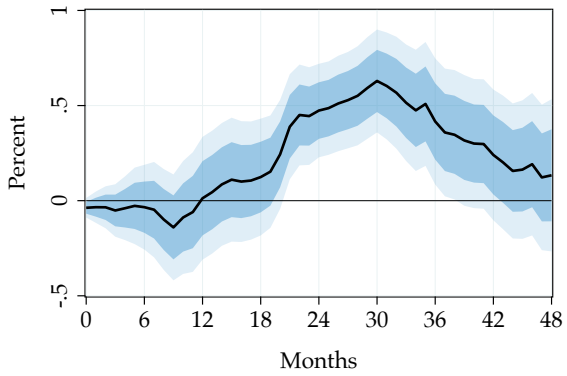



(b) Married Households

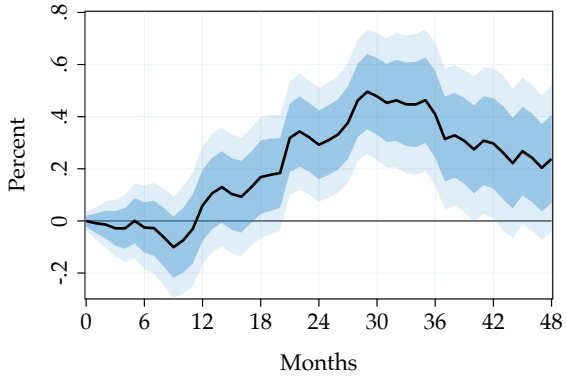



**Differences in Consumption Responses**

(c) Time-Series: Married/Single Ratio




(d) Panel: Marital Interaction Effect




*Notes:* This figure reports the consumption responses following a 25-basis-point expansionary monetary policy shock. Panels (a) and (b) report the responses of single and married households, respectively, estimated using Equation (1). Panel (c) reports the response of the log ratio of married to single household consumption, estimated using Equation (1). Panel (d) reports the additional response of married households conditional on income, housing-tenure, and age interactions, estimated jointly using Equation (2). Solid lines denote point estimates; dark and light shaded areas denote 68 and 90 percent confidence bands, respectively.

tically distinguishable from zero at any horizon. By contrast, married households exhibit a statistically significant and persistent increase in consumption, reaching approximately 0.4 percent after 28 months.

We next assess whether the consumption responses of married and single households differ statistically. Figure 2c directly estimates the difference between the two responses using the log ratio of married to single household consumption. The ratio rises following the monetary easing, indicating a stronger response among married households. The

difference is statistically significant primarily between two and three years after the shock. Thus, the aggregate time-series evidence points to substantial heterogeneity in monetary policy transmission by marital status.

### 3.3. Panel Specification

The time-series results establish that married households increase consumption more sharply and persistently than single households following a monetary easing. This differential response may, however, reflect other characteristics correlated with marital status. Married households tend to be older, have higher incomes, and are more likely to own their homes—characteristics that may independently shape their exposure to monetary policy.

To separate these margins, we extend the two-group time-series approach by constructing a consumption time series for each cell defined by the intersection of marital status, income quartile, housing tenure, and age group. We then jointly estimate interactions between the monetary policy shock and each characteristic. Specifically, for each horizon $h = 0, \ldots, 48$ months, we estimate:

$$\log y_{g,t+h} - \log y_{g,t-1} = \alpha_{g,h} + \lambda_{t,h} + \left(\gamma_h \text{Mar}_g + \boldsymbol{\delta}_h' \mathbf{z}_g\right)\varepsilon_t + \boldsymbol{\beta}_h' \mathbf{x}_{g,t-1} + \nu_{g,t+h}, \tag{2}$$

where $y_{g,t}$ denotes the average per capita consumption expenditure for group $g$, and $\varepsilon_t$ is the identified monetary policy shock. The indicator $\text{Mar}_g$ equals one if group $g$ consists of married households and zero otherwise. The vector $\mathbf{z}_g$ contains indicators for income quartile, housing tenure, and age group. Group fixed effects, $\alpha_{g,h}$, absorb persistent differences across cells, while time fixed effects, $\lambda_{t,h}$, absorb aggregate conditions common to all groups in a given month. The vector $\mathbf{x}_{g,t-1}$ contains 12 lags of group-level consumption growth.

The coefficient $\gamma_h$ measures the consumption response of married households relative to single households, controlling for response differences by income quartile, housing tenure, and age group. These additional differences are captured by the vector $\boldsymbol{\delta}_h$, with each coefficient measured relative to the corresponding omitted category. In robustness checks, we further expand this horse race to include interactions of the monetary policy shock with education, race, urban residence, and the presence of children. For inference, we use heteroskedasticity-robust standard errors clustered at the time level following Almuzara and Sancibrián (2024).

Figure 2d reports the estimated difference in consumption responses between married and single households. The response is positive and persistent, becoming statistically sig-

nificant after approximately two years and peaking at about 0.5 percent after 29 months. Thus, married households increase consumption by more than single households following a monetary easing, even after allowing the shock response to vary independently with income, housing tenure, and age—corroborating the time-series evidence.

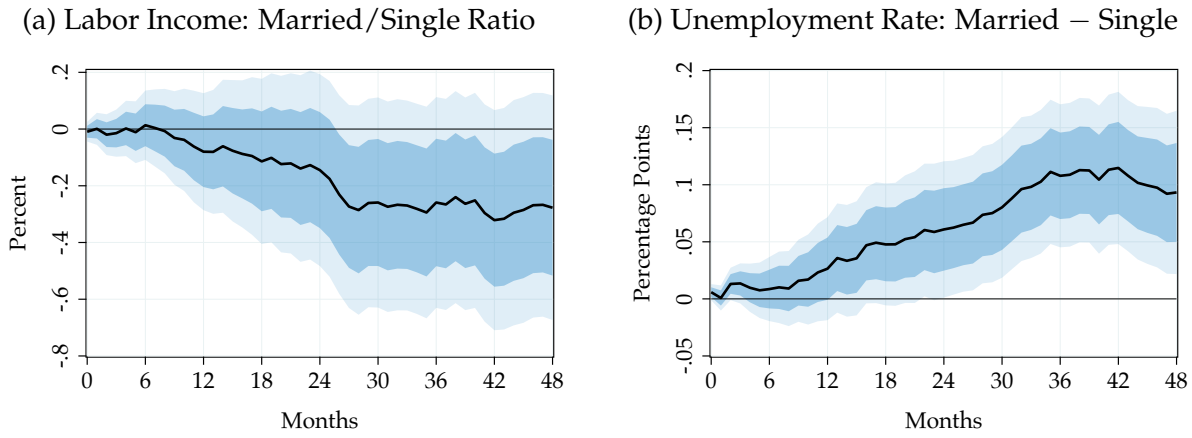
Appendix Figure B.4 reports the age, housing tenure, and income interaction effects from the same specification. The estimates reveal meaningful heterogeneity along these dimensions consistent with previous work, but they do not account for the marital-status differential. Middle-aged and older households generally respond more strongly than younger households, while mortgagors and renters exhibit larger responses than outright owners. The income estimates are less monotonic. To our knowledge, this is the first analysis to allow several household characteristics to shape aggregate consumption responses to a monetary policy shock simultaneously, helping separate the role of marital status from other dimensions of household heterogeneity.

## 3.4. Labor Market Responses

One potential explanation for this differential consumption response is that married households simply face more cyclical labor market outcomes, with their earnings rising more sharply during expansions. Figures 3a and 3b report the response of the difference between married and single households' labor income and unemployment rate, respectively, to a 25-basis-point expansionary monetary policy shock. These differences are computed as a log ratio for the income response and a percentage-point difference for the unemployment rate response. Note that there are no statistically significant differences between the labor income responses of the two groups. Furthermore, single households' employment *increases more* in response to the shock, implying consumption responses in the opposite direction of our headline results—should the mechanism operate through the labor market. Appendix Figure B.5 reports the corresponding aggregate responses and the separate responses of single and married households.

The stronger consumption response of married households is in contrast with standard heterogeneous-agent models and empirical evidence emphasizing the role of liquidity constraints. Single households tend to have lower liquid assets on average, which would ordinarily predict higher marginal propensities to consume out of transitory income shocks. Moreover, the spousal insurance literature suggests that married households may smooth consumption more effectively than single households due to secondary earners. Both mechanisms would imply stronger consumption responses among single households to aggregate shocks.

Figure 3: Labor Market Responses to a Monetary Policy Shock




*Notes:* This figure reports differences in labor income and unemployment rate responses between married and single households following a 25-basis-point expansionary monetary policy shock. Panel (a) reports the response of the log ratio of married to single household labor income. Panel (b) reports the response of the unemployment rate difference between married and single households. Both responses are estimated using Equation (1). Solid lines denote point estimates; dark and light shaded areas denote 68 and 90 percent confidence bands, respectively.

## 3.5. Sensitivity Analyses

Having documented our headline result, we now assess whether the larger consumption response of married households depends on the empirical specification, identification and estimation strategy, or the measurement of consumption. We also examine responses to other aggregate shocks and consider potential confounders correlated with marital status. Our central finding holds true across these exercises: married households generally exhibit a larger consumption response than single households. We summarize the main findings below and report detailed results in Appendix C.

**Specification and sample.** We first examine whether the differential response between married and single households depends on our specification choices. We test this by varying the number of outcome lags, adding lags of the monetary policy shock, and changing the macroeconomic controls and deterministic terms. These exercises continue to preserve the positive differential in both the time-series and panel specifications (Appendix Figures C.1–C.4). A separate concern is that smoothing the survey data may shape the estimated responses. We therefore use the raw monthly series and, for the time-series specifications, the smooth local projections estimator proposed by Barnichon and Brownlees (2019). The unsmoothed estimates are substantially more volatile but continue to imply a positive differential (Appendix Figure C.5).

The result is also not specific to using monthly data or the baseline sample period. Estimating the responses at quarterly frequency preserves the larger consumption response among married households (Appendix Figure C.6). Using a more recent sample period (2002–2019) or extending the baseline sample through 2023 to include the post-pandemic period retains the positive differential response (Appendix Figure C.7).

**Identification and estimation strategy.** Next, we assess whether our findings depend on the baseline monetary policy shock series. We use the alternative information-robust high-frequency measures of Bauer and Swanson (2023) and Miranda-Agrippino and Ricco (2021), and the narrative measure of Romer and Romer (2004). The married–single differential continues to remain positive at medium horizons (Appendix Figure C.8). We also compare the baseline local projections with LP-IV estimates and, for the time-series specifications, an external-instrument VAR. The LP-IV estimates are less precise and the VAR implies a less persistent differential. However, both approaches point toward a larger response among married households as compared to single households (Appendix Figure C.9).

To examine whether the pattern extends beyond monetary policy, we estimate consumption responses to the oil supply shocks of Känzig (2021) and Baumeister and Hamilton (2019), normalized to reduce oil prices. Married households increase consumption, while single households' consumption response is smaller and less precisely estimated (Appendix Figure C.10). These findings suggest that differences in consumption responses by household composition are not specific to demand shocks. We revisit this point when discussing both the mechanism and model.

**Potential confounders.** We examine whether marital status captures other household characteristics that independently shape consumption responses, and just happen to be correlated with marital status. We expand the panel specification to interact the shock with education, race, urban residence, and the presence of children, retaining the baseline income, housing-tenure, and age interactions. The married–single differential remains close to the baseline estimate (Appendix Figure C.11).

We further examine the definition and composition of the household groups. Including unmarried cohabiting couples in the partnered group somewhat attenuates the differential but preserves its positive response (Appendix Figure C.13). Both single- and dual-earner married households respond more than single households, so the result is not confined to couples with single earners (Appendix Figure C.14). Married households also exhibit a larger response when compared separately with never-married and previously

married households (Appendix Figure C.15). These exercises show that the differential consumption response persists after extensively accounting for observable differences between married and single households.

**Measurement choices.** Finally, we assess whether the differential response depends on how we measure and aggregate household consumption. Excluding imputed rent or all shelter expenditures attenuates the married-household response, while preserving a positive differential (Appendix Figure C.16). We also replace per capita consumption with household consumption, consumption per primary adult, and OECD equivalence-adjusted consumption. The time-series results are similar across these measures, although the panel differential is smaller under the first two alternatives (Appendix Figure C.17). The differential persists when we compare per capita consumption responses for the average married and single household, rather than for the average person in each group (Appendix Figure C.18).

# 4. The Role of Necessities and Luxuries

We now disaggregate household spending to examine whether the higher response of married households reflects differences in budget composition or in the ability to adjust spending within particular categories. First, we use estimated Engel curves to classify goods as necessities or luxuries and then compare budget allocations across household types. Single households spend more per person on necessities and devote a larger share of their budget to necessities than married households. Next, we examine expenditure elasticities for single and married households within each category. While necessity elasticities are similar across the two groups, married households typically exhibit higher expenditure elasticities for luxuries. Finally, we decompose the consumption response to monetary policy shocks into necessity and luxury spending. Luxury spending by married households accounts for most of the response gap, consistent with both their larger luxury budget share and their greater responsiveness within this category.

## 4.1. Expenditure Allocations and Elasticities

**Engel curve estimation.** We begin by classifying goods as necessities or luxuries based on their expenditure elasticities. Following Andreolli, Rickard, and Surico (2025), who build on Aguiar and Bils (2015), we start from the following Engel-curve specification for

each consumption category $j$:

$$\log y_{ijt} - \log \overline{y}_{jt} = \alpha_{jt} + \beta_j \log y_{it} + \delta_j' \mathbf{z}_i + \nu_{ijt}, \tag{3}$$

where $y_{ijt}$ is the per capita spending on good $j$ by household $i$, $\overline{y}_{jt}$ is its average across households in the same year, and $y_{it}$ is the total per capita spending. The coefficient $\beta_j$ measures the expenditure elasticity. Goods with estimated elasticities below one are classified as necessities, and those with elasticities above one as luxuries.

We include year fixed effects, $\alpha_{jt}$, and a vector of demographic controls, $\mathbf{z}_i$, which contains indicators for the reference person's age (35–59 and 60 or older), household size (three to four and five or more members), and two or more earners. To accommodate zero spending, we follow Aguiar and Bils (2015) and replace the log deviation in Equation (3) with the proportional deviation from mean expenditure. As in Andreolli, Rickard, and Surico (2025), we use CEX data from 1995 to 1997. Finally, because measurement error in individual expenditure categories also enters measured total expenditure and can therefore bias the estimated coefficient on total expenditure, we instrument log total expenditure with log after-tax per capita income and indicators for the second through fifth per capita income quintiles.[5]

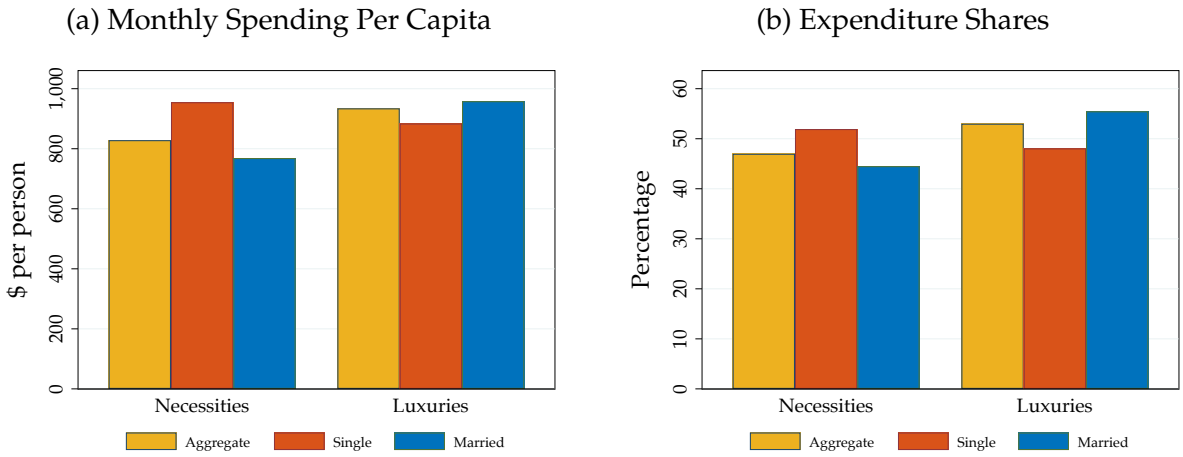
Our resulting classification is consistent with the literature: we classify 9 of the 25 categories as necessities, including food at home, rent, and utilities, and the remaining 16 as luxuries, including food away from home, household appliances, and new cars. Appendix Table D.3 reports the aggregate expenditure elasticities by category.

**Expenditure composition by marital status.** We now compare monthly per capita spending on necessities and luxuries across married and single households. Figure 4a shows that singles spend $955 on necessities, while married households spend only $769. This gap in necessity spending remains after accounting for observable household characteristics: Appendix Table D.2 shows that married households spend approximately $167 less per person on necessities each month after controlling for income, age, the number of earners, housing tenure, and education. Conversely, married households spend slightly more on luxuries, at $958 per person compared with $884 among singles.

Single households also devote a larger share of their consumption budget to necessities. Figure 4b shows that necessities account for approximately 52 percent of spending among singles, compared with 45 percent among married households—a difference of 7 percentage points. Conversely, married households allocate 55 percent of their con-

[5] Andreolli, Rickard, and Surico (2025) use income rather than lagged expenditure to avoid potential downward bias in expenditure elasticities for infrequently purchased goods such as cars.

Figure 4: Necessity and Luxury Consumption by Household Composition




*Notes:* This figure reports necessity and luxury consumption in aggregate and separately for single and married households. Panel (a) reports average monthly per capita spending in 2019 dollars across the sample. Panel (b) reports expenditure on each category as a percentage of total expenditure. Goods are classified using the aggregate expenditure elasticities estimated from Equation (3).

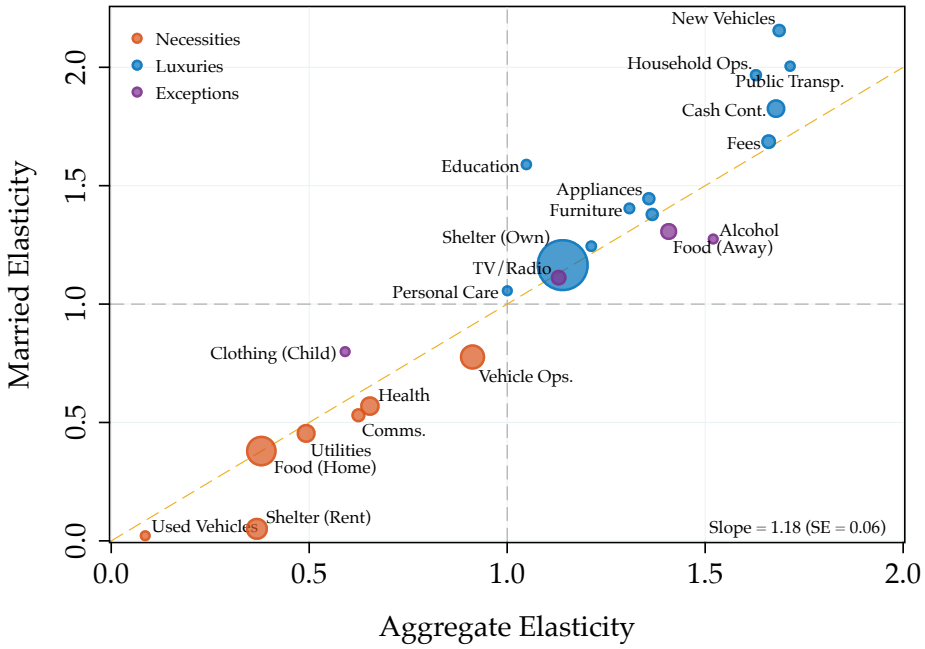
sumption budget to luxuries, compared with 48 percent among singles. Singles therefore exhibit both higher per capita spending on necessities and a larger necessity budget share.

**Expenditure elasticities by marital status.** To determine whether these differing budget allocations are accompanied by differences in how households allocate their marginal expenditures, we estimate Equation (3) separately for single and married households. Figure 5 plots married households' estimated elasticities against the aggregate estimates, with points above the 45-degree line indicating higher elasticities among married households.[6] Married households exhibit higher elasticities than in aggregate for several luxury goods, including new vehicles, household operations such as domestic services and childcare, household appliances, and furniture. Necessity elasticities generally lie below the aggregate estimates.

We provide a more direct comparison of elasticities between married and single households in Appendix Table D.3. For new vehicles, the estimated elasticity is 2.16 among married households, versus 1.03 among singles; for household operations such as domestic services and childcare, the corresponding estimates are 1.97 and 1.19. This pattern does not extend to every luxury. Food away from home and alcohol are two exceptions: single households exhibit higher expenditure elasticities for these categories, potentially reflecting differences in home production and social activities across household types. For

[6]For visual clarity, we compare married households' elasticities with the aggregate estimates, as smaller budget shares for some categories among single households lead to noisier estimates.

Figure 5: Expenditure Elasticities of Married Households




*Notes:* This figure plots expenditure elasticities for married households against aggregate expenditure elasticities. Point sizes reflect aggregate budget shares. The 45-degree line indicates equal elasticities; points above it indicate higher elasticities among married households. Goods are classified as necessities or luxuries using their aggregate expenditure elasticities.

necessities, food-at-home elasticities are nearly identical across household types, at 0.38 for married households and 0.39 for singles. Singles exhibit higher elasticities in most other necessity categories, including utilities and rent, while married households have a higher elasticity for children's clothing.

To assess the statistical significance of these differences, we also estimate a pooled specification that interacts marital status with log total expenditure. Appendix Tables D.4 and D.5 report the results. The interaction estimates confirm significantly higher elasticities among married households for several luxury categories, including new vehicles, domestic services and childcare, household appliances, and furniture.

Taken together, these results confirm that the consumption baskets of married and single households differ fundamentally in both their baseline allocations and their expenditure elasticities. We next examine how necessity and luxury spending contribute to the larger consumption response of married households to monetary policy shocks.

## 4.2. Decomposing the Time-Series Response

Married households devote a larger share of their budgets to luxuries and exhibit higher expenditure elasticities for several luxury categories. These patterns suggest that luxury spending may play an important role in married households' larger consumption response to monetary policy shocks. We examine this possibility by estimating Equation (1) separately for necessities and luxuries, for both single and married households, retaining the classification based on aggregate expenditure elasticities.

Figure 6a reports the responses of necessity spending. Single households' spending remains statistically indistinguishable from zero throughout the four-year horizon. Married households exhibit a modest increase at longer horizons, peaking at approximately 0.2 percent, although this response is also statistically insignificant. The ratio of married to single necessity spending in Figure 6c becomes positive at medium horizons, but the increase is small and statistically insignificant.

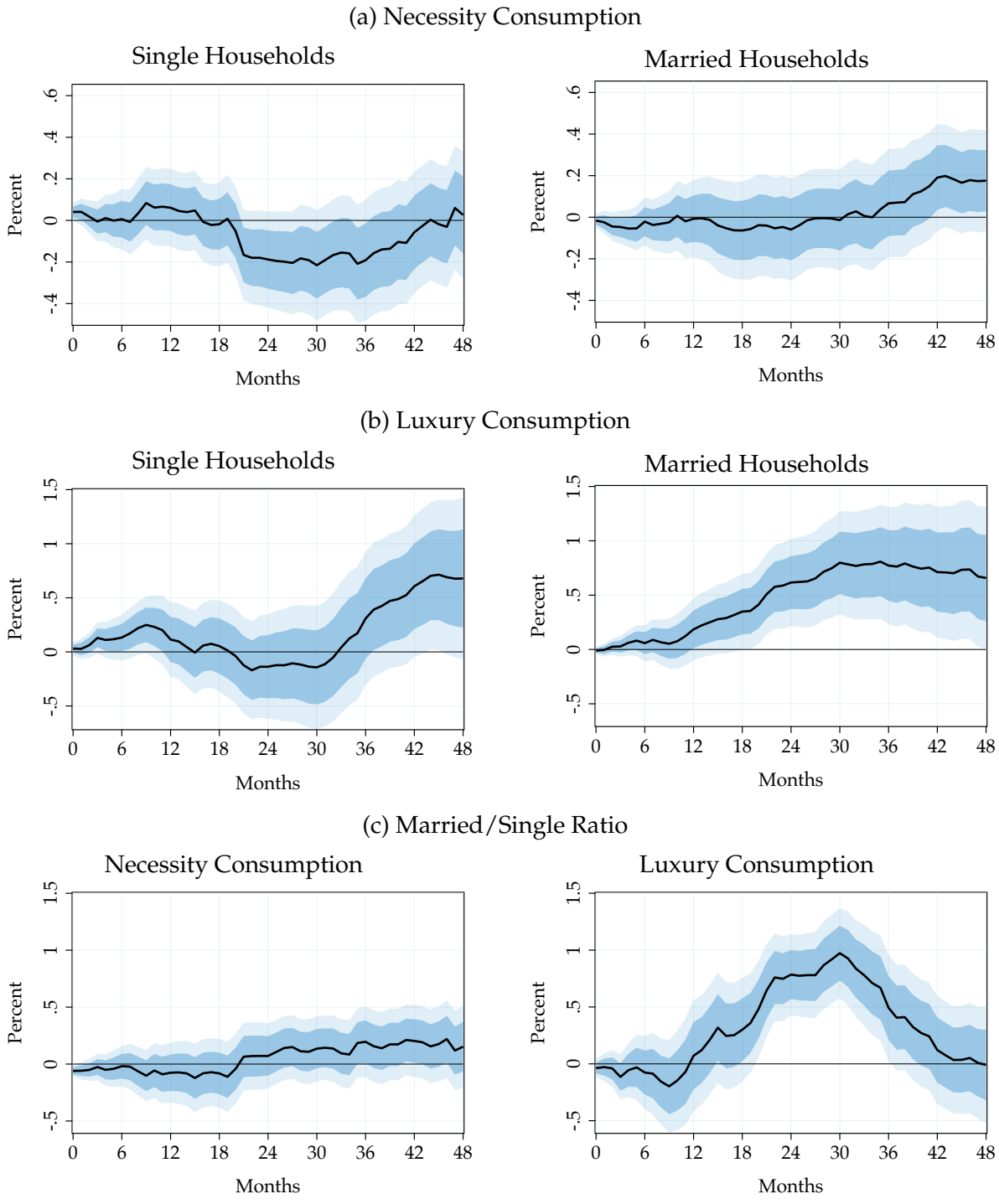
Figure 6b reports the responses of luxury spending. Single households exhibit a small initial increase and a larger response at longer horizons, but their response is statistically insignificant at most horizons. Married households, by comparison, increase luxury spending persistently, with a statistically significant response that peaks at approximately 0.8 percent. The ratio of married to single spending in Figure 6c rises by approximately 1 percent at its peak and is statistically significant at medium horizons.

This pattern points to luxury spending as an important source of the larger consumption response among married households. A back-of-the-envelope calculation weighting each group's luxury response by its respective budget share suggests that the differential in luxury spending accounts for approximately 81 percent of the peak married–single gap in total consumption.

**Luxury vs. durable consumption.** Another possibility is that married households' larger consumption response primarily reflects durable purchases. Several luxury categories for which married households exhibit higher expenditure elasticities are durables, including new vehicles, household appliances, and furniture.

We therefore examine consumption responses separately for durables and for nondurables and services. Appendix Figure B.6 shows that the durable spending differential is statistically insignificant at most horizons. By contrast, the luxury spending differential in Figure 6c is positive and statistically significant throughout the medium horizon. Despite the overlap between luxuries and durables, these results suggest that the necessity versus luxury classification captures differences in consumption responses that are

Figure 6: Necessity and Luxury Consumption Responses by Marital Status




*Notes:* This figure reports the responses of necessity and luxury consumption following a 25-basis-point expansionary monetary policy shock. Panels (a) and (b) report the responses of single and married households for necessities and luxuries, respectively. Panel (c) reports the response of the log ratio of married to single household consumption within each category. Responses are estimated using Equation (1). Solid lines denote point estimates; dark and light shaded areas denote 68 and 90 percent confidence bands, respectively.

not confined to durable goods. This lines up with our finding that married households' higher elasticities also extend to certain services, including domestic services and childcare, vehicle leasing and rentals, and education.

**Summary and discussion.** The preceding evidence documents three related patterns. First, married households spend less per person on necessities and allocate a larger share of their budgets to luxuries. Second, they exhibit higher expenditure elasticities for several luxury categories. Third, their larger consumption response to monetary policy shocks is concentrated in luxury spending at medium horizons. Together, these findings motivate examining whether a common feature of household consumption can account for both the spending allocations and elasticities observed in the cross-section and the consumption responses observed in the time-series.

Economies of scale in household consumption provide a potential explanation. When household members share goods such as rent and utilities, expenditure need not rise proportionately with household size to provide the same consumption services per person. This insight is central to the microeconomic literature that explicitly models consumption sharing within the household decision problem (Lewbel and Pendakur, 2008; Browning, Chiappori, and Lewbel, 2013). It also underlies the use of equivalence scales to account for differences in consumption needs across households of different sizes.

In the next section, we incorporate this well-established insight into a parsimonious macroeconomic model. We examine whether economies of scale can jointly explain married households' lower necessity spending and higher expenditure elasticities for luxuries, and whether the same mechanism can account for their stronger response to monetary policy shocks.

# 5. Model

In this section, we develop a two-good heterogeneous-agent New Keynesian (HANK) model to explain how consumption sharing within households can generate the spending patterns and consumption responses to monetary policy documented above. Married and single households have the same non-homothetic preferences over necessities and luxuries but differ only in their ability to share consumption. This shareability microfounds a higher effective intertemporal elasticity of substitution for married households, particularly for luxuries. Calibrated to U.S. data, the model captures their larger luxury budget shares and stronger consumption response to monetary policy. We then use the model to quantify how the decline in marriage rates changes the effectiveness of mone-

tary policy.

## 5.1. Households

The economy is populated by a continuum of heterogeneous households, indexed by $i$ and characterized by a fixed marital status $j \in \{M, S\}$. Households face uninsurable idiosyncratic labor productivity risk, with productivity $e_{it}$ following an exogenous Markov process. Since our goal is to isolate the role of economies of scale in monetary transmission, we abstract from endogenous family formation and intra-household bargaining, modeling each household as a single decision-making unit. To incorporate household size parsimoniously into this framework, we express expenditure, income, and assets in per capita terms. Let $\mu^M \in (0,1)$ and $\mu^S \in (0,1)$ denote the shares of individuals living in married and single households, respectively, with $\mu^M + \mu^S = 1$. Throughout, we aggregate per capita quantities using the share of individuals in each household type.[7]

**Household problem.** Households consume two goods: necessities and luxuries. Given initial assets $a_{i,-1}$, labor productivity $e_{i0}$, and discount factor $\beta_{i0}$, a household of type $j$ chooses sequences of necessity consumption $c^n_{it}$, luxury consumption $c^\ell_{it}$, and end-of-period assets $a_{it}$ to maximize expected lifetime utility:

$$\mathbb{E}_0 \left[ \sum_{t=0}^{\infty} \left( \prod_{s=0}^{t-1} \beta_{is} \right) U^j \left( c^n_{it}, c^\ell_{it}, n_{it} \right) \right] \tag{4}$$

subject to the sequence of flow budget constraints:

$$c^n_{it} + c^\ell_{it} + a_{it} = (1 + r^p_t) a_{i,t-1} + (1 - \tau_t) w_t e_{it} n_{it} + T_{it}, \tag{5}$$

and a no-borrowing constraint $a_{it} \geq 0$. Here, $r^p_t$ is the real return on assets and $w_t$ is the real wage. Labor earnings, $w_t e_{it} n_{it}$, are taxed at the common proportional rate $\tau_t$, and $T_{it}$ denotes government transfers. Households take prices and the tax and transfer rules as given. Furthermore, they do not choose their hours worked, $n_{it}$; a representative union instead assigns hours equally across households to meet labor demand. Finally, the discount factor $\beta_{it} \in \{\beta_L, \beta_H\}$ follows an exogenous two-state Markov process, with $\beta_L < \beta_H$.

[7] Note that integrals over $i$ incorporate the population shares of both household types. For any per capita quantity $x_{it}$, its population aggregate is $X_t \equiv \int_0^1 x_{it}\, di = \sum_{j \in \{M,S\}} \mu^j \int_{\mathcal{I}_j} x_{it}\, dF_j(i)$, where $\mathcal{I}_j$ is the set of households of type $j$ and $F_j$ is the within-type population distribution, normalized so that $\int_{\mathcal{I}_j} dF_j(i) = 1$.

**Preferences.** Our starting point is non-homothetic preferences over necessities and luxuries, common to both married and single households (Andreolli, Rickard, and Surico, 2025). These preferences capture two well-documented empirical patterns: necessities have a lower intertemporal elasticity of substitution (IES) than luxuries, and the luxury expenditure share rises with the consumption budget. Building on these preferences, we introduce two additional features that microfound differences in the effective IES between household types—both within consumption categories and for total consumption. Before presenting the functional form, we outline these two features.

First, we allow for consumption sharing within married households, which generates *economies of scale* and gives them higher *effective consumption* at a given per capita budget. Under non-homothetic preferences, this increase in effective consumption shifts married households' spending toward luxuries, the more intertemporally substitutable good. The resulting increase in the luxury expenditure share raises married households' overall IES.

Second, we introduce subsistence requirements for each consumption category that are common across household types. Sharing lowers the per capita expenditure required to meet these needs. At a given expenditure level within each category, married households therefore consume further above subsistence, raising the effective IES for that good and thus contributing to a higher IES of total consumption.

We implement consumption sharing through a type-specific parameter, or Barten scale, $\phi^j$, that maps per capita expenditure into effective consumption. For simplicity, we assume that the same parameter applies to both goods, with $\phi^M \in [0.5, 1)$ and $\phi^S = 1$. Per capita expenditures $c^n_{it}$ and $c^\ell_{it}$ therefore provide effective consumption levels $c^n_{it}/\phi^j$ and $c^\ell_{it}/\phi^j$, respectively.

A household of type $j$ has the following utility function, which is additively separable in necessities, luxuries, and labor:

$$U^j(c^n_{it}, c^\ell_{it}, n_{it}) = \theta \frac{(c^n_{it}/\phi^j - \bar{c}^n)^{1-\gamma^n}}{1-\gamma^n} + \frac{(c^\ell_{it}/\phi^j - \bar{c}^\ell)^{1-\gamma^\ell}}{1-\gamma^\ell} - \varphi \frac{n_{it}^{1+1/\nu}}{1+1/\nu}, \tag{6}$$

where $\theta$ and $\varphi$ scale necessity utility and labor disutility, respectively, and $\nu$ is the Frisch elasticity of labor supply.[8] Utility depends on effective consumption above the Stone–Geary subsistence floors $\bar{c}^n$ and $\bar{c}^\ell$ for necessities and luxuries, respectively. The parameters $\gamma^n$ and $\gamma^\ell$ govern intertemporal substitutability for necessities and luxuries, respectively, with $\gamma^n > \gamma^\ell$. Without subsistence requirements, this inequality implies that households are more willing to shift luxury consumption across time; with positive subsistence floors, each good's effective IES also depends on consumption relative to subsistence.

[8] Utility is expressed per household member; total household utility is household size times $U^j$.

Note that all preference parameters other than $\phi^j$ are common across household types. Later in Section 5.3, we examine how consumption sharing interacts with this preference structure to generate the observed differences in consumption behavior between married and single households.

## 5.2. Rest of the Economy

The rest of the economy follows a standard New Keynesian framework with sticky wages, as in Auclert, Rognlie, and Straub (2025). We summarize the main elements below and refer readers to their paper for further details.

**Firms.** Firms produce using labor as the only input, with aggregate production $Y_t = N_t$, where $N_t = \int_0^1 e_{it} n_{it}\, di$ denotes aggregate effective labor. Firms set prices at a constant markup $\mu$ over nominal marginal cost, which equals the nominal wage $W_t$. Thus, $P_t = \mu W_t$, and the real wage is $w_t = W_t/P_t = 1/\mu$. Firms' profits are taxed at the same proportional rate $\tau_t$ as households.

A competitive producer transforms aggregate output into necessities $Y_t^n$ or luxuries $Y_t^\ell$ at a one-to-one rate and without additional cost, so $Y_t = Y_t^n + Y_t^\ell$. Let $P_t^n$ and $P_t^\ell$ denote the prices of necessities and luxuries, respectively. Perfect competition and the common transformation technology imply $P_t^n = P_t^\ell = P_t$.

**Union.** We introduce nominal wage rigidity through a union that chooses wages and allocates hours equally across households, so $n_{it} = N_t$. The union chooses the common nominal wage to maximize the utility of an *average household*. We define this household as having average per capita consumption $C_t = \int_0^1 (c_{it}^n + c_{it}^\ell)\, di$, the population-weighted shareability parameter $\bar{\phi} = \mu^M \phi^M + \mu^S \phi^S$, and average discount factor $\bar{\beta}$. Let $U_c(C_t; \bar{\phi})$ denote the average household's marginal utility of total consumption expenditure, evaluated at its optimal allocation between necessities and luxuries. Under Rotemberg adjustment costs, the resulting first-order wage Phillips curve is:

$$\pi_t^w = \kappa \left( \varphi N_t^{1/\nu} - \frac{1-\tau_t}{\mu} U_c(C_t; \bar{\phi}) \right) + \bar{\beta} \pi_{t+1}^w, \tag{7}$$

where wage inflation is defined as $\pi_t^w = \frac{W_t - W_{t-1}}{W_{t-1}}$ and $\kappa$ governs the slope of the Phillips curve. Conditional on future wage inflation, wages rise when the marginal disutility from working an additional hour, $\varphi N_t^{1/\nu}$, exceeds the utility gain from the resulting after-tax earnings, $\frac{1-\tau_t}{\mu} U_c(C_t; \bar{\phi})$.

Because firms set prices at a constant markup over wages, price inflation equals wage inflation, $\pi_t = \pi_t^w$.

**Government.** The government serves three primary functions. The first is issuing real, one-period risk-free debt $B_t$, which pays the real interest rate $r_t$ in period $t+1$. The second is providing transfers $T_{it}$, where needed, to ensure that each household's per capita income exceeds its subsistence requirement:

$$T_{it} = \max\Big\{0,\ \phi^j(\bar{c}^n + \bar{c}^\ell) + \varepsilon - (1-\tau_t)w_t e_{it} n_{it}\Big\}, \tag{8}$$

where $\varepsilon > 0$ ensures that income after taxes and transfers lies strictly above the subsistence requirement.[9] Finally, the government purchases a fixed quantity of goods $G_t$ each period. The government's budget constraint is:

$$\tau_t Y_t + B_t = (1+r_{t-1})B_{t-1} + T_t + G_t, \tag{9}$$

where $T_t = \int_0^1 T_{it}\, di$ denotes total transfers and $\tau_t$ is the tax rate. Following Auclert, Rognlie, and Straub (2025), we assume that the government adjusts the tax rate $\tau_t$ to target a constant debt burden, $(1+r_t)B_t = (1+r_{t-1})B_{t-1}$, and to satisfy the budget constraint.

**Monetary policy.** The monetary authority sets the nominal interest rate $i_t$ according to a standard Taylor rule that responds to contemporaneous inflation $\pi_t$:

$$i_t = r_t^* + \phi_\pi \pi_t, \tag{10}$$

where $\phi_\pi > 1$ denotes the central bank's responsiveness to inflation. The ex-post real interest rate $r_t$ is then determined by the Fisher equation: $1 + r_t = \frac{1+i_t}{1+\pi_{t+1}}$.

**Mutual fund.** Households invest their assets $a_{it}$ in a perfectly competitive mutual fund that holds government bonds and firms' equity. Aggregate dividends $d_t$ equal firms' total after-tax profits, so $d_t = (1-\tau_t)(Y_t - w_t N_t)$. Let $p_t$ denote the price of the aggregate stock portfolio after payment of the period-$t$ dividend. The realized return on equity between periods $t$ and $t+1$ is given by $r_{t+1}^p = \frac{p_{t+1} - p_t + d_{t+1}}{p_t}$. Because there is no aggregate uncertainty, no arbitrage implies that equity and government bonds offer the same return, $r_{t+1}^p = r_t$, which is also the return earned by the mutual fund.

[9] We set $\varepsilon = 10^{-6}$. Because hours worked are assigned by the union rather than chosen by households, transfers do not induce a household-level labor supply response.

**Equilibrium.** Given exogenous paths $\{G_t, r_t^*\}$ and the policy in Equations (9) and (10), an equilibrium consists of aggregate price and quantity paths $\{r_t, r_t^p, p_t, d_t, Y_t, C_t, A_t\}$, household policies, and a distribution of households over states $(e, \beta, a)$ within each type $j \in \{M, S\}$, such that: (i) households optimize, (ii) the distribution evolves consistently with household policies and exogenous state transitions, and (iii) the asset and goods markets clear:

$$A_t = p_t + B_t, \tag{11}$$

$$Y_t = C_t + G_t, \tag{12}$$

where $A_t = \int_0^1 a_{it}\, di$ and $C_t = \int_0^1 (c_{it}^n + c_{it}^\ell)\, di$.[10] By Walras's law, either the asset- or goods-market-clearing condition is redundant.

## 5.3. Calibration and Steady State

**Calibration.** We calibrate the model's steady state to the U.S. economy at a quarterly frequency. Table 2 summarizes the parameter values. Panel A reports externally calibrated parameters, based on data moments, empirical evidence, and standard conventions in the literature. We set $\phi^M = 0.6$ using the OECD modified-equivalence scale, consistent with the median married household in our sample having two adults and one child. We normalize $\phi^S = 1$, consistent with the median single household having one member. In the baseline calibration, we set $\mu^M = 0.67$ to match the share of the U.S. population living in married households in 2000.

We set the per capita subsistence requirement, $\bar{c} = \bar{c}^n + \bar{c}^\ell$, to 0.31, guided by the ratio of the single-person poverty line ($15,940) to median income ($50,960) in the 2024 Census. We divide this requirement between necessities and luxuries in proportion to their expenditure shares in the bottom income decile, giving $\bar{c}^n = 0.18$ and $\bar{c}^\ell = 0.13$.

Following Auclert, Rognlie, and Straub (2025), we set the quarterly probability of a new, independent discount-factor draw to $q = 0.01$ and the patient population share to $\omega = 0.49$. The income process, firm, and policy parameters take standard values from the literature.

Panel B reports parameters jointly calibrated to match empirical targets. The discount factors, $\beta_L$ and $\beta_H$, are calibrated to match an aggregate MPC of 0.3 and a steady-state assets-to-GDP ratio of 500 percent. We calibrate the preference weight, $\theta$, to match an aggregate steady-state necessity consumption share of 47 percent. The curvature param-

[10] We normalize average labor productivity to one, $\int_0^1 e_{it}\, di = 1$. With common hours $n_{it} = N_t$, aggregate effective labor supply therefore equals labor demand, so labor-market clearing holds by construction.

Table 2: Calibration of the Baseline Model

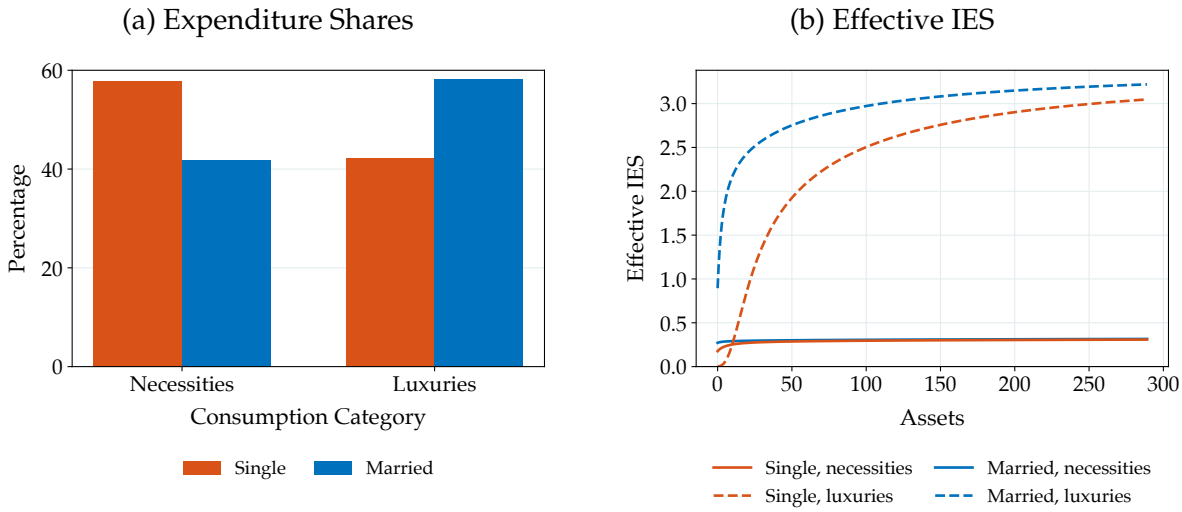
| Parameter | Description | Value | Source / Target |
|---|---|---|---|
| *Panel A: Externally calibrated parameters* | | | |
| *Preferences* | | | |
| $\phi^M$ | Married shareability | 0.60 | OECD equivalence-scale |
| $\phi^S$ | Single shareability | 1.00 | Normalization |
| $\bar{c}^n$ | Necessity subsistence floor | 0.18 | Bottom income decile share |
| $\bar{c}^\ell$ | Luxury subsistence floor | 0.13 | Bottom income decile share |
| $\omega$ | Share of patient households | 49% | Auclert, Rognlie, and Straub (2025) |
| $q$ | Probability of new $\beta$ draw (quarterly) | 1% | Auclert, Rognlie, and Straub (2025) |
| $\nu$ | Frisch elasticity | 2 | |
| *Demographics* | | | |
| $\mu^M$ | Married population share | 0.67 | 2000 U.S. Census |
| *Income process* | | | |
| $\rho_e$ | Income process persistence | 0.97 | |
| $\sigma_e$ | Income process volatility | 0.50 | |
| *Firms* | | | |
| $\mu$ | Markup | 1.11 | Auclert, Rognlie, and Straub (2025) |
| $\kappa$ | Slope of the Phillips curve | 0.01 | Auclert, Rognlie, and Straub (2025) |
| *Policy* | | | |
| $r^*$ | Real interest rate (annual) | 2% | Auclert, Rognlie, and Straub (2025) |
| $\phi_\pi$ | Taylor rule inflation coefficient | 1.50 | Auclert, Rognlie, and Straub (2025) |
| $B/Y$ | Bonds to GDP (annual) | 100% | Auclert, Rognlie, and Straub (2025) |
| $G/Y$ | Government spending to GDP | 20% | Auclert, Rognlie, and Straub (2025) |
| *Panel B: Internally calibrated parameters* | | | |
| $\beta_H$ | Discount factor: patient (quarterly) | 1.00 | Aggregate MPC (0.3) |
| $\beta_L$ | Discount factor: impatient (quarterly) | 0.90 | Assets to GDP, annual (500%) |
| $\theta$ | Necessity weight | 0.16 | Aggregate necessity share (47%) |
| $1/\gamma^n$ | Necessity IES | 0.43 | Empirical $\Delta \log C^n$ response |
| $1/\gamma^\ell$ | Luxury IES | 3.42 | Empirical $\Delta \log C^\ell$ response |
| $\varphi$ | Labor disutility scale | 1.27 | Output normalization: $Y = 1$ |

*Notes:* This table summarizes the parameter values for the baseline model, which is calibrated to the U.S. economy at a quarterly frequency. Panel A reports externally calibrated parameters. Panel B reports parameters jointly internally calibrated to match specific steady-state moments and dynamic targets.

eters $\gamma^n$ and $\gamma^\ell$ target aggregate impact responses of necessity and luxury consumption of 0.13 percent and 0.70 percent, respectively. These targets correspond to the empirical responses at 42 months. Finally, we set the labor disutility scale parameter, $\varphi$, to normalize steady-state aggregate output to one.

**Steady-state consumption.** Recall that married and single households differ only in their ability to share consumption, governed by the externally calibrated parameter $\phi^M$. Although we do not specifically target differences between household types, the model

Figure 7: Steady State Consumption by Household Composition




*Notes:* Panel (a) plots the expenditure shares on necessities and luxuries for both single and married households. Panel (b) displays the effective intertemporal elasticity of substitution (IES) for both consumption categories across the asset distribution, conditional on the median skill level and patient discount factor.

generates a higher luxury expenditure share and a higher effective IES for married households, consistent with the empirical patterns. Two features of the preference structure drive these differences.

The first feature is the interaction between consumption sharing and non-homothetic preferences. Additive separability of utility across necessities and luxuries, combined with different utility curvatures, allows expenditure shares to vary with effective consumption. Because $\phi^M < 1$, married households attain higher effective consumption at the same per capita expenditure. Intuitively, consumption sharing makes married households effectively wealthier than single households. Abstracting from subsistence requirements, this increase in effective consumption lowers the marginal utility of necessities relative to luxuries, inducing a shift toward luxury expenditure. Figure 7a illustrates the resulting differences in the expenditure shares in the calibrated model: married households allocate 58 percent of consumption expenditure to luxuries, compared with 42 percent for singles. We term this the *budget composition effect*.

The second feature is the interaction between consumption sharing and goods-specific Stone–Geary subsistence requirements. Without subsistence requirements, the IES for good $k \in \{n, \ell\}$ is constant at $1/\gamma^k$. With subsistence requirements, the effective IES depends on the fraction of expenditure devoted to consumption above subsistence:

$$\text{IES}^n_{\text{eff}} = \frac{c^n_{it} - \phi^j \bar{c}^n}{c^n_{it}} \cdot \frac{1}{\gamma^n}, \quad \text{IES}^\ell_{\text{eff}} = \frac{c^\ell_{it} - \phi^j \bar{c}^\ell}{c^\ell_{it}} \cdot \frac{1}{\gamma^\ell}, \quad \text{IES}_{\text{eff}} = \frac{(c^n_{it} - \phi^j \bar{c}^n)\frac{1}{\gamma^n} + (c^\ell_{it} - \phi^j \bar{c}^\ell)\frac{1}{\gamma^\ell}}{c_{it}}, \quad (13)$$

where $c_{it} = c_{it}^n + c_{it}^\ell$ is total per capita expenditure. The effective IES for each good converges to zero as expenditure approaches its subsistence floor and approaches $1/\gamma^k$ as expenditure grows large. Because $\phi^M < 1$, married households require less per capita expenditure to meet their subsistence needs. At the same expenditure on a given good, a larger fraction of their expenditure therefore goes toward consumption above subsistence, raising their effective IES for each good. We term this the *subsistence satiation effect*.

Figure 7b reports the effective IES across asset holdings for patient households at the median skill level. The effective IES of necessities varies little with assets. On the other hand, the effective IES of luxuries rises with asset holdings. Among low-wealth households, consumption sharing gives married households greater flexibility to adjust luxury spending, resulting in a substantially higher effective IES than for singles. This gap narrows at higher asset levels as subsistence requirements account for a smaller share of expenditure for both household types.

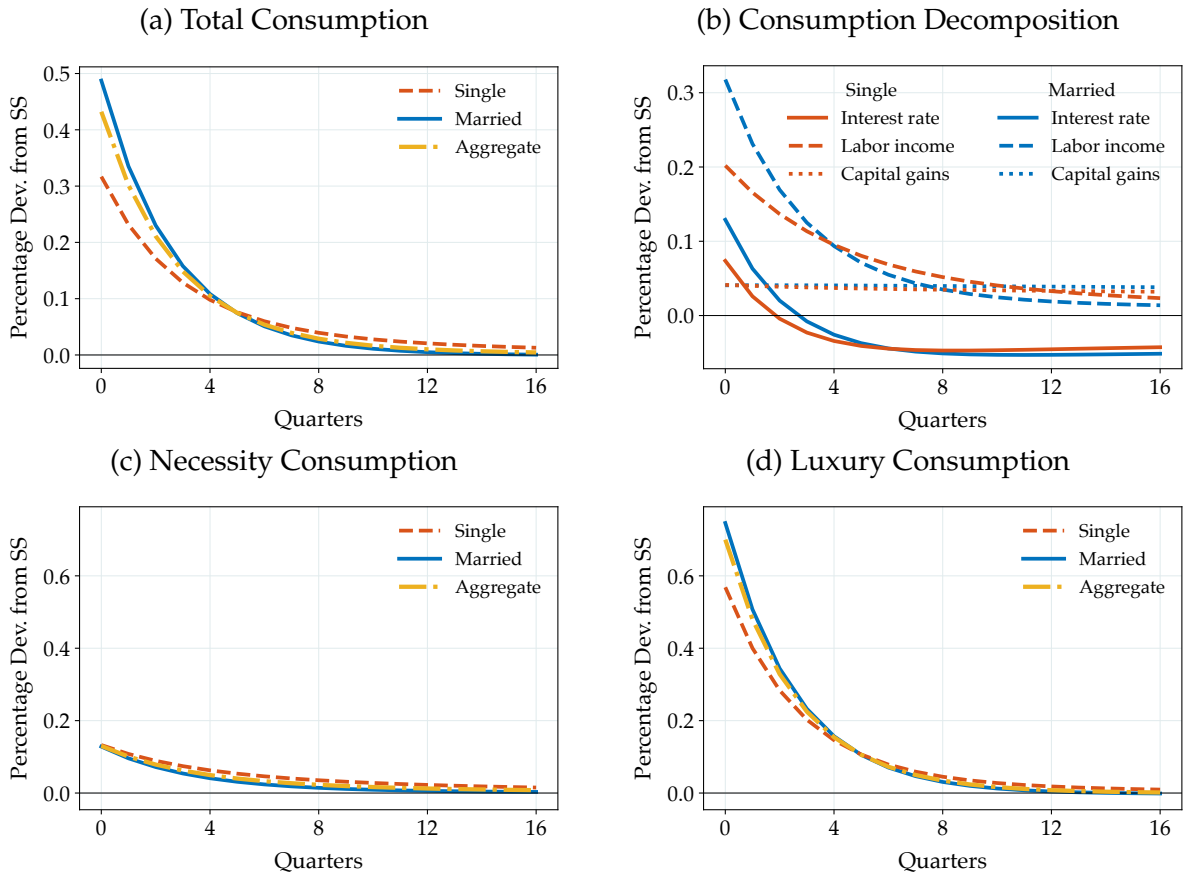
Together, the budget composition and subsistence satiation effects generate a higher effective IES of total consumption for married households in the calibrated model. The first shifts expenditure toward luxuries, which have a higher effective IES, while the second raises the effective IES within each good at a given expenditure level. Averaging over the steady-state distribution yields an effective IES of 1.06 overall, with 1.29 for married households and 0.60 for singles. Appendix E.1 reports additional steady-state moments.

## 5.4. Consumption Responses to Monetary Policy Shocks

We now turn to analyzing heterogeneity in the consumption responses to monetary policy shocks. We simulate an expansionary monetary policy shock of 25 basis points in annualized terms. We let the shock follow an AR(1) process with persistence $\rho_r = 0.7$, to match an empirical half-life of approximately 2 quarters. We solve for the impulse response functions using the sequence-space Jacobian method à la Auclert et al. (2021).

The consumption responses reveal three patterns. First, Figure 8a shows that the aggregate impact response of 0.43 percent masks substantial heterogeneity: married households increase consumption by 0.49 percent, compared with 0.32 percent for single households. Second, Figures 8c and 8d show that aggregate luxury consumption responds more strongly in percentage terms than necessity consumption, a feature targeted by the calibration. Third, Figure 8d shows that married households increase luxury spending more in percentage terms, consistent with their higher effective IES for luxury goods. Combined with their larger steady-state luxury expenditure share, this stronger response translates into a larger increase in total consumption.

Figure 8: Consumption Responses by Household Composition




*Notes:* This figure plots consumption responses to an expansionary monetary policy shock of 25 basis points in annualized terms. Panel (a) reports aggregate consumption and the responses of married and single households. Panel (b) decomposes the consumption response into contributions from interest rate, net labor income, and capital gains channels. Panels (c) and (d) report necessity and luxury consumption responses by household type.

Finally, Figure 8b decomposes married and single households' consumption responses into contributions from interest rates, net labor income, and capital gains. Consistent with standard HANK models, the net labor-income channel accounts for the largest response on impact for both household types, with a larger contribution for married households. The larger net labor-income contribution rationalizes married households' greater consumption responsiveness to other aggregate shocks that affect income, without directly changing interest rates.

Moreover, the interest-rate channel also generates a larger consumption response for married households on impact. Larger direct and indirect responses therefore occur within the same household group. This pattern contrasts with the familiar distinction between hand-to-mouth households, which respond strongly to income changes but little

to interest rates, and saver households, which can adjust consumption intertemporally. In our model, married households' higher effective IES helps explain their stronger response to interest rates, while their larger response through net labor income reinforces the overall consumption gap.

**Counterfactual.** To isolate the effect of declining marriage rates on monetary policy effectiveness, we compare economies with married population shares of $\mu^M = 0.87$ and $\mu^M = 0.60$, matching the fraction of individuals living in married households in 1930 and 2024, respectively. We hold the remaining baseline parameters fixed and solve for the steady-state real interest rate and output in each economy.[11] Appendix Table E.1 reports the equilibrium interest rate and output in each counterfactual economy.

Table 3: Consumption Responses under Alternative Household Composition

| | $\%\Delta C$ | $\%\Delta C^S$ | $\%\Delta C^M$ |
|---|---|---|---|
| *1930 ($\mu^M = 0.87$)* | 0.498 | 0.347 | 0.520 |
| *2024 ($\mu^M = 0.60$)* | 0.411 | 0.309 | 0.477 |
| *Difference* | 0.087 | 0.038 | 0.043 |

*Notes:* $\%\Delta C$, $\%\Delta C^S$, and $\%\Delta C^M$ denote the impact percentage changes in aggregate, single-household, and married-household consumption, respectively, following an expansionary monetary policy shock of 25 basis points in annualized terms. The married population shares are set to $\mu^M = 0.87$ and $\mu^M = 0.60$, matching their 1930 and 2024 values, respectively. The bottom row reports the 1930 response minus the 2024 response in percentage points.

Table 3 compares consumption responses to an expansionary monetary policy shock of 25 basis points across the two demographic calibrations. Aggregate consumption rises by 0.498 percent on impact under the 1930 household composition, compared with 0.411 percent under the 2024 composition. The resulting gap of 0.087 percentage points is nearly twice the 0.046 percentage point gap obtained by changing population weights while holding baseline consumption levels and household-type responses fixed. General equilibrium adjustments amplify the effect of household composition beyond this mechanical reweighting. As the final two columns of Table 3 show, both married and single households respond more strongly under the 1930 composition. A larger share of married households strengthens the aggregate demand response, generating additional labor-income gains that support consumption for both groups. Appendix Figure E.3 shows that the net labor-income channel accounts for most of the increase in each group's

[11] In unreported results, we hold $r^*$ fixed and instead adjust the target asset-to-income ratio to clear the asset market. The conclusions are similar.

consumption response.

Overall, the model predicts an impact consumption response approximately 21 percent larger under the 1930 household composition than under the 2024 composition. This result identifies a potential demographic channel contributing to the attenuation of monetary transmission documented by Boivin and Giannoni (2006).

# 6. Conclusion

This paper documents substantial differences in the consumption responses of married and single households to monetary policy shocks. Married households increase consumption more strongly following a monetary easing, and this differential persists after accounting for income, age, housing tenure, and other observable characteristics. The labor market evidence does not indicate larger earnings gains among married households that could explain their stronger consumption response. These findings point to a role for household composition beyond the standard demographic and balance-sheet differences emphasized in existing work.

Differences in expenditure allocations and elasticities help explain this result. Married households spend less per person on necessities, devote a larger share of their budgets to luxuries, and exhibit higher expenditure elasticities for several luxury categories. Following a monetary easing, the larger consumption response of married households is thus concentrated in luxury spending.

We provide a structural explanation for these patterns in a two-good heterogeneous-agent New Keynesian model with non-homothetic preferences and greater consumption sharing within married households. By reducing the per-capita expenditure required for basic needs, consumption sharing shifts household budgets toward luxuries and increases the intertemporal flexibility of within-good spending. These forces endogenously generate a larger consumption response to monetary policy shocks for married households.

The model also suggests that the secular decline in marriage can weaken the aggregate consumption response to monetary policy. Shifting the household composition in our counterfactual economies from 2024 back to 1930 amplifies the aggregate consumption response by approximately 21 percent. This difference reflects both the larger share of married households and general equilibrium feedback through aggregate demand. Changing household composition may therefore contribute to the attenuation in monetary policy transmission over time.

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# Online Appendix

## Household Composition and The Transmission of Aggregate Shocks

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## Contents



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# A. Data

## A.1. Household Data

### A.1.1. Consumption Data

We use the Consumer Expenditure Survey (CEX) from the Bureau of Labor Statistics (BLS) to obtain detailed consumption data. We rely on the Public Use Microdata (PUMD) files for the Interview Survey. The Interview Survey is a rotating panel in which consumer units participate in up to four quarterly interviews, with each interview collecting expenditures for the preceding three months. For earlier survey years, 1982 to 1989, we obtain the relevant files from ICPSR.

Note that the CEX unit of observation is the consumer unit, which is the relevant economic unit for our analysis. Unlike a housing unit, which is defined by co-residence, a consumer unit is defined by financial independence and shared expenditure decisions. It may include all related individuals living together, a financially independent individual living alone or with others, or two or more individuals who live together and jointly make spending decisions. For example, unrelated roommates who do not pool resources are treated as separate consumer units, while spouses or partners who make joint expenditure decisions are treated as one unit. Throughout the paper, we refer to consumer units as households for expositional simplicity.

**Interview Survey files.** We construct our CEX panel by combining five components of the PUMD. The *FMLI files* contain consumer-unit characteristics and survey weights, together with annual income, assets and liabilities, and summary quarterly expenditures. The *MEMI files* contain member-level characteristics; we use these records to identify unmarried partners within the consumer unit and to count the number of earners. The *MTBI files* report detailed monthly expenditures by Universal Classification Code (UCC), while the *ITBI files* report detailed income information. The *EXPN files* contain detailed records on assets and liabilities.

We aggregate the MTBI and ITBI records to the consumer-unit–reference-month level and link them to household characteristics from the corresponding FMLI and MEMI interview files. We assign expenditures to the month in which they occurred and use the resulting monthly panel in our baseline analysis. We also construct a quarterly panel by summing expenditure and other flow variables within calendar quarters. We use the EXPN records to supplement the summary financial information in the FMLI files.

**Demographics and other balance sheet characteristics.** Our baseline measure of marriage is based on the marital status of the reference person, `marital1`. We classify consumer units as married if the reference person is currently married, and as single otherwise. As a broader measure of partnered households, we classify a consumer unit as partnered if the reference person is married or if `cu_code` identifies an unmarried partner within the consumer unit.

Age groups are based on the reference person's age, `age_ref`. Education is based on the reference person's education level, `educ_ref`, which we recode into three groups: no high school degree, high school or some college, and college degree or more. Housing tenure is measured using `cutenure`, which we classify into three categories: mortgagers, outright owners, and renters. Household size and the number of children are measured using `fam_size` and `perslt18`, respectively. Finally, we use the member-level earner indicator, `earner`, to construct the number of earners within the consumer unit.

**Expenditures by category.** We obtain expenditures by category by aggregating UCC-level data. To map UCC codes to expenditure categories, we closely follow Coibion, Gorodnichenko, and Koustas (2021) and Orchard, Ramey, and Wieland (2025). The resulting categories are similar to the hierarchical groupings published by the BLS for the Interview Survey. However, because we seek to separately identify expenditures on durables, non-durables, and services, several of our categories are defined with greater granularity than those of the BLS. Table A.1 details how the non-durable, durable, and service expenditure measures are constructed.

Table A.1: Expenditure Classification in the CEX

| Category | Component | UCC codes |
|---|---|---|
| **Durables** | House expenditures, durables | 240112, 240122, 240212, 240213, 240220, 240222, 240312, 240322, 320622, 320632, 320612, 990930, 240113, 240123, 240214, 240223, 240313, 240323, 320623, 320613, 320633, 990940 |
| | Rental expenditures, durables | 240111, 240121, 240211, 240221, 240311, 240321, 320611, 320621, 320631, 790690, 990920 |
| | Phone, durables | 320232, 690210 |
| | Furniture | 290110, 290120, 290210, 290310, 290320, 290410, 290420, 290430, 290440 |
| | Floor coverings | 220614, 220511, 220616, 230132, 320162, 230133, 230131, 320161, 230134, 320163, 320110, 320111 |
| | Major appliances | 220612, 220613, 230117, 230118, 300111, 300112, 300211, 300212, 300216, 300217, 300221, 300222, 300311, 300312, 300321, 300322, 300331, 300332, 300411, 300412, 320511, 320512 |

*Continued on next page*

Table A.1: Expenditure Classification in the CEX (continued)

| Category | Component | UCC codes |
|---|---|---|
| | Small appliances | 320310, 320320, 320330, 320340, 320345, 320350, 320360, 320370, 320521, 320522 |
| | Miscellaneous household equipment | 320120, 320130, 320150, 320210, 320220, 320221, 320230, 320231, 320233, 320410, 320420, 320901, 320902, 320903, 320904, 340904, 430130, 690241, 690242, 690243, 690244, 690245 |
| | Information processing equipment | 690110, 690111, 690112, 690115, 690117, 690118, 690119, 690120, 690220, 690230 |
| | Jewelry | 430110, 430120 |
| | New vehicles | 450110, 450210, 450220, 450900 |
| | Used vehicles | 460110, 460901, 460902, 460903 |
| | Car maintenance and repairs, durables | 470220, 480110, 480211, 480212, 480213, 480214, 480215, 480100 |
| | Health expenditures, durables | 550110, 550320, 550330, 550340 |
| | Tv, audio and visual equipment | 310311, 310312, 310313, 310314, 310316, 310110, 310120, 310130, 310140, 310315, 310210, 310220, 310230, 310231, 310232, 310320, 310330, 310331, 310332, 310333, 310334, 310340, 310342, 610130 |
| | Pets, toys, hobbies, and playground equipment, durables | 610110, 610120, 610140, 610320 |
| | Other entertainment equipment, including recreational vehicles | 600121, 600122, 600131, 600132, 600141, 600142, 600210, 600310, 600410, 600420, 600430, 600900, 600901, 600902, 610210, 610230 |
| | Books | 590220, 590230, 660310 |
| | Educational books and supplies | 660110, 660115, 660210, 660215, 660410, 660415, 660900, 660901, 660902, 660903, 660905, 660906, 660001 |
| **Non-durables** | Food at home | 190904, 790220, 790230, 790240, 800600 |
| | Alcohol at home | 790310, 790320, 790330 |
| | Fuel oil | 250111, 250112, 250113, 250114, 250211, 250212, 250213, 250214, 250221, 250222, 250223, 250224, 250901, 250902, 250903, 250904, 250911, 250912, 250913, 250914 |
| | Household textiles | 280110, 280120, 280130, 280140, 280210, 280220, 280230, 280900 |
| | Clothing, children, non-durables | 370110, 370120, 370125, 370130, 370211, 370212, 370213, 370220, 370311, 370312, 370313, 370314, 370901, 370902, 370903, 370904, 370360, 390110, 390120, 390210, 390221, 390222, 390223, 390230, 390360, 390310, 390321, 390322, 390901, 390902, 410110, 410111, 410112, 410120, 410121, 410122, 410130, 410131, 410132, 410140, 410141, 410142, 410901, 410902, 410903, 410904, 720210 |
| | Clothing, adult, non-durables | 360110, 360120, 360210, 360311, 360312, 360320, 360330, 360340, 360350, 360360, 360410, 360420, 360511, 360512, 360513, 360901, 360902, 380110, 380210, 380311, 380312, 380313, 380315, 380320, 380331, 380332, 380333, 380340, 380360, 380410, 380420, 380430, 380510, 380901, 380902, 380903, 720110, 720310 |

*Continued on next page*

Table A.1: Expenditure Classification in the CEX (continued)

| Category | Component | UCC codes |
|---|---|---|
| | Clothing, other | 420110, 420115, 420120 |
| | Footwear | 400210, 400220, 400110, 400310 |
| | Gasoline | 470111, 470112, 470113, 470211, 470212, 470114, 470311 |
| | Prescription and non-prescription drugs | 540000 |
| | Personal care products, non-durables | 640130, 640420, 640430 |
| | Magazines | 590110, 590111, 590112, 590210, 590211, 590212, 590310, 590410 |
| | Tobacco | 630110, 630210 |
| **Services** | Food away from home | 190901, 190902, 190903, 190905, 790430, 790400, 790410, 800700 |
| | Alcohol away from home | 790420, 200900 |
| | House expenditures, services | 230112, 230113, 230114, 230115, 230116, 230122, 230142, 230151, 320625, 230119, 230123, 230152, 320626, 220900, 220901, 230901, 340911, 220902, 230902, 340912, 680905 |
| | Rent | 210110, 800710 |
| | Rental expenditures, services | 230111, 230121, 230141, 230150, 320624 |
| | Housing away from home | 210210, 210310 |
| | Energy service | 260211, 260212, 260213, 260214, 260111, 260112, 260113, 260114 |
| | Telephone services | 270000, 270101, 270102, 270103, 270104, 270105, 270106, 270510, 270610 |
| | Water and other public services | 270211, 270212, 270213, 270214, 270411, 270412, 270413, 270414, 270901, 270902, 270903, 270904 |
| | Babysitting and childcare | 340210, 340211, 340212, 670310, 670320 |
| | Elderly care | 340906, 340910 |
| | Household-related expenses | 340310, 340410, 340420, 340520, 340530, 340914, 340915, 340903, 330511, 340510, 340620, 340630, 340901, 340907, 340908, 690113, 690310, 990900, 990910 |
| | Internet | 690114, 690116 |
| | Clothing, services | 440110, 440120, 440130, 440140, 440150, 440210, 440900 |
| | Other vehicle charges | 520110, 520111, 520112, 510115, 520310, 520410, 520530, 520531, 520532, 520541, 520542, 520550, 520560, 620113, 620114 |
| | Car maintenance and repairs, services | 480216, 490100, 490110, 490211, 490212, 490220, 490221, 490231, 490232, 490300, 490311, 490312, 490313, 490314, 490315, 490317, 490318, 490319, 490411, 490412, 490413, 490500, 490501, 490502, 490900 |
| | Public transit | 530110, 530210, 530311, 530312, 530411, 530412, 530510, 530901, 530902 |
| | Leased vehicles | 450310, 450311, 450313, 450314, 450350, 450351, 450353, 450354, 450410, 450411, 450413, 450414 |
| | Rental vehicles | 520511, 520512, 520516, 520517, 520521, 520522, 520902, 520905, 520903, 520906 |

*Continued on next page*

Table A.1: Expenditure Classification in the CEX (continued)

| Category | Component | UCC codes |
|---|---|---|
| | Health expenditures, services | 570901, 570903, 560110, 560210, 560310, 560320, 560330, 560400, 560410, 560420, 560900, 570110, 570111, 570210, 570220, 570230, 570240 |
| | Fees and admissions, entertainment | 610900, 620110, 620111, 620121, 620122, 620211, 620212, 620213, 620214, 620215, 620216, 620221, 620222, 620310, 620903 |
| | Tv, audio, and visual services | 270310, 270311, 310240, 310243, 310341, 310350, 310400, 340610, 340902, 340905, 620904, 620912, 620916, 620917, 620918, 690320, 690330, 690340, 690350, 620930 |
| | Pets, toys, hobbies, playground equipment, services | 620410, 620420 |
| | Other entertainment services | 520901, 520904, 520907, 600110, 620902, 620906, 620907, 620909, 620919, 620921, 620922, 600311, 620908, 620320, 620330, 620905, 680310, 680320 |
| | Education services | 670110, 670210, 670410, 670901, 670902, 670903, 671000 |
| | Personal care services | 650110, 650210, 650310, 650900 |
| | Housing insurance | 220111, 220112, 220121, 220122, 210901, 210902 |
| | Rental insurance | 350110 |
| | Vehicle insurance | 500110 |
| | Health insurance | 580110, 580111, 580113, 580115, 580311, 580112, 580114, 580116, 580210, 580310, 580312, 580412, 580422, 580432, 580442, 580904, 580906, 580901, 580907, 580908, 580909, 580910, 580411, 580421, 580431, 580441, 580902, 580903, 580905, 580400, 580401, 580402 |
| | Fees and other charges | 620115, 620926, 680110, 680140, 680210, 680901, 680902, 680903, 680904, 790600, 790840 |
| | Imputed rent | 910050 |
| **Non-consumption expenditures** | Alimony and child support payments | 800111, 800121, 800801 |
| | Cash contributions | 800800, 800802, 800803, 800804, 800810, 800811, 800820, 800821, 800830, 800831, 800840, 800841, 800850, 800851, 800860, 800861, 810400 |
| | Mortgage interest | 220311, 220312, 220313, 220314, 880110, 880310, 220321, 220322 |
| | Property taxes | 220211, 220212 |
| | Vehicle finance charges | 510110, 510901, 510902, 850300, 870103, 870203, 870303, 870403, 870503, 870603, 870607, 870703, 870803 |
| | Occupational expenses | 900001, 900002 |
| | Finance charges | 5420, 5520, 5620, 710110 |
| | Other finance charges | 620112, 680220, 880210 |
| | Life and other personal insurance | 2120, 700110 |
| | Pensions and social security deductions | 800910, 800920, 800932, 800940 |
| | Private pensions deductions | 800931 |
| | Educational savings account | 920050 |

**Income.** The CEX measure of before-tax income includes the following: labor income (wages and/or salaries) before deductions; self-employment income from business, partnership, or professional practice (farm and non-farm); social security and railroad retirement, pensions, and annuities; interest, dividends, rental income, and other property income; supplemental social security income, public assistance, and SNAP; other regular income—including unemployment compensation, workers' compensation, veterans' benefits, alimony, and child support; and, other income—including money received from care of foster children, cash scholarships and fellowships, and stipends not based on working.

We adjust this measure of before-tax income by adding meals and rent as pay and other money receipts, following Aguiar and Bils (2015). Other money receipts consist of: lump sum receipts; money from sale of household furnishings; refunds from overpayment on social security; refunds from insurance policies; refunds from property taxes; and, rental receipts from timeshares and vacation homes.

To obtain income after taxes, we deduct federal, state, and local income taxes, and other taxes such as personal property taxes and vehicle personal property taxes. We add back tax refunds.

Because the CEX income measure is retrospective, it captures income earned during the twelve months preceding the interview quarter and is not well suited to measuring short-run income responses to monetary policy shocks. We therefore use the CPS to construct higher-frequency income measures that align more closely with the timing of the shock.

**Data cleaning.** We drop consumer units that report zero food consumption in any interview (combining both food at home and food away from home). We also exclude units with less than three months of data. Following Coibion et al., 2017, we correct for sample breaks in several variables affected by changes in the Interview Survey questionnaire. The affected periods are food at home (1982M1–1987M12), food away from home (2007M4–2007M6), personal care services (2001M4–2001M6), and occupational expenditures (2001M4–2001M6). To implement the correction, we regress each expenditure variable on a time trend and an indicator for the sample break, and then subtract from the original series the estimated effect of the sample break indicator.

We express dollar measures in average 2019 dollars using the consumer price index (`CPIAUCSL`). Additionally, to ensure comparability across married and single households with varying family sizes, we divide all expenditures by family size to express them in per-capita terms. We later show that our results are robust to using alternative equiva-

lence scales.

**Sample restrictions.** Our baseline sample covers January 1982 through December 2019, beginning when data on rental-equivalence becomes consistently available and ending before the atypical consumption patterns associated with the Covid-19 pandemic. We further implement the following restrictions simultaneously, following the literature using CEX data:

1. We exclude households that do not report income or that report negative income.
2. We exclude households that report negative or zero total consumption.
3. We exclude households whose head does not report their age or is either below 18 years or above 80 years.
4. We exclude households that do not report their housing tenure or that do not fall into the mortgagers, outright owners, or renters categories.
5. We exclude households with changes in marital status, number of children, or family size across interviews.

**Aggregation.** To aggregate outcomes to the group-level, we use the final household-level weight, `finlwt21`. When aggregating per-capita outcomes, we use the final household-level weight, `finlwt21`, multiplied by family size, `fam_size`, so that the aggregated estimates represent individuals rather than consumer units. However, in sensitivity checks, we show that our results are robust to using the household-level weight directly.

**Normalization.** Following Cloyne, Ferreira, and Surico (2020), we rescale each group-level consumption series by the ratio of per-capita PCE to the aggregated per-capita CEX consumption. We apply the same time-varying ratio to married and single households, so the normalization does not mechanically alter their relative response. To reduce high-frequency sampling noise, our baseline monthly series use a backward-looking moving average over the current and preceding three quarters (12 months). We report robustness to using the unsmoothed series and to estimating smooth local projections following Barnichon and Brownlees (2019).

### A.1.2. Income and Employment Data

We use the Current Population Survey (CPS), accessed through IPUMS, to measure household labor income and employment at a monthly frequency. The CPS is jointly adminis-

tered by the U.S. Census Bureau and the Bureau of Labor Statistics and follows a rotating-panel design: households are interviewed for four consecutive months, leave the sample for eight months, and then return for four additional interviews. Our earnings measures come from the Outgoing Rotation Group (ORG) survey, which collects detailed labor-market information during respondents' fourth and eighth interview months.

**Demographics.** We classify households as married or single using the household head's marital status (`marst`). Married households include those whose head reports being married, while single households include those whose head is separated, divorced, widowed, or never married.

**Income and employment variables.** We construct weekly household earnings by summing `earnweek` across employed adults, with non-employed adults contributing zero. We express earnings in average 2019 dollars using the same CPI adjustment applied to the CEX data. We divide this total by family size to measure weekly earnings per family member. Using employment status (`empstat`), we construct the unemployment rate as the number of adults who are unemployed divided by the number in the labor force.

**Sample restrictions.** Our sample covers January 1982 through December 2019, matching the baseline CEX sample. We retain individuals aged 18 or older who are household heads, spouses, or other relatives, identified using their relationship to the household head (`relate`) and age (`age`). We impose the following additional restrictions:

1. We exclude group quarters (`gqtype`).
2. We exclude households whose head does not report their age or is either below 18 years or above 80 years.
3. We exclude households with changes in marital status (`marst`), number of children (`nchild`), or family size (`famsize`) across interviews.
4. We exclude households if the employment status (`empstat`) is missing for any retained adult or if an employed adult lacks eligible weekly earnings (`eligorg`, `earnweek`).

**Aggregation.** We construct the household-level weight using the individual-level earnings weight (`earnwt`), following IPUMS guidance.[3] For households with a married male

[3] See https://forum.ipums.org/t/weight-for-household-level-analysis-of-outgoing-rotation-group/3987.

head and a wife present, we use the wife's `earnwt`; otherwise, we use the household head's `earnwt`. When aggregating weekly earnings per family member, we multiply this household-level weight by family size; for unemployment, we multiply it by the number of labor-force participants.

### A.1.3. Portfolio Data

We use the Survey of Consumer Finances (SCF) to measure household balance sheets. The SCF is a triennial survey sponsored by the Federal Reserve Board in cooperation with the U.S. Department of the Treasury. We combine the public summary extracts with selected variables from the full public data files.

**Demographics.** We classify households as married or single using the reference person's marital status (`x8023`) and, where applicable, legal marital status (`x7372`).

**Balance-sheet variables.** Following Kaplan, Violante, and Weidner (2014), liquid assets include checking accounts (`checking`), savings accounts (`saving`), money market accounts (`mma`), call accounts (`call`), non-money-market mutual funds (`nmmf`), directly held stocks (`stocks`), and directly held bonds (`bond`). Because the SCF does not report cash holdings, we impute cash as 5.5 percent of balances in checking, savings, money market, and call accounts. Net liquid wealth subtracts revolving credit-card balances (`ccbal`).

Illiquid assets include certificates of deposit (`cds`), savings bonds (`savbnd`), cash value of life insurance (`cashli`), retirement accounts (`retqliq`), primary residence (`houses`), other residential real estate (`oresre`), and nonresidential real estate (`nnresre`). Net illiquid wealth subtracts primary-residence mortgage and home-equity-line debt (`mrthel`) and debt secured by other residential real estate (`resdbt`). We exclude vehicles (`vehic`), business equity (`bus`), and other nonfinancial assets (`othnfin`) from the baseline measure.

**Income variables.** We measure income using wage and salary earnings (`x5702`), self-employment income (`x5704`), unemployment benefits (`x5716`), child benefits (`x5718`), TANF (`x5720`), and Social Security, pension, annuity, disability, and retirement income (`x5722`).

**Hand-to-mouth classification.** Following Kaplan, Violante, and Weidner (2014), a household with nonnegative net liquid wealth is hand-to-mouth if its net liquid wealth does not exceed one week's income. A household with negative net liquid wealth is classified as hand-to-mouth if the absolute value of its net liquid wealth is at least 16.5 percent of annual income.

**Sample restrictions.** Our sample uses survey waves from 1989 through 2019, consistent with the baseline CEX pre-pandemic sample. We impose the following restrictions:

1. We exclude households that do not report income (`income`) or that report negative income.
2. We exclude households whose reference person does not report their age or is either below 18 years or above 80 years.
3. We exclude households that do not report marital status, number of children (`kids`), or household size (`x101`).

We retain a household only if all five implicates satisfy these restrictions. We express dollar measures in average 2019 dollars using the same CPI adjustment applied to the CEX data.

**Aggregation.** To aggregate household-level estimates, we use the survey weight (`wgt`). For per-capita outcomes, we multiply `wgt` by household size so that estimates represent individuals rather than households.

#### A.1.4. Census Data

We use decennial Census and American Community Survey (ACS) microdata from IPUMS USA to document trends in marriage and household composition from 1880 through 2024. We use 1 percent samples for 1880 and each decennial Census from 1900 through 2000, with the 1970 observation drawn from the Form 1 State sample. We use ACS 5-year samples ending in 2010, 2020, and 2024.

**Demographics.** We use the household head's marital status (`marst`) to classify households as married or single. Married households have a currently married head, while single households have a head who is separated, divorced, widowed, or never married. We classify a household as having children if the household head has at least one own child present (`nchild` $> 0$). We identify cohabitation by the presence of an unmarried partner (`related` equal to 1114); this measure is available beginning in 1990.

**Sample restrictions.** We retain household units (`gq` equal to 1 or 2) and exclude group quarters. We restrict the sample to household heads (`relate` equal to 1) age 18 or older. We use the household weight (`hhwt`) throughout.

## A.2. Aggregate Data

Table A.2 provides details on the macroeconomic data used in the paper, including the data source and the transformation applied.

Table A.2: Macro Data Sources

| Variable | Description | Source | Trans. |
|---|---|---|---|
| *Panel A: Real Per-Capita Consumption Variables* | | | |
| PCE | Personal consumption expenditures, nominal, seasonally adjusted annual rate | FRED | $100 \times \log$ |
| PCEPI | Personal consumption expenditures: chain-type price index | FRED | $100 \times \log$ |
| POPTHM | Population | FRED | $100 \times \log$ |
| *Panel B: VAR Variables* | | | |
| GS1 | Market yield on U.S. Treasury securities at 1-year constant maturity | FRED | Level |
| INDPRO | Industrial production: total index | FRED | $100 \times \log$ |
| CPIAUCSL | Consumer price index for all urban consumers: all items in U.S. city average | FRED | $100 \times \log$ |
| EBP | Excess bond premium from Gilchrist and Zakrajšek (2012) | FRB website | Level |
| PPIACO | Producer price index by commodity: all commodities | FRED | $100 \times \log$ |
| *Panel C: Shock Series* | | | |
| MPS | Raw high-frequency monetary policy surprises from Gertler and Karadi (2015) | FRB SF website | Level |
| MPS_ORTH | Orthogonalized high-frequency monetary policy surprises from Bauer and Swanson (2023) | FRB SF website | Level |
| MPI | Orthogonalized high-frequency monetary policy surprises from Miranda-Agrippino and Ricco (2021) | Miranda-Agrippino's website | Level |
| MPShockRR | Narrative monetary policy shock from Romer and Romer (2004) | Adams–Matthes database | Level |
| OilShock | Oil supply news shock from Känzig (2021) | Kanzig's website | Level |
| OilShockBH | Oil supply shock from Baumeister and Hamilton (2019) | Adams–Matthes database | Level |

## A.3. Monetary Policy Shocks

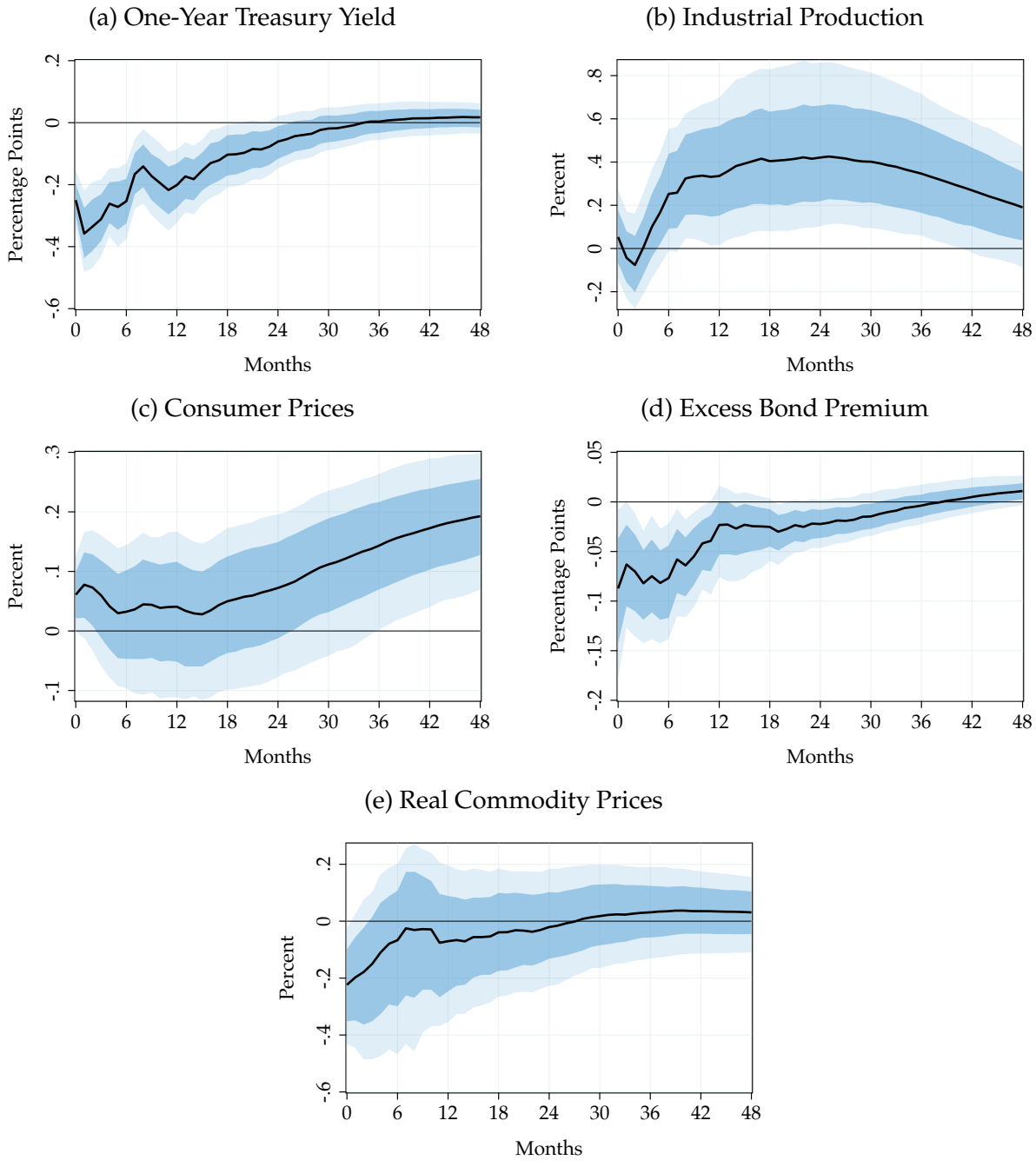
**Specification.** We estimate a monthly VAR following Bilbiie and Kanzig (2024). The VAR contains the one-year Treasury yield, industrial production, the consumer price index, the excess bond premium, and a commodity price index. All variables enter in log levels, except the one-year Treasury yield and excess bond premium, which enter in levels. We include 12 lags and in terms of determinsitics, a constant and a linear time trend. The sample covers January 1976 through December 2019.

**Identification.** We identify monetary policy shocks using the high-frequency external-instrument approach of Gertler and Karadi (2015). Our baseline instrument for the one-year rate is the raw monetary policy surprises of Gertler and Karadi (2015), which measure the changes in interest-rate futures within a 30-minute window around FOMC announcements. This instrument is available from February 1988 onward. We use these surprises to instrument for the one-year Treasury yield and normalize an expansionary shock to lower this yield by 25 basis points on impact. Consistent with Gertler and Karadi (2015), we find that the instrument is strong, with first-stage F-statistics safely above conventional thresholds.

As robustness checks, we use the information-robust measures of Miranda-Agrippino and Ricco (2021), which account for the Federal Reserve's information set using Greenbook forecasts, and Bauer and Swanson (2023), which orthogonalize high-frequency surprises with respect to macroeconomic and financial information available before the announcement. Finally, we use the narrative monetary policy shock of Romer and Romer (2004), which identifies policy changes from FOMC records rather than high-frequency surprises and purges them of systematic responses to the Federal Reserve's internal forecasts.

**Aggregate responses.** Figure A.1 reports the baseline responses to an expansionary monetary policy shock. The one-year Treasury yield falls persistently, accompanied by an immediate decline in the excess bond premium. Industrial production rises gradually, with the response peaking at approximately 0.4 percent after two years. Consumer prices respond more slowly, rising by approximately 0.2 percent after four years. Real commodity prices show a modest and generally imprecisely estimated response consistent with nominal commodity prices moving broadly in line with consumer prices.

Figure A.1: Aggregate Responses to a Monetary Policy Shock




*Notes:* This figure reports the impulse responses to a monetary policy shock, normalized to lower the one-year Treasury yield by 25 basis points on impact, estimated using an external-instrument VAR with the Gertler and Karadi (2015) surprise series as an instrument. The solid lines are point estimates and the dark and light shaded areas are 68 and 90 percent confidence bands, respectively.

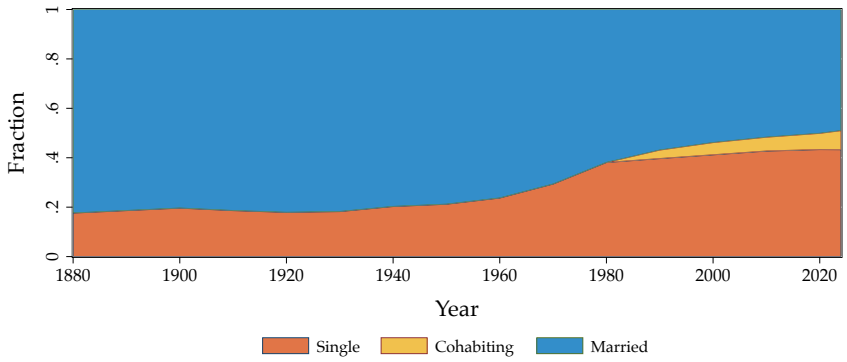
# B. Additional Macro Results

## B.1. Long-Run Trends in Household Composition

In this appendix, we provide additional evidence on long-run trends in household composition, including cohabitation and the presence of children.

**Cohabitation.** In Figure B.1, we examine whether the long-run decline in marriage is offset by a rise in cohabitation. To do so, we partition households into three mutually exclusive groups: single, cohabiting, and married. This measure is available only from 1990 onward, when the Census began identifying unmarried partners.

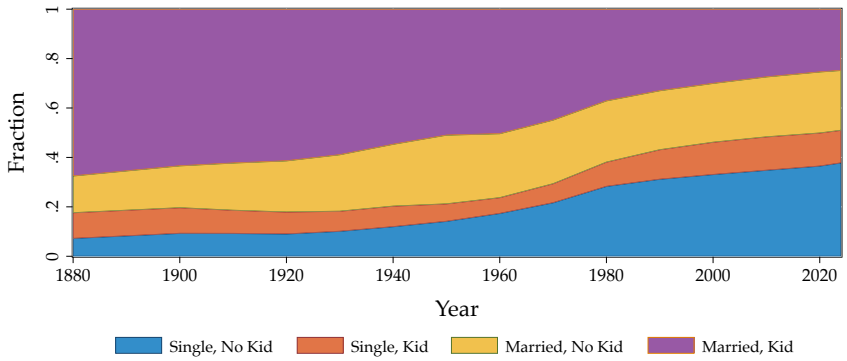
Figure B.1: Trends in Marriage and Cohabitation




Between 1990 and 2024, the share of cohabiting households rises from 3.4 percent to 7.7 percent. This 4.3 percentage-point increase offsets just over half of the 7.9 percentage-point decline in the share of married households over the same period.

**Children.** In Figure B.2, we examine how the decline in marriage is related to changes in the presence of children in the household. To do so, we classify households into four mutually exclusive groups based on the marital status of the householder and the presence of children in the household.

Figure B.2: Trends in Marriage and Children

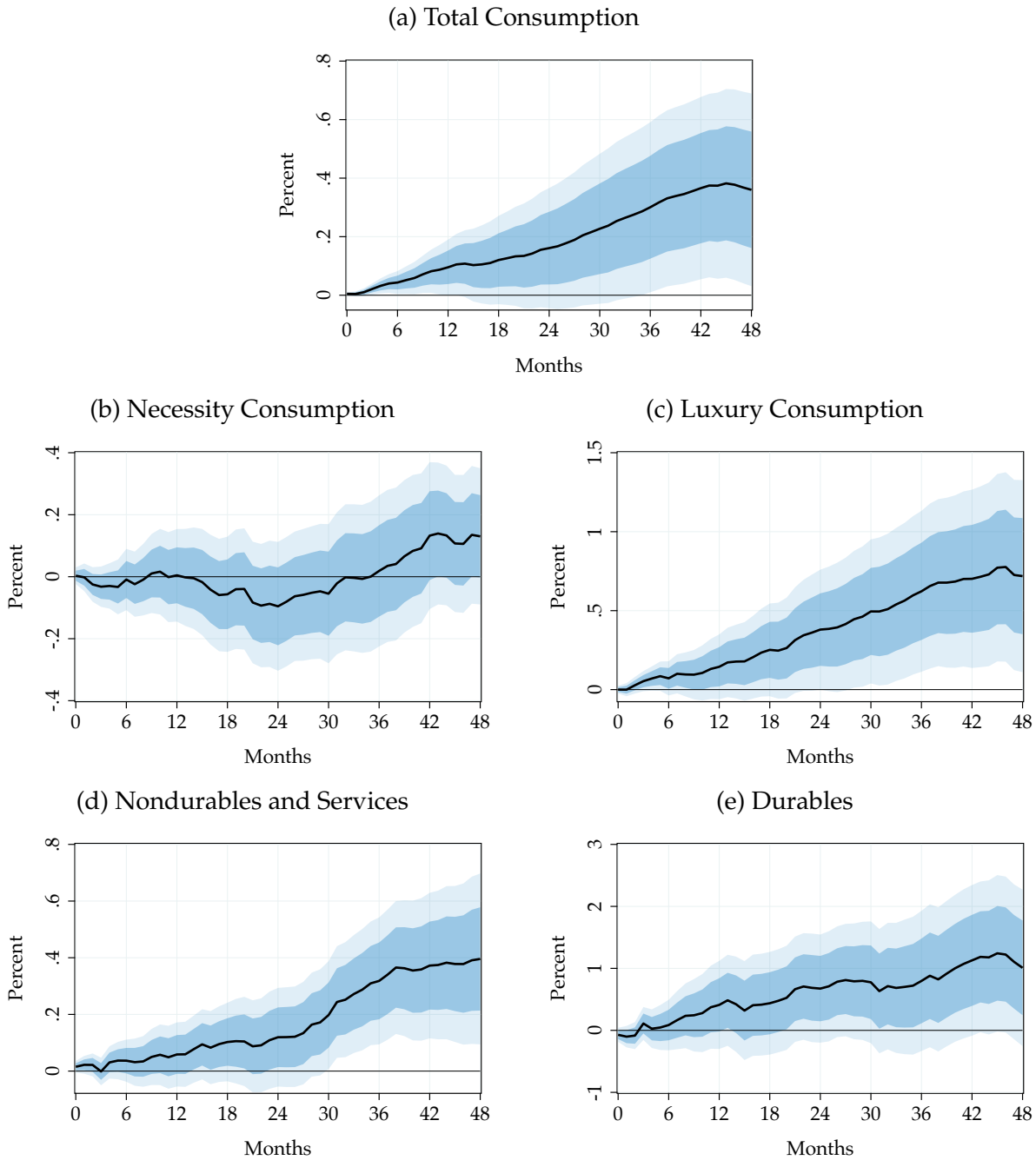



The long-run change in household composition is concentrated in a decline in married households with children and a rise in single households without children.

## B.2. Aggregate Consumption Responses

Figure B.3 reports the aggregate per-capita consumption response and disaggregates consumption into necessities and luxuries, and into durables and nondurables and services. Total consumption rises gradually following the expansionary shock. Luxury consumption exhibits a larger and more persistent increase, while the necessity response is smaller. Durable consumption also exhibits a larger percentage response than nondurables and services. The response of nondurables and services builds more gradually and remains positive at longer horizons.

Figure B.3: Aggregate Consumption Responses

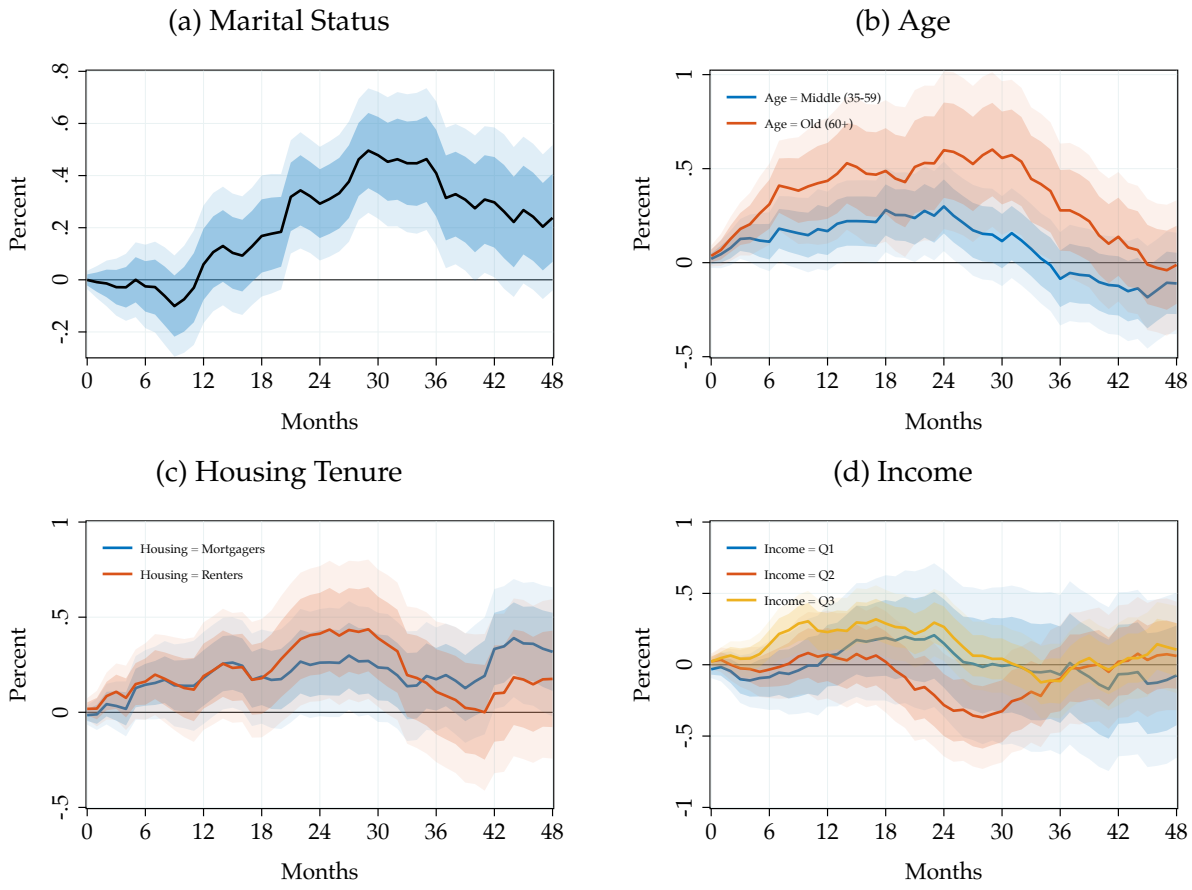



*Notes:* This figure reports aggregate per-capita consumption responses following a 25-basis-point expansionary monetary policy shock. Panel (a) reports the response of total consumption. Panels (b) and (c) report the responses of necessity and luxury consumption, respectively. Panels (d) and (e) report the responses of nondurables and services and of durables, respectively. Responses are estimated using Equation (1). Solid lines denote point estimates; dark and light shaded areas denote 68 and 90 percent confidence bands, respectively.

## B.3. Consumption Responses by Household Characteristic

Figure B.4 reports the interaction effects obtained from estimating Equation (2), which jointly allows the consumption response to vary with marital status, age, housing tenure, and income. Each panel reports the response relative to the omitted category.

Figure B.4: Consumption Responses: Interaction Effects




*Notes:* This figure reports the consumption responses by household characteristic, estimated jointly using Equation (2). The omitted categories are single households in Panel (a), households aged 18–34 in Panel (b), outright homeowners in Panel (c), and the highest income quartile in Panel (d). Solid lines denote point estimates; dark and light shaded areas denote 68 and 90 percent confidence bands, respectively.

Panel (a) shows that married households respond more strongly than single households at medium and longer horizons. Panel (b) shows larger responses among middle-aged and older households relative to households aged 18–34 at short and medium horizons, with these differences diminishing at longer horizons. Panel (c) shows larger responses among mortgagors and renters relative to outright homeowners. Finally, Panel (d) shows that the difference in the responses relative to the highest income quartile are statistically insignificant.

## B.4. Labor Market Responses

Figure B.5 reports aggregate labor income and unemployment responses, alongside the responses of single and married households.

Figure B.5: Labor Market Responses


*Notes:* This figure reports labor income and unemployment rate responses in aggregate and separately for single and married households following a 25-basis-point expansionary monetary policy shock. Solid lines denote point estimates; dark and light shaded areas denote 68 and 90 percent confidence bands, respectively.

Aggregate earnings rise gradually, reaching approximately 0.35% around 42 months after the shock. The aggregate unemployment rate declines by approximately 0.17 percentage points at medium horizons. Earnings rise and unemployment falls for both household types, with larger responses among singles.

## B.5. Durable and Nondurable Consumption Responses

Figure B.6 reports consumption responses for single and married households and the married-to-single consumption ratio, separately for durables and for nondurables and services. The categories are defined using the expenditure classification in Appendix A.1.1.

Figure B.6: Durable and Nondurable Consumption Responses by Marital Status


*Notes:* This figure reports durable and nondurable and service consumption responses separately for single and married households, along with the corresponding married-to-single consumption ratios, following a 25-basis-point expansionary monetary policy shock. Solid lines denote point estimates; dark and light shaded areas denote 68 and 90 percent confidence bands, respectively.

Married households exhibit larger consumption responses than single households at medium horizons for both durables and nondurables and services. The durable response ratio is positive, peaking at approximately 0.8 percent, but is imprecisely estimated. For nondurables and services, the ratio rises by approximately 0.5 percent at its peak. Thus, the larger consumption response of married households extends across both expenditure categories and is not restricted to durables.

# C. Sensitivity Analyses

This section examines whether the differential consumption response of married and single households depends on specification choices, sample, identification of monetary policy shocks, or measurement of consumption. We vary these choices in both the time-series and panel specifications. Across these exercises, the consumption response remains larger for married households. We also examine responses to other aggregate shocks to assess whether household composition matters beyond monetary policy transmission. Finally, we examine several potential confounders associated with marital status and find that the differential response remains after accounting for them.

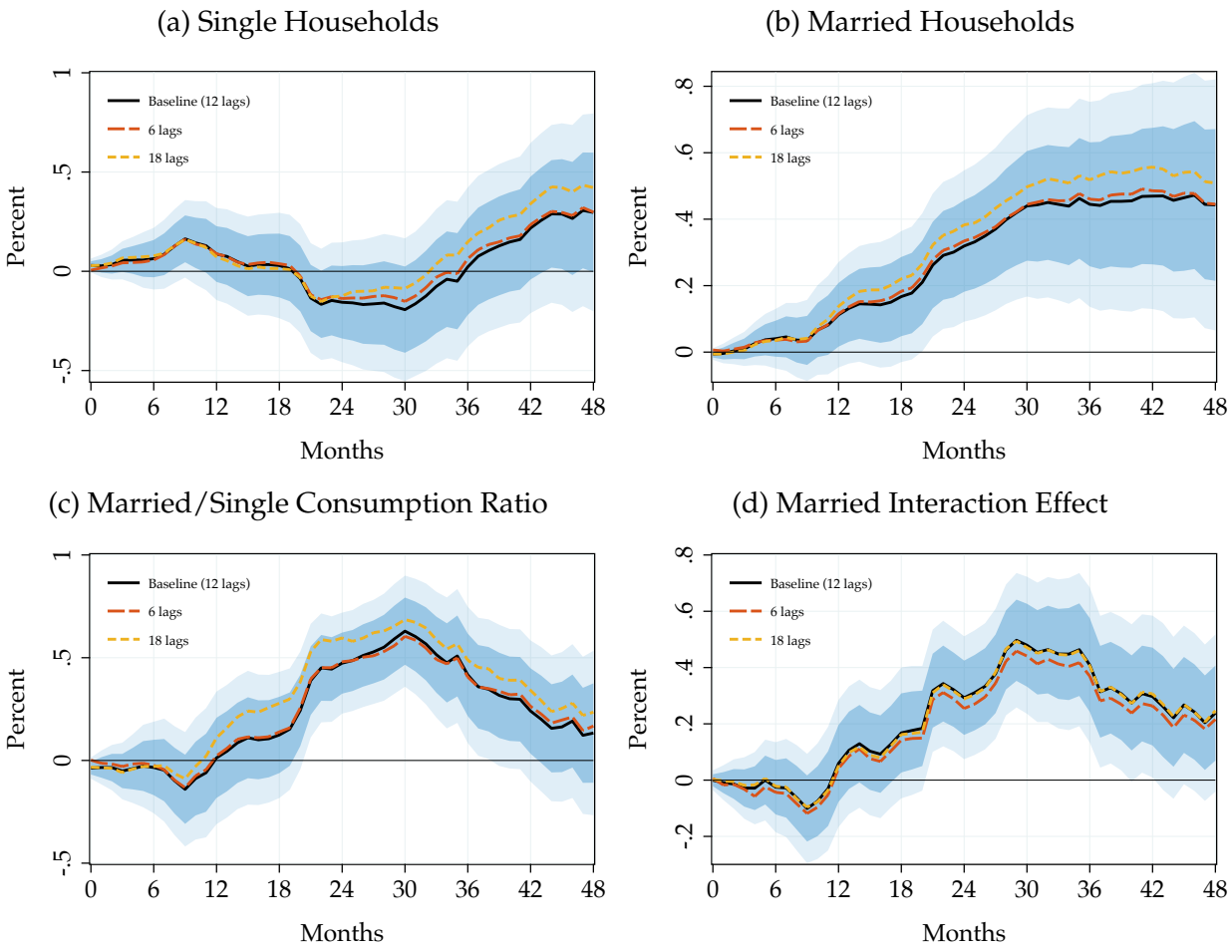
## C.1. Specification and Estimator Choices

We examine how sensitive the larger consumption response of married households is to specification choices. Figures C.1–C.5 vary the lag structure, controls, deterministic terms, and smoothing method in both the time-series and panel specifications.

**Dynamic specification.** Figures C.1 and C.2 examine the dynamic specification. Using six or eighteen outcome lags in place of the baseline twelve produces similar responses. The specification with eighteen lags generates a somewhat larger married response and married–single gap at some medium and longer horizons.

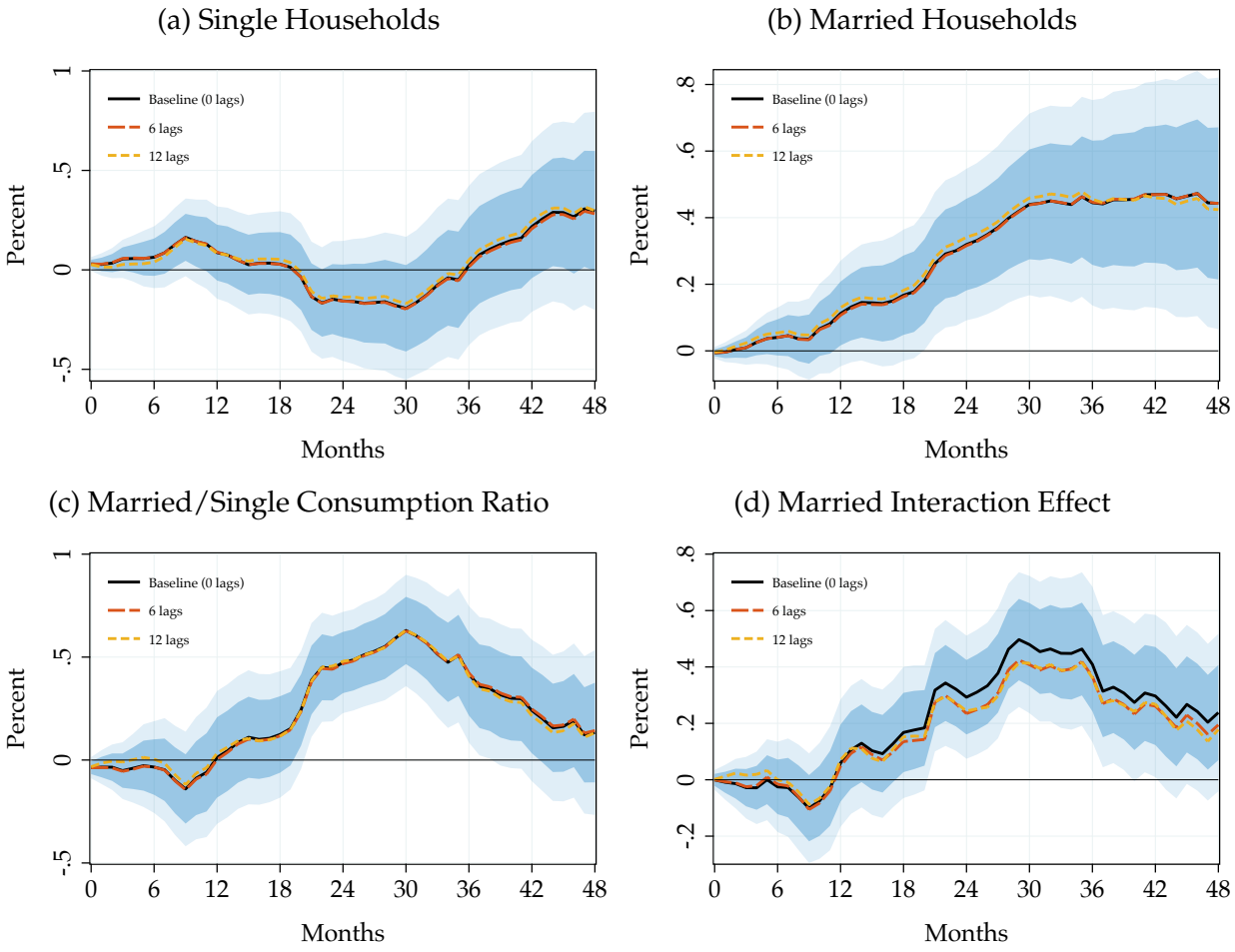
Including six or twelve lags of the monetary policy shock produces estimates that are nearly indistinguishable from the baseline, which includes only the contemporaneous shock.

Figure C.1: Specification Robustness: Outcome Lags




*Notes:* This figure reports the baseline consumption responses, estimated with twelve monthly outcome lags, alongside responses estimated with six or eighteen lags. Panels (a)–(c) use the time-series specification and Panel (d) uses the panel specification. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

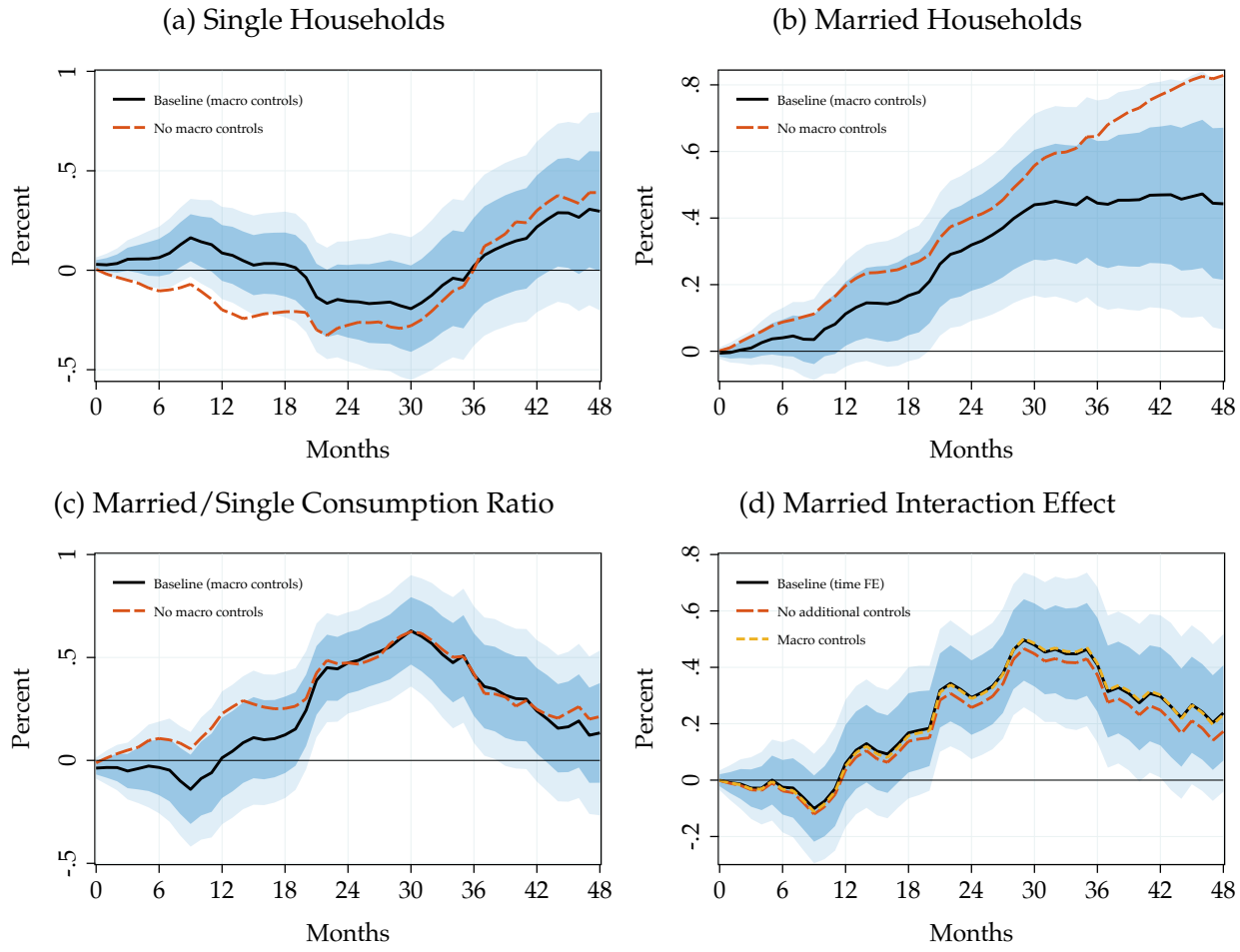
Figure C.2: Specification Robustness: Monetary Policy Shock Lags




*Notes:* This figure reports the baseline consumption responses, estimated using the contemporaneous monetary policy shock, alongside responses that also include six or twelve monthly shock lags. Panels (a)–(c) use the time-series specification and Panel (d) uses the panel specification. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

**Controls.** Figure C.3 varies the controls. In the time-series specification, removing the lagged macroeconomic controls makes the response of single households more negative at medium horizons and the later response of married households larger. The married–single gap nevertheless remains positive over similar horizons. In the panel specification, replacing the full set of time fixed effects with the contemporaneous shock, with or without lagged macroeconomic controls, produces little change in the married interaction effect.

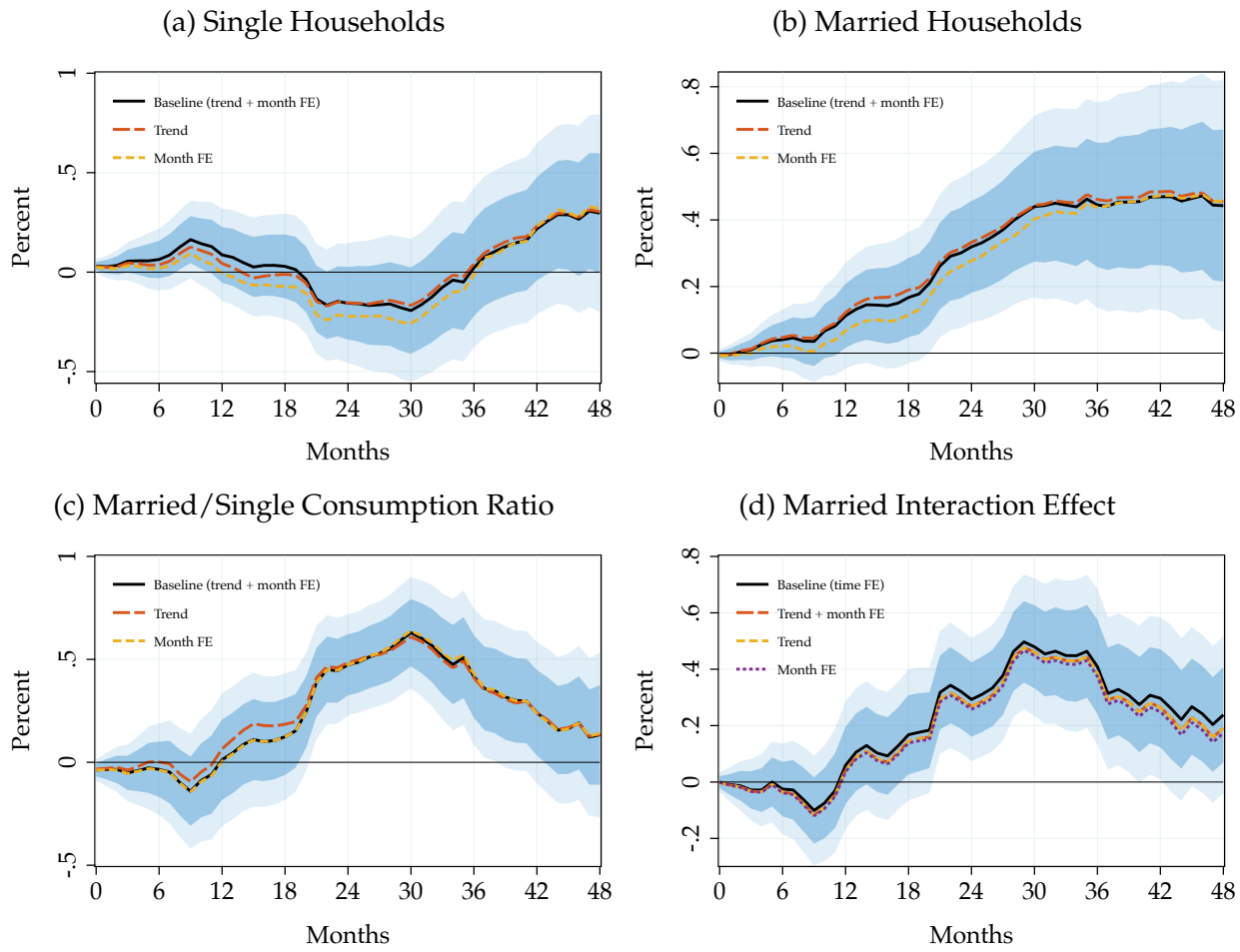
Figure C.3: Specification Robustness: Controls




*Notes:* This figure reports the baseline consumption responses alongside estimates using alternative controls. Panels (a)–(c) use the time-series specification and Panel (d) uses the panel specification. The time-series alternative omits the lagged macroeconomic controls. The panel alternatives replace time fixed effects with the contemporaneous shock, with and without lagged macroeconomic controls. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

**Deterministic terms.** Finally, Figure C.4 varies the deterministic terms. Retaining only the linear trend or month fixed effects in the time-series specification has little effect on the results. The panel estimates are similarly stable when the full set of time fixed effects is replaced with alternative combinations of a linear trend and month fixed effects.

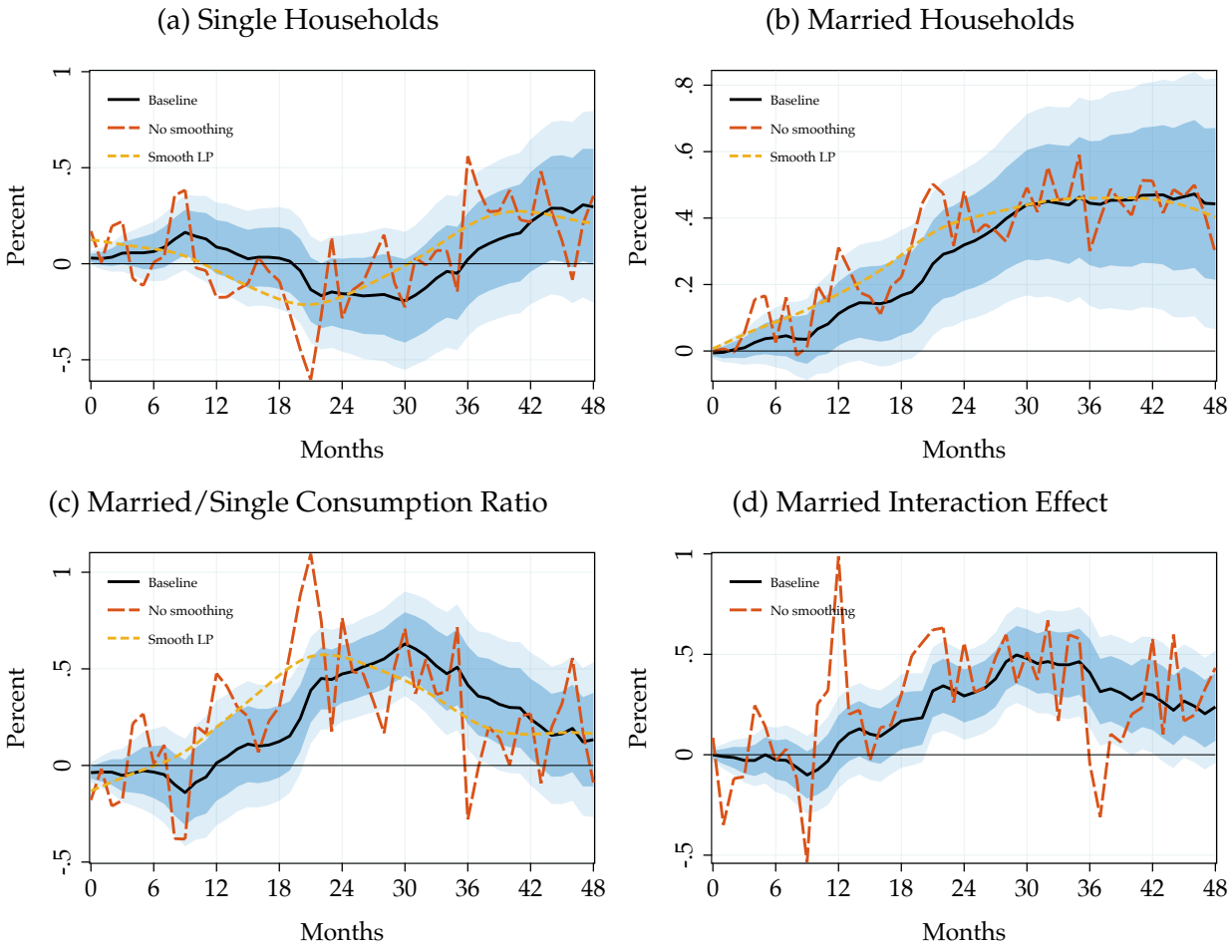
Figure C.4: Specification Robustness: Deterministic Terms




*Notes:* This figure reports the baseline consumption responses alongside estimates using alternative deterministic terms. Panels (a)–(c) use the time-series specification and Panel (d) uses the panel specification. The time-series alternatives retain either the trend or month fixed effects. The panel alternatives replace time fixed effects with a trend and month fixed effects, a trend only, or month fixed effects only. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

**Smoothing.** Our baseline uses a backward-looking moving average, constructed from the current quarter and the preceding three quarters, following Cloyne, Ferreira, and Surico (2020). Figure C.5 compares these estimates with the raw monthly series and, for the time-series specifications, smooth local projections (Barnichon and Brownlees, 2019). The unsmoothed estimates are substantially more volatile, but nevertheless, continue to imply a positive married–single consumption differential at medium horizons.

Figure C.5: Specification Robustness: Smoothing

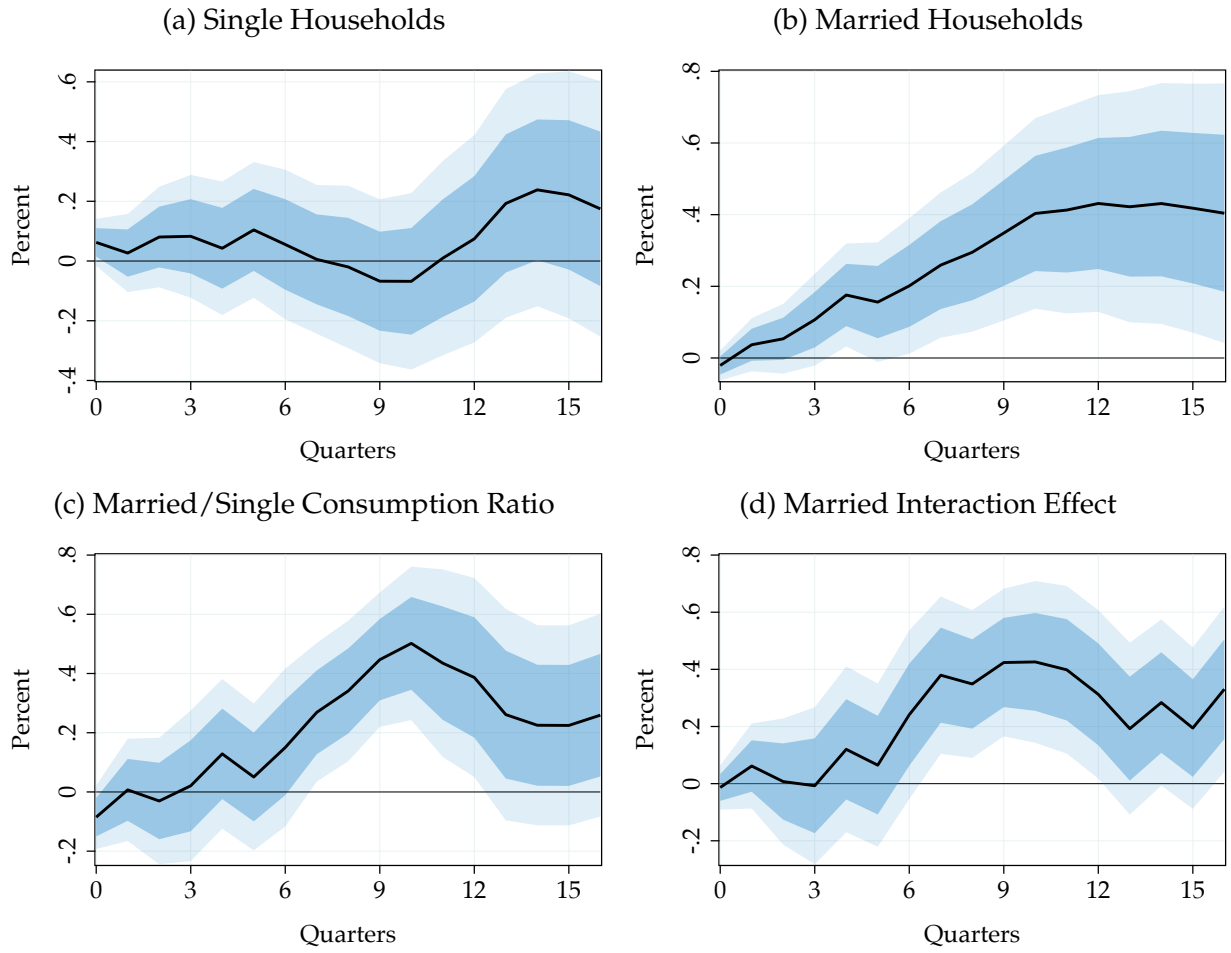



*Notes:* This figure reports the baseline consumption responses alongside estimates using the raw monthly series. Panels (a)–(c) use the time-series specification and also report smooth local projection estimates; Panel (d) uses the panel specification. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

## C.2. Data Frequency and Sample Period

**Data frequency.** Figure C.6 re-estimates the baseline specification using quarterly rather than monthly data. The quarterly estimates preserve the central pattern: consumption rises more among married households. Both the married–single consumption ratio and the married interaction effect become positive at medium horizons.

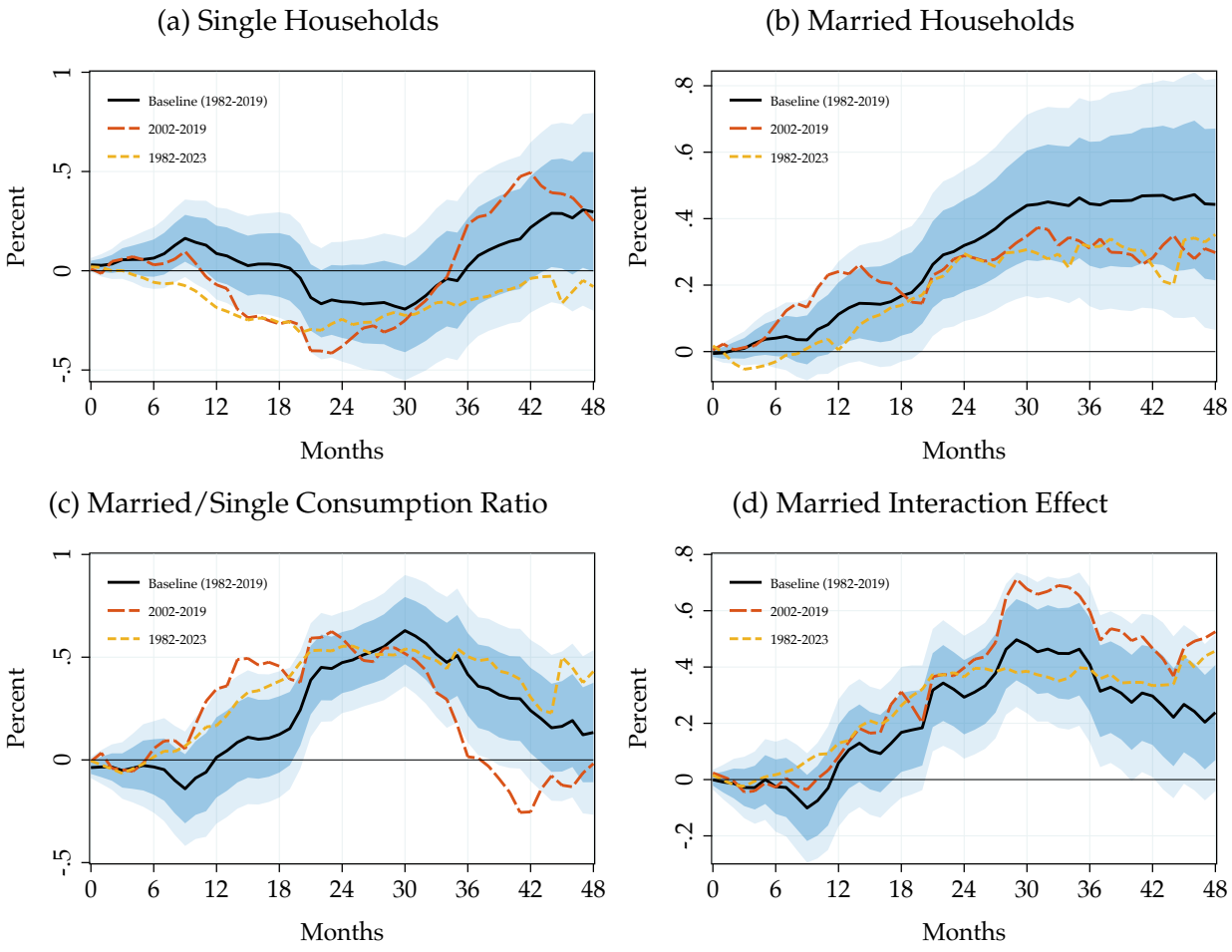
Figure C.6: Frequency Robustness: Quarterly Estimates




*Notes:* This figure re-estimates the baseline consumption responses at quarterly frequency. Panels (a)–(c) use the time-series specification and Panel (d) uses the panel specification. Solid lines denote point estimates; dark and light shaded areas denote 68 and 90 percent confidence bands, respectively.

**Sample period.** Figure C.7 compares the 1982–2019 baseline with estimates beginning in 2002 and with estimates extending the sample through 2023. The married–single response remains positive at medium horizons across both alternatives.

Figure C.7: Sample Robustness: Alternative Sample Periods

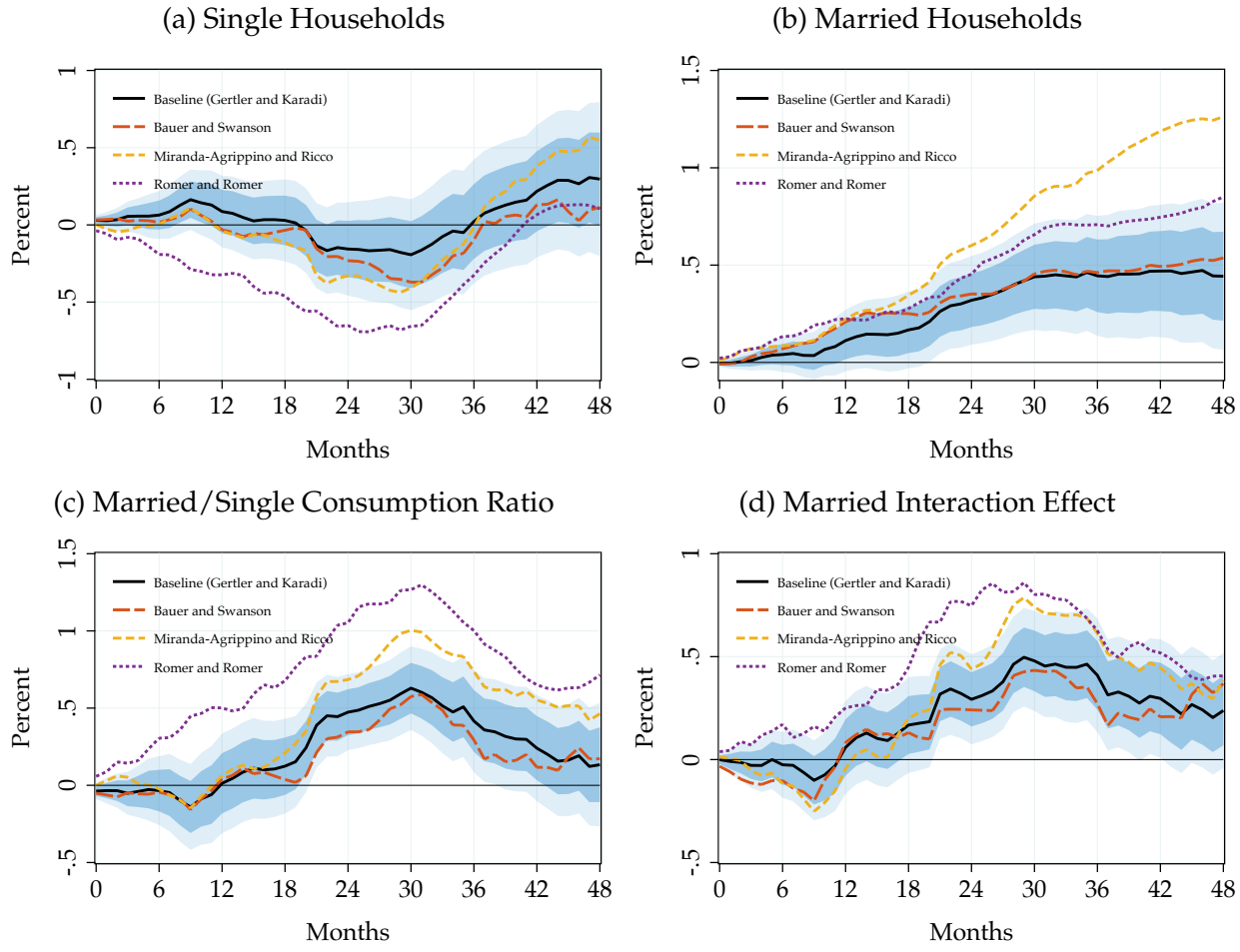



*Notes:* This figure reports the baseline consumption responses over 1982–2019 alongside estimates for 2002–2019 and 1982–2023. Panels (a)–(c) use the time-series specification and Panel (d) uses the panel specification. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

## C.3. Identification

**Alternative monetary policy shock series.** Figure C.8 compares the baseline estimates based on the Gertler and Karadi (2015) shock series with estimates using the shock series of Bauer and Swanson (2022), Miranda-Agrippino and Ricco (2021), and Romer and Romer (2004). The Miranda-Agrippino and Ricco (2021) series implies a larger rise in married consumption, while the Romer and Romer (2004) series produces a more pronounced decline in single consumption and a larger relative response. However, the medium-horizon response of married households relative to single households remains positive across the alternative series.

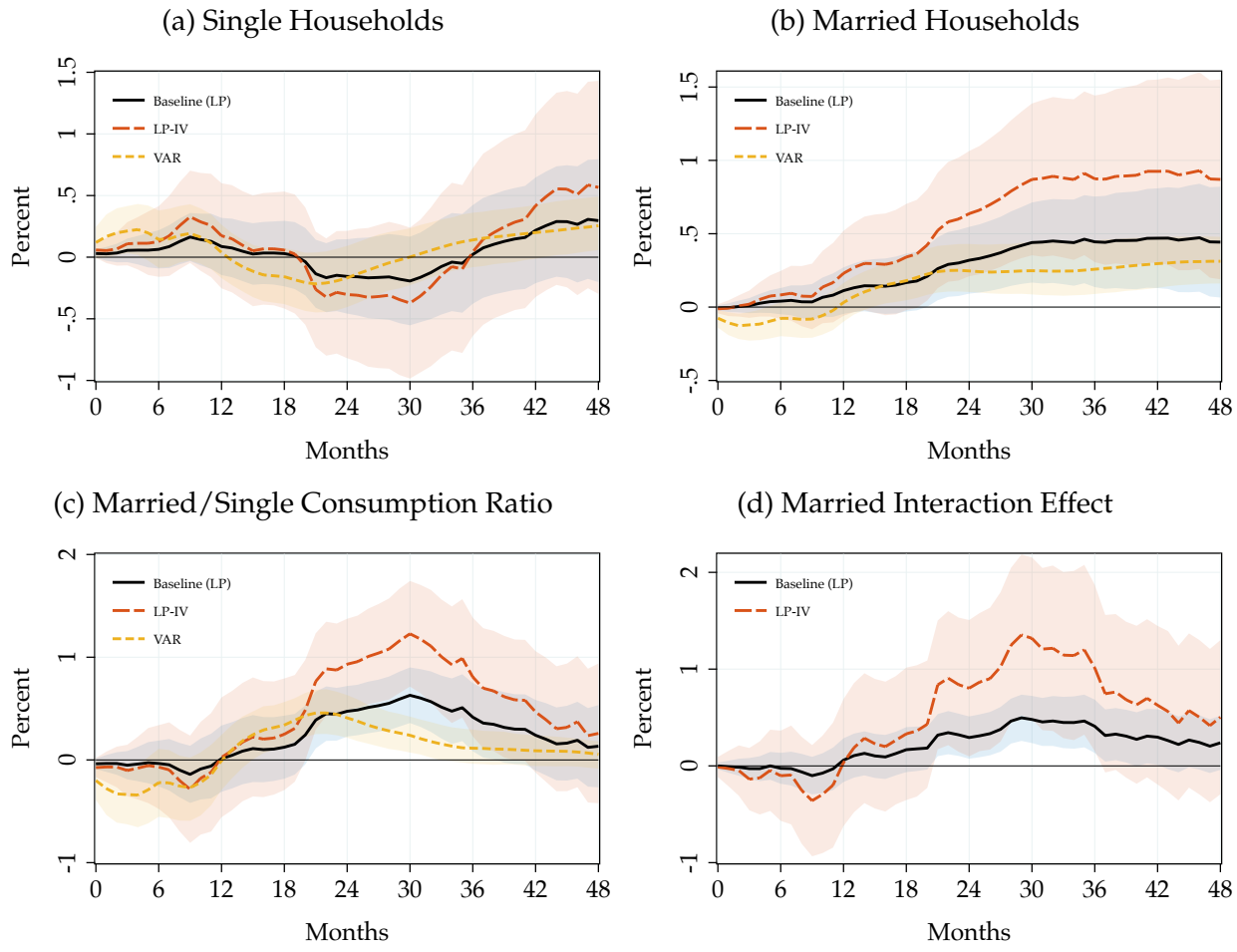
Figure C.8: Identification Robustness: Alternative Monetary Policy Shocks




*Notes:* This figure reports the baseline consumption responses using the Gertler and Karadi (2015) shock series alongside estimates using the Bauer and Swanson (2022), Miranda-Agrippino and Ricco (2021), and Romer and Romer (2004) shock series. Panels (a)–(c) use the time-series specification and Panel (d) uses the panel specification. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

**Estimator choice.** Figure C.9 examines whether the results depend on treating the estimated monetary policy shock as an observed regressor. We compare the baseline local projections with LP-IV estimates that use the Gertler and Karadi (2015) shock series as an instrument for the one-year Treasury yield and, additionally for the time-series specifications, estimates from an external-instrument VAR. The LP-IV estimates are substantially less precise, while the external-instrument VAR estimates imply a less persistent married–single consumption differential. However, all three approaches imply a larger medium-horizon consumption response among married households.

Figure C.9: Identification Robustness: LP-IV and External-Instrument VAR



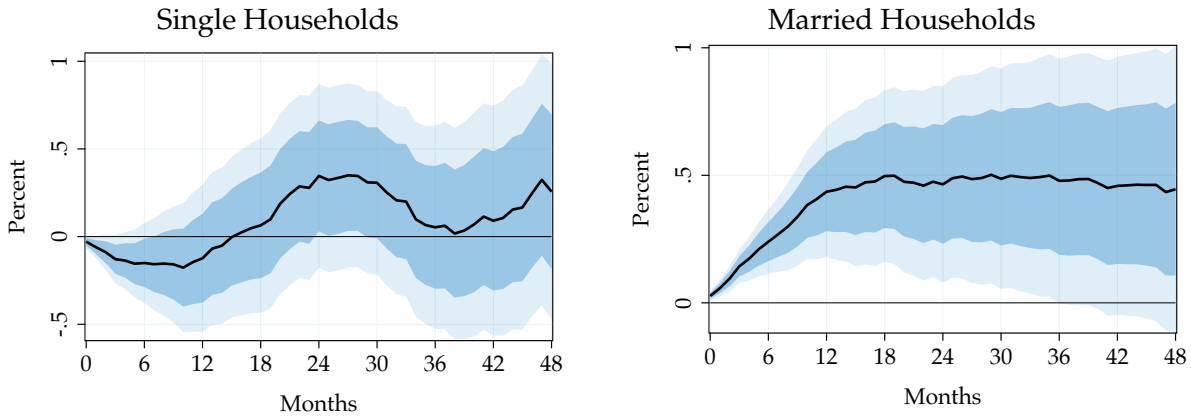

*Notes:* This figure reports the baseline consumption responses estimated using local projections alongisde LP-IV estimates that instrument the one-year Treasury yield with the Gertler and Karadi (2015) shock series. Panels (a)–(c) use the time-series specification and also report external-instrument VAR estimates; Panel (d) uses the panel specification. Shaded areas are 90 percent confidence bands for each estimator.

## C.4. Responses to Other Aggregate Shocks

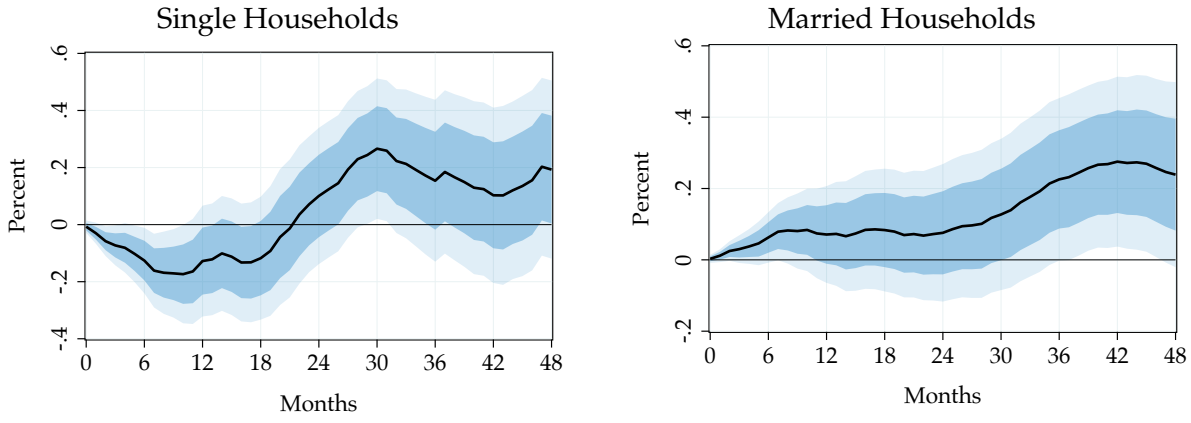
To assess whether household composition matters only for monetary policy transmission or demand shocks, we estimate group-specific consumption responses to oil shocks. These exercises provide evidence on whether the differential consumption responses generalize to supply shocks. Figures C.10a and C.10b report responses to expansionary oil supply shocks of Känzig (2021) and Baumeister and Hamilton (2019), respectively. Following both shocks, married households' consumption rises earlier and remains elevated for longer, while the response of single households is smaller and less precisely estimated.

Figure C.10: Consumption Responses to Oil Supply Shocks

(a) Oil Supply News Shock: Känzig (2021)




(b) Oil Supply Shock: Baumeister and Hamilton (2019)




*Notes:* Panel (a) reports local-projection responses to the oil supply news shock of Känzig (2021), normalized to lower real oil price by 10 percent. Panel (b) reports local-projection responses to a one-s.d. oil supply shock of Baumeister and Hamilton (2019). Solid lines denote point estimates; dark and light shaded areas denote 68 and 90 percent confidence bands, respectively.

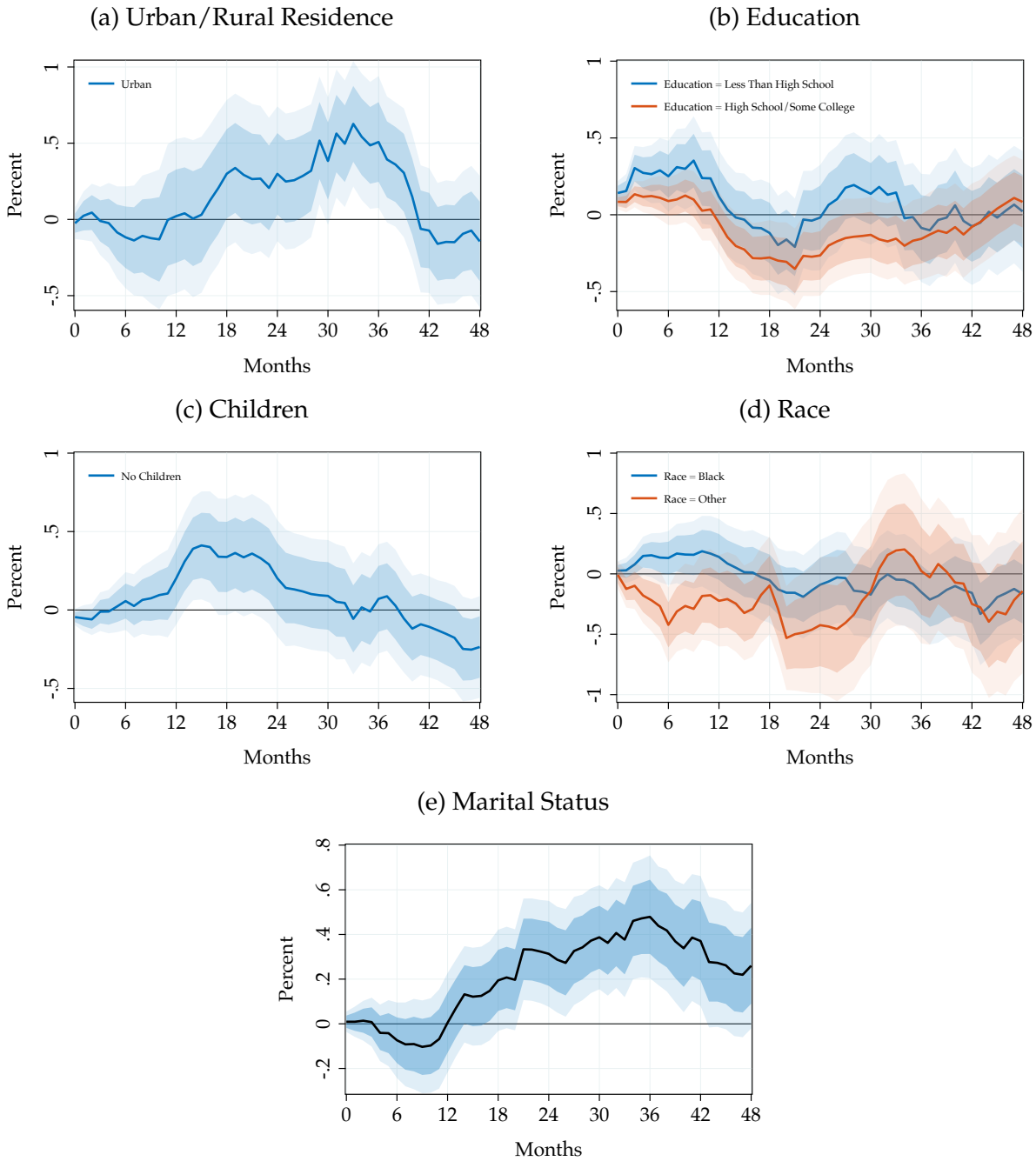
## C.5. Potential Confounders

**Additional demographic and geographic characteristics.** We expand the panel specification to include interactions of the monetary policy shock with urban residence, education, the presence of children, and race. We retain all four baseline characteristics—marital status, age, housing tenure, and income—and estimate the interactions jointly. Figure C.11 reports the additional interaction effects and the married–single differential from this extended specification.

Panel (a) shows a larger response among urban households relative to rural households at medium horizons. Panel (b) shows that households whose reference person has a high school education generally respond less than college graduates at medium horizons. Panel (c) shows a larger response among households without children relative to households with children. Finally, Panel (d) shows that the race differentials relative to White-reference-person households vary across horizons.

Panel (e) reports the married–single differential after including these additional interactions. The response remains similar to the baseline estimate in Figure 2d, with a persistent positive response at medium horizons and a peak of approximately 0.5 percentage points. These results provide evidence that demographic and geographic characteristics do not drive the larger consumption response of married households.

Figure C.11: Consumption Responses: Additional Interaction Effects



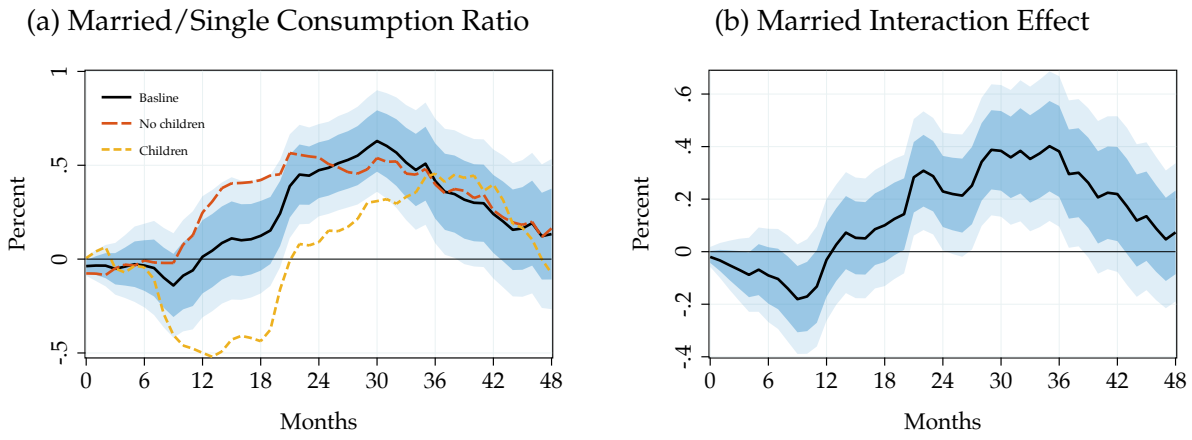

*Notes:* This figure reports the consumption responses by household characteristic, estimated jointly using the extended panel specification, which interacts the monetary policy shock with marital status, age, housing tenure, income, urban/rural residence, education, children, and race. The omitted categories are rural households in Panel (a), college graduates in Panel (b), households with children in Panel (c), White reference persons in Panel (d), and single households in Panel (e). Solid lines denote point estimates; dark and light shaded areas denote 68 and 90 percent confidence bands, respectively.

**Children.** Married households are more likely to have children, whose presence may independently affect consumption responses. Figure C.12 examines this possibility using two exercises.

Panel (a) estimates the married–single consumption ratio separately among households with and without children. The relative response becomes positive earlier among households without children. Among households with children, it is initially negative but turns positive at medium horizons.

Panel (b) instead adds a children interaction to the baseline panel specification. The married–single differential remains positive at medium horizons. These results provide evidence that the presence of children does not drive the larger consumption response of married households.

Figure C.12: Potential Confounder: Children




*Notes:* This figure reports the baseline married–single consumption responses alongside estimates allowing the differential to vary with the presence of children. Panel (a) uses the time-series specification and Panel (b) uses the panel specification. The time-series alternative estimates the married/single consumption ratio separately for households with and without children. The panel alternative interacts the monetary policy shock with marital status, age, housing tenure, income, and the presence of children. The dark and light shaded areas are 68 and 90 percent confidence bands, respectively, for the baseline estimate in Panel (a) and the expanded specification in Panel (b).

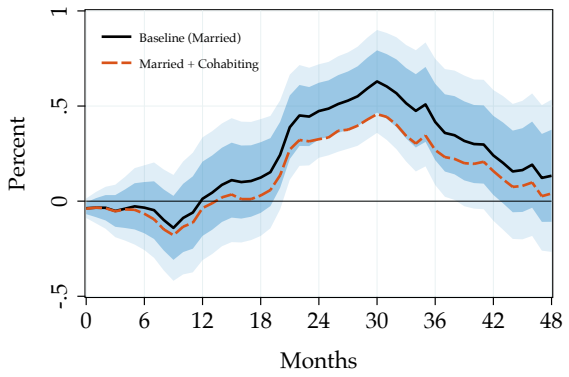
**Cohabitation.** Our baseline classification distinguishes households by legal marital status. Cohabiting couples may, however, share expenditures and pool resources in ways similar to married couples. Figure C.13 broadens the partnered group to include both married and unmarried cohabiting couples.

Panel (a) shows that the relative time-series response is somewhat smaller under this definition but still lies within the 68 percent confidence bands of our baseline specification.

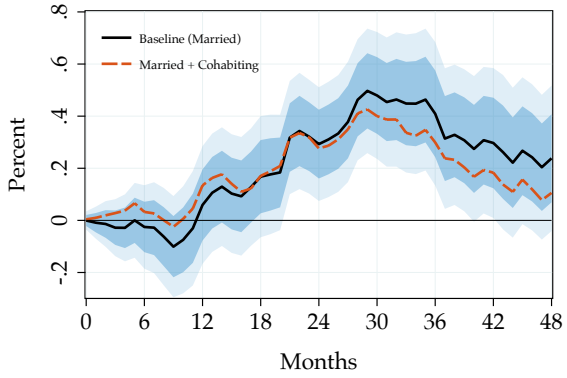
Panel (b) likewise shows a positive differential at medium and longer horizons, with some attenuation relative to baseline. The result therefore does not depend on excluding unmarried cohabiting couples from the partnered group.

Figure C.13: Potential Confounder: Cohabitation

(a) Partnered/Single Consumption Ratio




(b) Partnered Interaction Effect




*Notes:* This figure reports the baseline married–single consumption responses alongside estimates using a broader definition that groups married and unmarried cohabiting couples together. Panel (a) uses the time-series specification and Panel (b) uses the panel specification. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

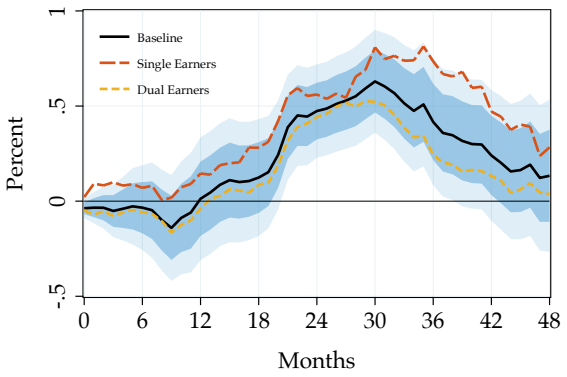
**Earner composition.** The married–single differential may also reflect differences in the number of earners. Figure C.14 distinguishes single- and dual-earner married households, comparing each group with single households.

Panel (a) shows a positive relative response for both groups at medium horizons, with a larger and more persistent differential among single-earner married households. This finding is consistent with the presence of a spousal insurance channel.

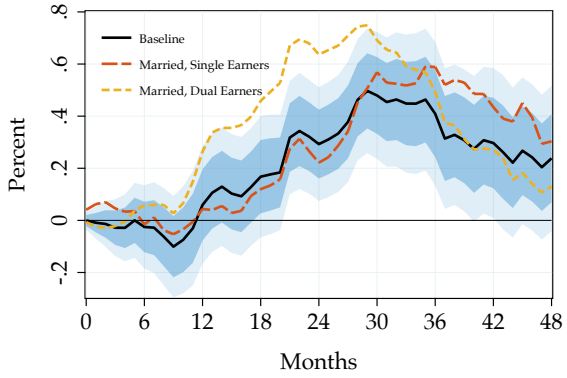
Panel (b) estimates the two married-household interactions jointly while retaining the baseline income, housing tenure, and age interactions. The larger response of married households is present among both single- and dual-earner couples, each of which responds more than single households at medium horizons.

Figure C.14: Potential Confounder: Earner Composition

(a) Married/Single Consumption Ratio




(b) Married Interaction Effects



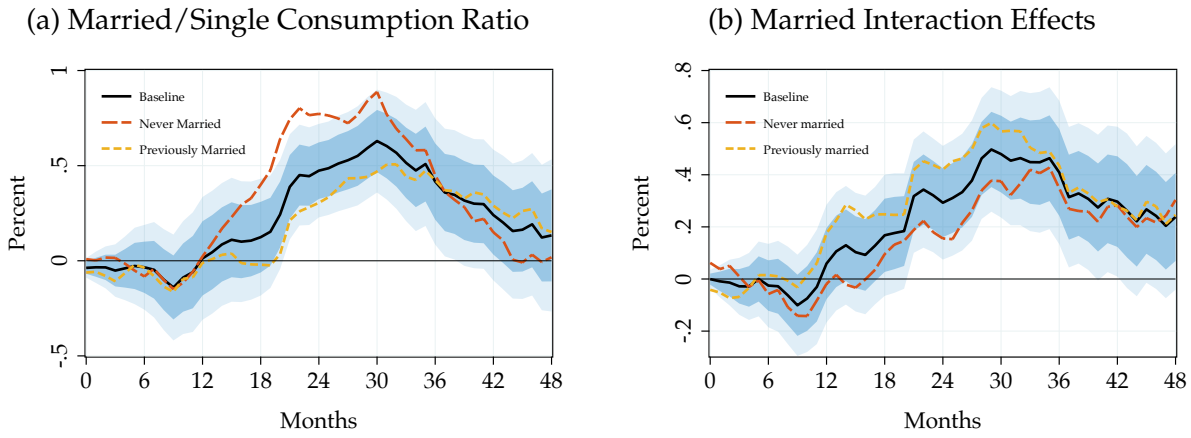

*Notes:* This figure reports the baseline married–single consumption responses alongside estimates distinguishing between single- and dual-earner married households. Panel (a) uses the time-series specification and Panel (b) uses the panel specification. The time-series alternatives report the consumption response of each married group relative to single households' consumption. The panel alternatives estimate the single- and dual-earner married interactions jointly, retaining the baseline income, housing tenure, and age interactions. Single households are the omitted category. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

**Marital history.** The baseline single-household category includes both never-married and previously married households. These groups may differ in their resources and consumption responses. Figure C.15 therefore compares currently married households separately with never-married households and with previously married households, comprising of households with divorced, widowed, and separated reference persons.

Panel (a) shows a positive married-household differential against both comparison groups at medium horizons, with a larger differential relative to never-married households.

Panel (b) also shows positive medium-horizon differentials against both groups, although the differential relative to previously married households is larger in the panel specification. Thus, our baseline result does not depend on either single-household category alone.

Figure C.15: Potential Confounder: Marital History

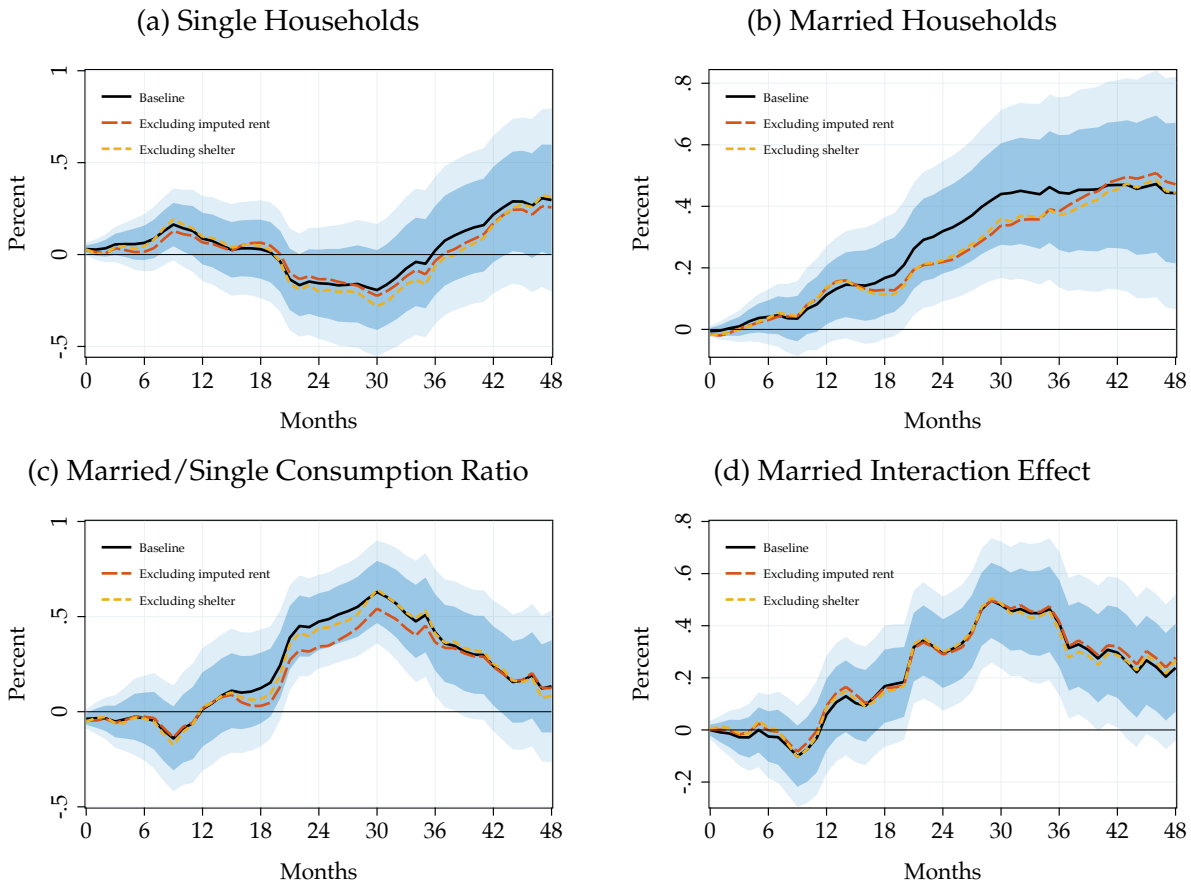



*Notes:* This figure reports the baseline married–single consumption responses alongside estimates distinguishing between never-married and previously married households. Panel (a) uses the time-series specification and Panel (b) uses the panel specification. The time-series alternatives report married-household consumption relative to each single-household group's consumption. The panel alternatives use a joint three-category marital-status specification, retaining the baseline income, housing tenure, and age interactions. Previously married households include divorced, widowed, and separated households, and the panel estimates are expressed as currently married minus the indicated single-household category. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

## C.6. Measurement Choices

**Housing expenditures.** Housing services constitute an important component of measured household consumption and may differ systematically across household types. Figure C.16 first excludes imputed rent and then excludes all shelter expenditures. Excluding housing expenditures attenuates the response of married households. Nevertheless, the medium-horizon response of married households relative to single households remains positive.

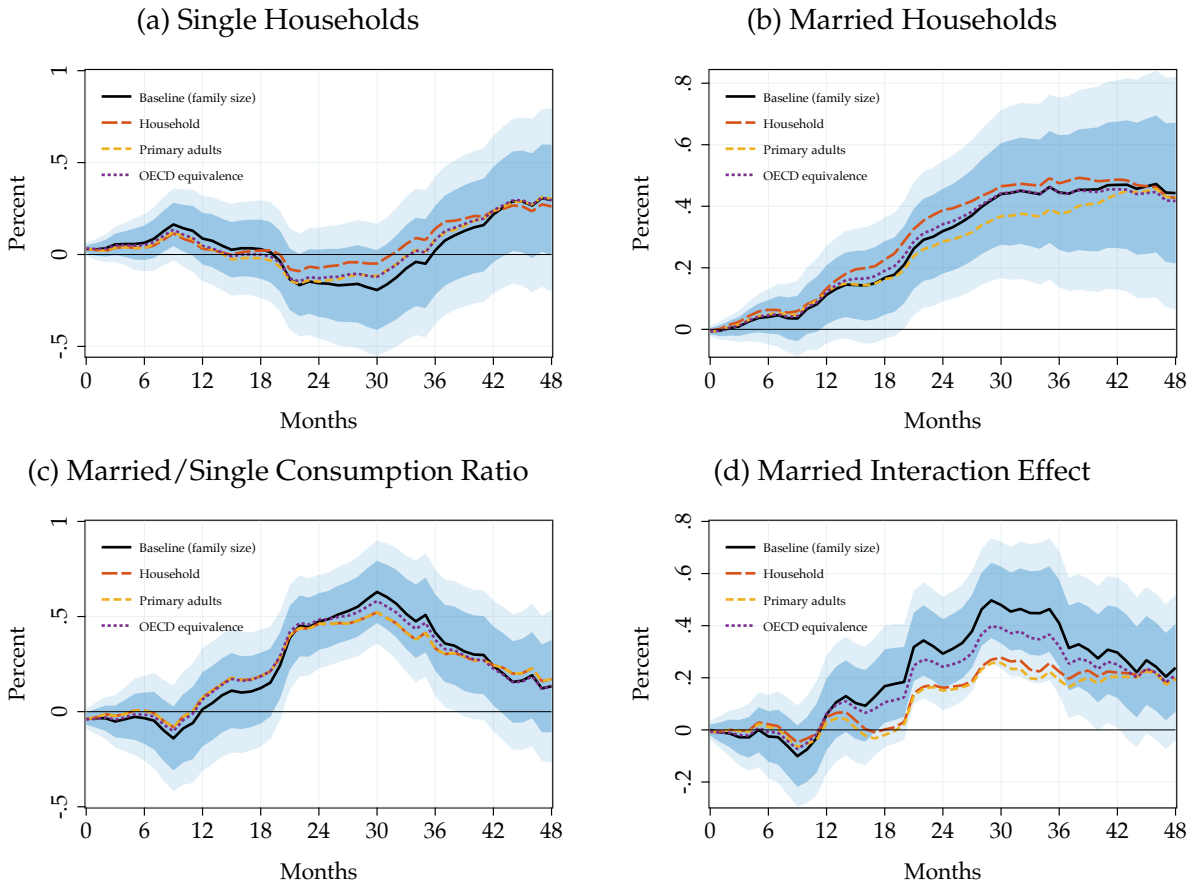
Figure C.16: Measurement Robustness: Housing Expenditures




*Notes:* This figure reports the baseline consumption responses alongside estimates that exclude imputed rent and estimates that exclude all shelter expenditures. Panels (a)–(c) use the time-series specification and Panel (d) uses the panel specification. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

**Consumption denominator.** Our baseline specifications express consumption in per capita terms. Figure C.17 instead uses household consumption, consumption per primary adult, and consumption adjusted using the OECD equivalence scale. The time-series responses are similar across the different measures. The panel interaction is smaller when consumption is measured at the household level or per primary adult, although the OECD-equivalence estimate remains close to the baseline.

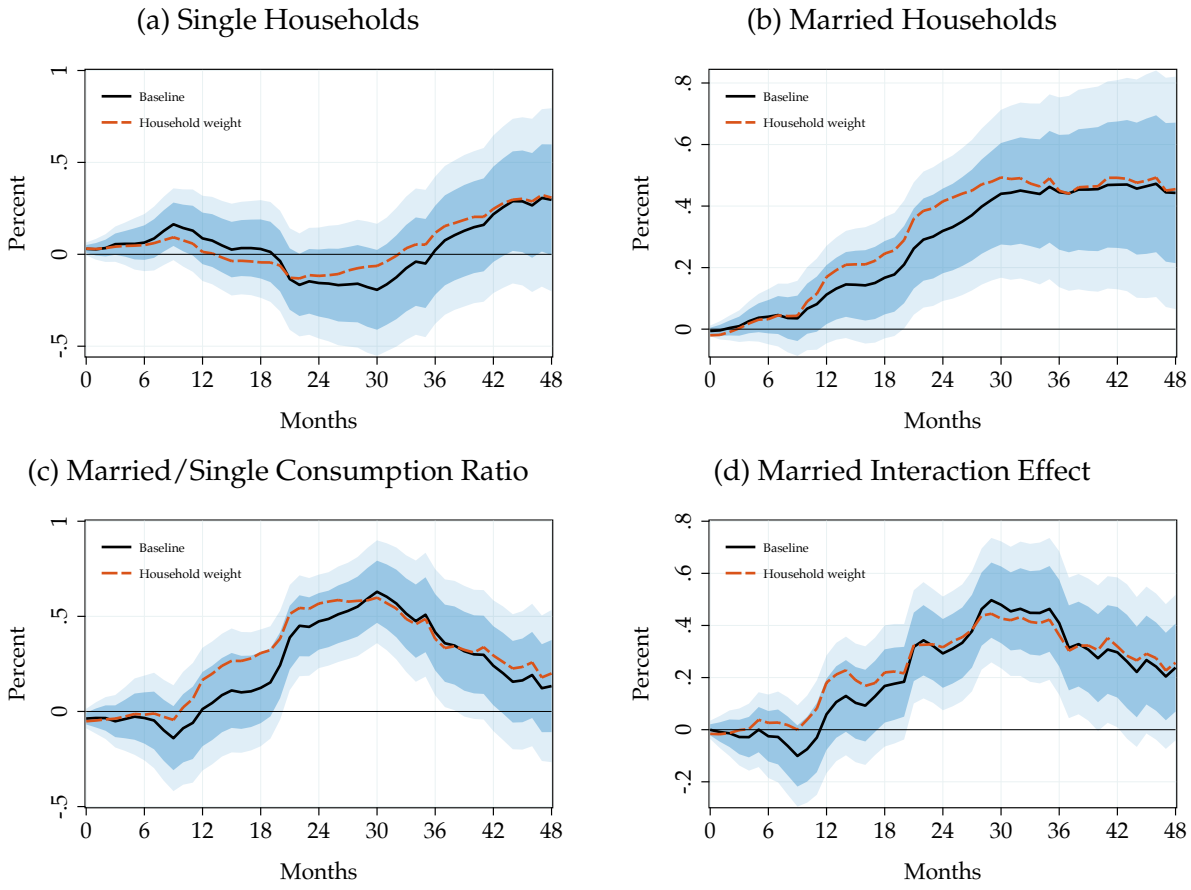
Figure C.17: Measurement Robustness: Consumption Denominator




*Notes:* This figure reports the baseline consumption responses alongside estimates using alternative consumption denominators. Panels (a)–(c) use the time-series specification and Panel (d) uses the panel specification. The alternative measures use household consumption, consumption per primary adult, and consumption adjusted using the OECD equivalence scale—in place of the baseline consumption per family member. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

**Household weights.** The baseline weighting scheme represents individuals by multiplying the consumer-unit weight by family size. Figure C.18 instead uses the consumer-unit weight alone. Household-level weighting produces a larger response for married households and a larger time-series married–single gap at intermediate horizons, while leaving the panel estimates broadly similar. The differential thus persists when we compare per-capita consumption responses for the average married and single household, rather than for the average person in each group.

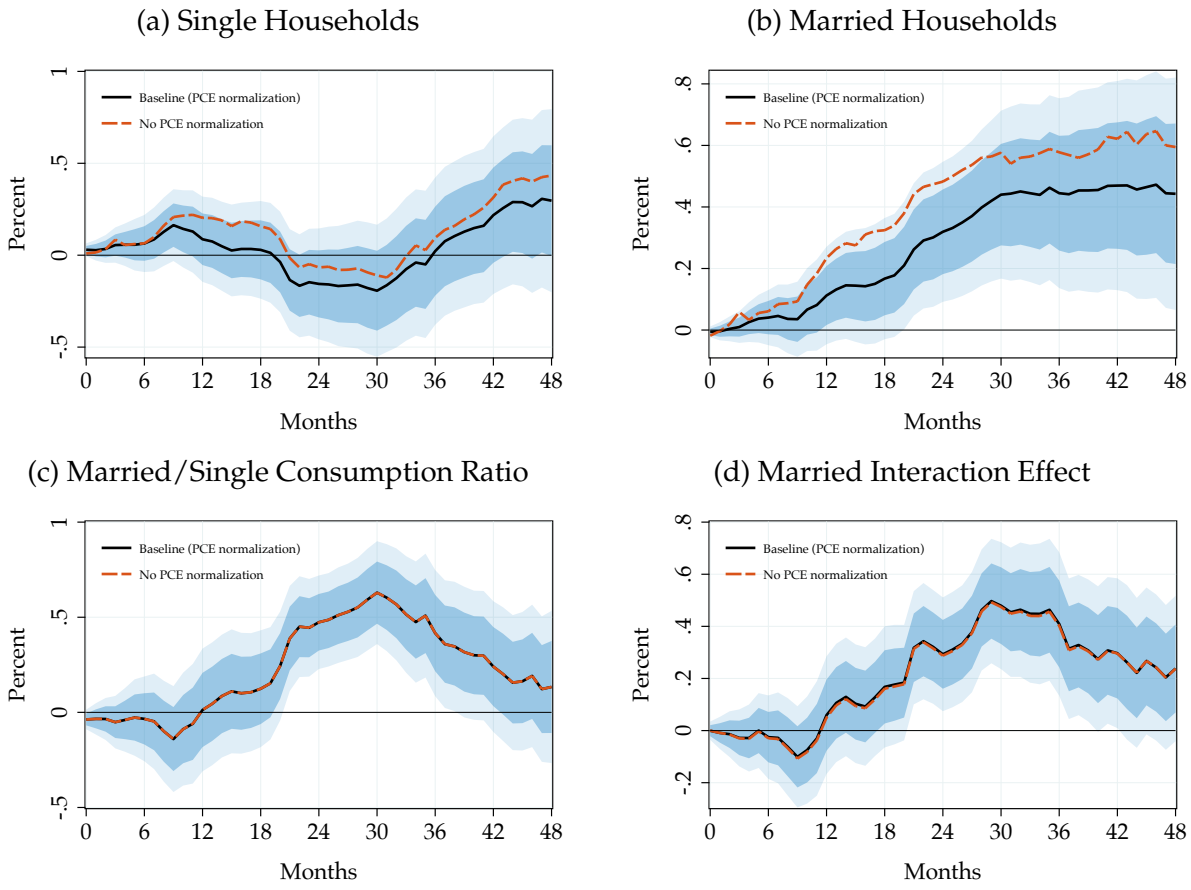
Figure C.18: Measurement Robustness: Household Weights




*Notes:* This figure reports the baseline consumption responses using individual-level weights alongside estimates using the consumer-unit weight. Panels (a)–(c) use the time-series specification and Panel (d) uses the panel specification. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

**PCE normalization.** Our baseline consumption measure rescales the CEX consumption using the aggregate real PCE per capita. Figure C.19 reports estimates without this normalization. Removing the normalization changes the magnitude of the single and married households' time-series responses, particularly for married households. By construction, however, it does not affect the married–single consumption ratio or the panel interaction estimate.

Figure C.19: Measurement Robustness: PCE Normalization




*Notes:* This figure reports the baseline consumption responses alongside estimates that omit the aggregate real PCE per capita normalization. Panels (a)–(c) use the time-series specification and Panel (d) uses the panel specification. The dark and light shaded areas are 68 and 90 percent confidence bands for the baseline estimates, respectively.

# D. Additional Micro Results

## D.1. Liquid Wealth and Necessity Consumption

We document that married households hold higher liquid wealth and consume fewer necessities per capita in Sections 2 and 4, respectively. Here, we examine whether these differences persist after controlling for observable demographic and economic characteristics across the two household types. To do so, we estimate equations of the form:

$$y_{it} = \alpha + \delta_t + \beta \cdot \text{Mar}_i + \gamma' \mathbf{z}_{it} + \nu_{it}, \tag{D.1}$$

where $y_{it}$ is per capita liquid wealth or per capita necessity consumption, $\text{Mar}_i$ is an indicator variable equal to 1 when the household head is married, $\mathbf{z}_{it}$ is a vector of demographic and economic controls, and $\delta_t$ represents time fixed effects. For liquid wealth, we estimate the regression using the SCF data, while for necessities consumption we do so using the CEX data. Both sets of regressions incorporate an expanding vector of controls, including per capita household income, age of the household head, indicators for 1 and 2+ earners, and dummy variables for housing tenure and education groups.

**Liquid wealth.** Table D.1 reports the estimated coefficient of marriage on liquid wealth, expressed in thousands of 2019 dollars. Across all specifications, the coefficient remains positive and statistically significant, confirming that married households hold substantially more liquid wealth, even when controlling for observables.

Table D.1: Liquid Wealth Per Capita

| Liquid Wealth Per Capita: | (a) Raw | (b) Year FE | (c) Income | (d) + Age and Earners | (e) + Additional Controls |
|---|---|---|---|---|---|
| Married | 11.83 | 12.68 | 5.17 | 9.41 | 8.48 |
| | (0.52) | (0.52) | (1.43) | (0.70) | (0.71) |
| Observations | 51,381 | 51,381 | 51,381 | 51,381 | 50,500 |
| Year FE | No | Yes | Yes | Yes | Yes |
| Income | No | No | Yes | Yes | Yes |
| Age and earners | No | No | No | Yes | Yes |
| Housing and education | No | No | No | No | Yes |

*Notes:* This table reports OLS regression coefficients of marriage on per capita liquid wealth using the SCF data. Each column adds an expanding set of controls including income, age, earner counts, housing tenure, and education. Standard errors, computed using the SCF bootstrap replicate weights and accounting for multiple imputation, are reported in parentheses.

**Necessity consumption.** Table D.2 reports the estimated coefficient of marriage on per capita necessities consumption, expressed in 2019 dollars. The negative coefficient across all columns indicates that married households consume fewer necessities per capita than single households, demonstrating that the gap is not driven by differences in baseline demographic or economic characteristics.

Table D.2: Necessities Per Capita

| Necessities Per Capita: | (a) Raw | (b) Month FE | (c) Income | (d) + Age and Earners | (e) + Additional Controls |
|---|---|---|---|---|---|
| Married | -185.97 | -181.06 | -244.24 | -226.41 | -167.11 |
| | (2.79) | (2.80) | (2.98) | (2.98) | (2.84) |
| Observations | 2,013,642 | 2,013,642 | 2,013,642 | 2,013,642 | 2,013,642 |
| Month FE | No | Yes | Yes | Yes | Yes |
| Income | No | No | Yes | Yes | Yes |
| Age and earners | No | No | No | Yes | Yes |
| Housing and education | No | No | No | No | Yes |

*Notes:* This table reports OLS regression coefficients of marriage on per capita necessities consumption using the CEX data. Each column adds an expanding set of controls including income, age, earner counts, housing tenure, and education. Standard errors clustered at the household level are reported in parentheses.

## D.2. Elasticity Estimates

**Aggregate and group-level elasticities.** In Section 4, we document that married households allocate a larger share of their budgets to luxuries and exhibit higher expenditure elasticities for several luxury goods than single households. Table D.3 reports the underlying good-level budget shares and the elasticities estimated using Equation (3) for the aggregate population, single households, and married households. Goods are sorted in ascending order by their aggregate elasticity, with the dashed line separating necessities from luxuries. Single households exhibit higher elasticities for 8 of the 9 necessities, while married households exhibit higher elasticities for 9 of the 16 luxuries. Budget shares display a similar pattern: single households allocate a larger share of expenditures to 5 of the 9 necessities, while married households allocate a larger share to 9 of the 16 luxuries.

These comparisons are based on separately estimated elasticities and do not establish that the differences across household types are statistically significant. Next, we test the significance of these differences directly using a pooled specification.

**Marriage interaction.** To formally test whether expenditure elasticities differ between married and single households, we estimate a pooled version of Equation (3) that interacts

Table D.3: Budget Shares and Elasticity Estimates by Household Type

| Category | Aggregate | | Single | | Married | |
|---|---|---|---|---|---|---|
| | Share | Elasticity | Share | Elasticity | Share | Elasticity |
| Tobacco | 0.87 | -0.12 | 1.11 | 0.25 | 0.76 | -0.31 |
| | | (0.05) | | (0.09) | | (0.06) |
| Used car purchases | 3.97 | 0.09 | 3.36 | 0.19 | 4.25 | 0.02 |
| | | (0.10) | | (0.13) | | (0.14) |
| Rent | 6.87 | 0.37 | 12.31 | 1.21 | 4.34 | 0.05 |
| | | (0.04) | | (0.09) | | (0.04) |
| Food at home | 11.43 | 0.38 | 11.81 | 0.39 | 11.25 | 0.38 |
| | | (0.01) | | (0.02) | | (0.02) |
| Utilities | 5.17 | 0.49 | 5.38 | 0.59 | 5.07 | 0.45 |
| | | (0.01) | | (0.03) | | (0.02) |
| Children's clothing | 0.76 | 0.59 | 0.61 | 0.28 | 0.83 | 0.80 |
| | | (0.04) | | (0.06) | | (0.06) |
| Commmunication, telephone contracts | 2.56 | 0.62 | 3.09 | 0.93 | 2.31 | 0.53 |
| | | (0.02) | | (0.04) | | (0.03) |
| Health expenditures including insurance | 5.50 | 0.65 | 4.83 | 0.71 | 5.81 | 0.57 |
| | | (0.03) | | (0.04) | | (0.04) |
| Gas and vehicle maintenance | 8.56 | 0.91 | 8.25 | 1.18 | 8.70 | 0.78 |
| | | (0.02) | | (0.03) | | (0.03) |
| Personal care | 0.95 | 1.00 | 0.95 | 1.07 | 0.95 | 1.06 |
| | | (0.03) | | (0.04) | | (0.04) |
| Education | 1.16 | 1.05 | 1.06 | 0.09 | 1.21 | 1.59 |
| | | (0.11) | | (0.14) | | (0.16) |
| Entertainment equipment (TV, radio, etc.) | 3.47 | 1.13 | 3.48 | 1.26 | 3.47 | 1.11 |
| | | (0.03) | | (0.04) | | (0.04) |
| Owner occupied housing consumption | 22.90 | 1.14 | 20.24 | 1.14 | 24.14 | 1.16 |
| | | (0.02) | | (0.04) | | (0.03) |
| Shoes and other apparel | 1.27 | 1.21 | 1.38 | 1.36 | 1.22 | 1.24 |
| | | (0.04) | | (0.06) | | (0.05) |
| Furniture and fixtures | 1.40 | 1.31 | 1.16 | 1.22 | 1.51 | 1.40 |
| | | (0.08) | | (0.09) | | (0.12) |
| Household appliances | 2.13 | 1.36 | 1.81 | 1.27 | 2.28 | 1.44 |
| | | (0.05) | | (0.06) | | (0.07) |
| Men's and women's clothing | 2.20 | 1.37 | 2.26 | 1.53 | 2.17 | 1.38 |
| | | (0.04) | | (0.06) | | (0.05) |
| Food away from home | 4.17 | 1.41 | 4.35 | 1.74 | 4.09 | 1.31 |
| | | (0.03) | | (0.05) | | (0.04) |
| Alcoholic beverages | 0.92 | 1.52 | 1.22 | 2.21 | 0.78 | 1.27 |
| | | (0.05) | | (0.10) | | (0.06) |
| Domestic services and childcare | 1.59 | 1.63 | 1.31 | 1.19 | 1.72 | 1.97 |
| | | (0.07) | | (0.09) | | (0.10) |
| Entertainment fees, admissions, and reading | 2.99 | 1.66 | 2.97 | 1.84 | 3.00 | 1.69 |
| | | (0.04) | | (0.08) | | (0.06) |
| Cash contributions | 5.04 | 1.68 | 3.91 | 1.49 | 5.57 | 1.83 |
| | | (0.07) | | (0.09) | | (0.10) |
| New car purchases | 2.22 | 1.69 | 1.40 | 1.03 | 2.60 | 2.16 |
| | | (0.18) | | (0.19) | | (0.28) |
| Public transportation | 1.10 | 1.71 | 1.12 | 1.48 | 1.10 | 2.00 |
| | | (0.07) | | (0.10) | | (0.11) |
| Other car spending (leasing, rentals) | 0.81 | 2.13 | 0.64 | 2.06 | 0.89 | 2.29 |
| | | (0.12) | | (0.18) | | (0.17) |

*Notes:* This table reports good-level budget shares and expenditure elasticities for the aggregate population, single households, and married households. Elasticities are estimated using Equation (3). Standard errors clustered at the household level are reported in parentheses.

marital status with total expenditure:

$$\log y_{ijt} - \log \overline{y}_{jt} = \alpha_{jt} + \beta_j \log y_{it} + \phi_j(\text{Mar}_i \times \log y_{it}) + \eta_j \text{Mar}_i + \delta_j' \mathbf{z}_i + \nu_{ijt}, \tag{D.2}$$

where $\beta_j$ measures the expenditure elasticity for single households and $\phi_j$ measures the difference in expenditure elasticities between married and single households. We estimate Equation (D.2) separately for each good. Table D.4 reports goods for which the marriage interaction is positive, while Table D.5 reports goods for which it is negative or statistically insignificant.

The results provide further evidence that higher expenditure elasticities among married households are concentrated among luxury goods. Of the 13 goods with significantly positive marriage interaction effects, 12 are classified as luxuries based on their aggregate expenditure elasticities. In contrast, only 4 of the 12 goods without a significantly positive marriage interaction are classified as luxuries. Children's clothing is the only necessity for which married households exhibit a significantly higher expenditure elasticity. Among luxuries, food away from home, alcoholic beverages, entertainment equipment, and shoes and other apparel are the only categories for which married households do not exhibit significantly higher expenditure elasticities.

Table D.4: Elasticity Estimates with Positive Marriage Interaction Effect

| Category | Aggregate Share | Single Elasticity | Married Interaction |
|---|---|---|---|
| Men's and women's clothing | 2.20 | 1.34 | 0.12 |
| | | (0.04) | (0.05) |
| Entertainment fees, admissions, and reading | 2.99 | 1.59 | 0.20 |
| | | (0.06) | (0.06) |
| Personal care | 0.95 | 0.90 | 0.22 |
| | | (0.03) | (0.04) |
| Owner occupied housing consumption | 22.90 | 0.99 | 0.25 |
| | | (0.03) | (0.03) |
| Household appliances | 2.13 | 1.15 | 0.35 |
| | | (0.05) | (0.07) |
| Furniture and fixtures | 1.40 | 1.09 | 0.37 |
| | | (0.07) | (0.10) |
| Other car spending (leasing, rentals) | 0.81 | 1.92 | 0.40 |
| | | (0.14) | (0.17) |
| Children's clothing | 0.76 | 0.35 | 0.42 |
| | | (0.04) | (0.06) |
| Domestic services and childcare | 1.59 | 1.32 | 0.61 |
| | | (0.07) | (0.09) |
| Cash contributions | 5.04 | 1.29 | 0.62 |
| | | (0.07) | (0.09) |
| Public transportation | 1.10 | 1.39 | 0.64 |
| | | (0.08) | (0.10) |
| Education | 1.16 | 0.57 | 0.89 |
| | | (0.10) | (0.14) |
| New car purchases | 2.22 | 1.11 | 0.97 |
| | | (0.17) | (0.24) |

*Notes:* This table reports the baseline elasticity ($\beta_j$) and the marriage interaction effect ($\phi_j$) estimated using Equation (D.2) for goods where the interaction effect is positive. Standard errors clustered at the household level are reported in parentheses.

Table D.5: Elasticity Estimates with Negative Marriage Interaction Effect

| Category | Aggregate Share | Single Elasticity | Married Interaction |
|---|---|---|---|
| Rent | 6.87 | 1.15 | -1.03 |
| | | (0.06) | (0.07) |
| Tobacco | 0.87 | 0.26 | -0.57 |
| | | (0.06) | (0.07) |
| Alcoholic beverages | 0.92 | 1.89 | -0.46 |
| | | (0.08) | (0.08) |
| Commmunication, telephone contracts | 2.56 | 0.81 | -0.22 |
| | | (0.03) | (0.03) |
| Used car purchases | 3.97 | 0.20 | -0.22 |
| | | (0.11) | (0.14) |
| Gas and vehicle maintenance | 8.56 | 1.03 | -0.18 |
| | | (0.02) | (0.03) |
| Food away from home | 4.17 | 1.49 | -0.07 |
| | | (0.04) | (0.04) |
| Utilities | 5.17 | 0.52 | -0.03 |
| | | (0.02) | (0.02) |
| Food at home | 11.43 | 0.38 | 0.02 |
| | | (0.01) | (0.02) |
| Health expenditures including insurance | 5.50 | 0.59 | 0.02 |
| | | (0.03) | (0.04) |
| Entertainment equipment (TV, radio, etc.) | 3.47 | 1.15 | 0.02 |
| | | (0.03) | (0.04) |
| Shoes and other apparel | 1.27 | 1.26 | 0.03 |
| | | (0.04) | (0.05) |

*Notes:* This table reports the baseline elasticity ($\beta_j$) and the marriage interaction effect ($\phi_j$) estimated using Equation (D.2) for goods where the interaction effect is negative or statistically insignificant. Standard errors clustered at the household level are reported in parentheses.

# E. Model Details

This appendix reports untargeted moments from the baseline calibration of the model and additional results from the counterfactual exercise.

## E.1. Untargeted Moments

**Effective IES.** In Figure 7b, we displayed the effective IES for necessities and luxuries across the asset distribution for married and single households that are patient and in the median productivity group. We now examine whether the differences in effective IES between married and single households persist across discount factors and productivity levels. Figure E.1 reports the effective IES for patient and impatient households in the bottom, middle, and top productivity quartiles. Similar to the results in the main paper, differences in the necessity effective IES are quite small in comparison to that of luxuries.

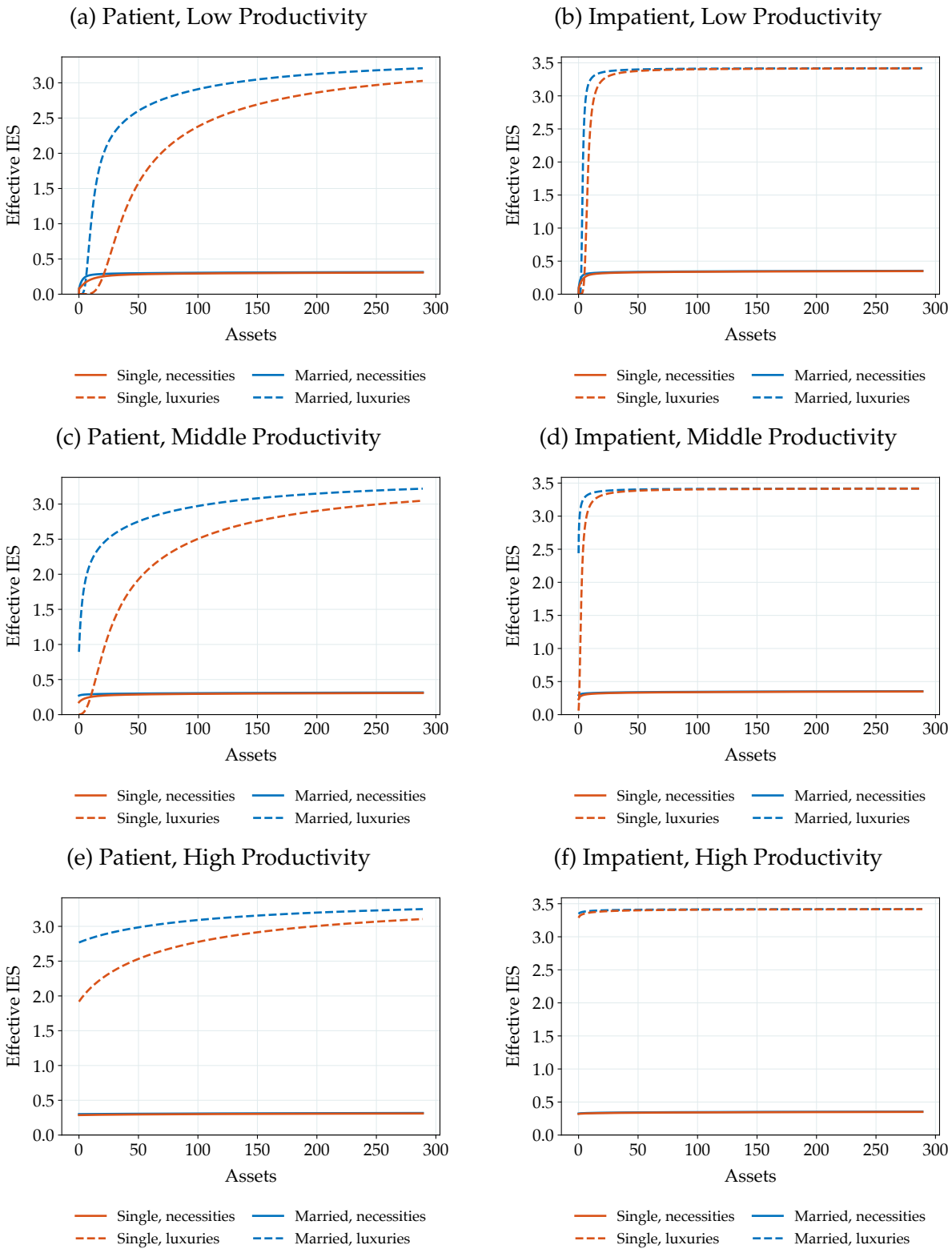
However, there is large heterogeneity in the magnitude of differences between married and single households based on the discount factor and productivity states. Notably, the differences between impatient married and single households are smaller than the differences between their patient counterparts. Moreover, differences are smaller for higher productivity households. Intuitively, as household income increases, the effects of the subsistence requirements are diluted, which mitigates differences between married and single households.

**Assets.** Table 1 illustrates that, in aggregate, married households hold more liquid assets than single households. Moreover, in Table **??** we provide further details that these differences in asset holdings remain after controlling for a large set of economic and demographic indicators. These empirical differences provide an additional benchmark for the model: does consumption sharing also generate higher steady-state asset holdings among married households?

Two competing mechanisms make it unclear whether married households hold more assets than single households on average in the model economy. First, consumption sharing increases married households' ability to meet their subsistence needs, potentially weakening their precautionary saving motive. On the other hand, married households are able to save more easily by clearing the subsistence threshold with lower per-capita expenditures. Thus, differences in the asset distribution between the two groups is a quantitative issue.

Figure E.2 displays the mean assets of married and single households, both in aggregate and across the four productivity quartiles for the baseline calibration. Consistent

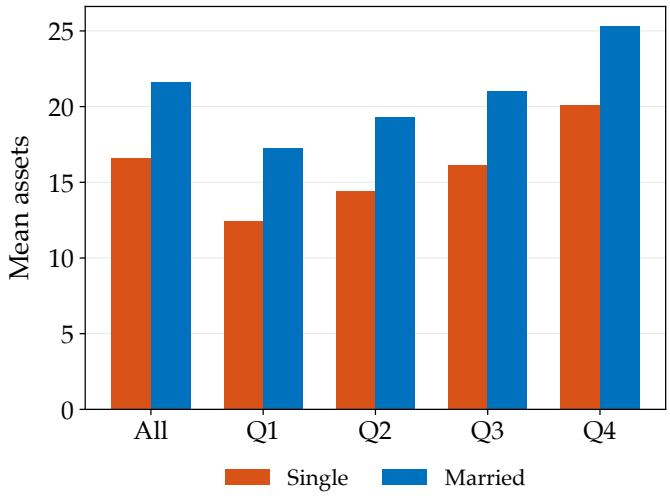
Figure E.1: Effective IES by Household Type and State




*Notes:* This figure plots the effective IES of necessity and luxury consumption across asset holdings for married and single households. Each panel conditions on a discount factor and productivity state.

with the data, married households hold more assets than single households. This feature remains true across productivity quartiles.

Figure E.2: Assets of Married and Single Households




*Notes:* This figure reports mean assets for married and single households overall and by productivity quartile.

## E.2. Counterfactual Details

Table 3 shows that both married and single households display larger consumption responses to an expansionary monetary policy shock in the economy with more married households. One potential explanation for these within group differences is differences in the calibrated steady states. As documented in Sections 5.3 and E.1, married and single households differ in their steady state consumption and wealth. We therefore examine how steady-state outcomes vary with the married population share.

Table E.1 reports the steady-state differences in $\mu^M$, $r^*$, and steady state output between the baseline and two counterfactual economies. While the mass of married households varies considerably between economies, the two flexible equilibrium objects only marginally change, indicating that steady state differences are not a large factor in explaining the within group consumption response differences.

What then explains these differences? Figure E.3 reports the consumption response decomposition under both economies for single and married households. The within group responses coming from the direct interest rate and capital gains are nearly identical for both economies. On the other hand, the labor income response is considerably higher for both household types in the economy with more married households. Because

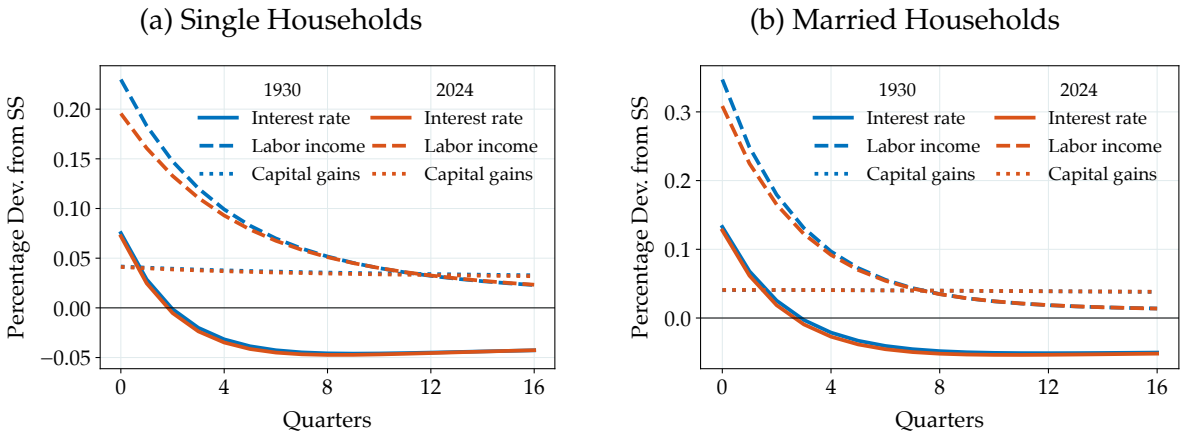
Table E.1: Model Counterfactual: Steady-States

| | $\mu^M$ | $r^*$ | $Y^{ss}$ |
|---|---|---|---|
| *Baseline* | 0.67 | 0.50% | 1.00 |
| *1930* | 0.87 | 0.49% | 1.04 |
| *2024* | 0.60 | 0.50% | 0.99 |

*Notes:* This table reports the married population share, $\mu^M$, the quarterly steady-state real interest rate, $r^*$, and steady-state output in the baseline and counterfactual economies. Output is normalized to one in the baseline.

married households are more responsive to policy shocks, their larger population share in the 1930 economy drives a stronger aggregate demand expansion, which subsequently generates a larger labor income response overall. Indeed, the response of net labor income to the monetary policy shock at impact is 9% higher in the 1930 economy. Overall, dynamic GE feedbacks, rather than steady state differences, amplify the counterfactual differences in consumption responses.

Figure E.3: Counterfactual Consumption Response Decompositions




*Notes:* This figure decomposes consumption responses to an expansionary monetary policy shock of 25 basis points in annualized terms into interest-rate, net labor-income, and capital-gains contributions. Panel (a) reports responses for single households, and Panel (b) reports responses for married households. Each panel compares economies with married population shares of $\mu^M = 0.87$ (1930) and $\mu^M = 0.60$ (2024).

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