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Broken homes and empty pantries: the impact of couple separation on living standards in France

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Abstract

This study sheds new light on the impact of couple separation on the living standards of women by considering the effects of separation on measures reflecting the adequacy of food consumption in addition to more commonly studied income and expenditure measures. Using panel data from France, I examine changes in disposable income, food expenditures and quantities purchased, diet quality and body weight around the time of separation and up to 8 years later, compared to a control group of households that did not separate. Living standards decline to such an extent that some households cannot maintain their food consumption, resulting in weight loss.

Keywords Separation · Divorce · Living standards · Income · Food consumption · Weight loss · Event study

JEL Classifications I12 · J12 · D12

1 Introduction

Family dissolution due to couple separation has become an event that a large part of the population will experience at some point in their lives. In France, the share of cohabiting couples who broke up their first union after less than 8 years more than doubled, from 12% for unions formed in the 1970s to 29% for unions formed between 1997 and 2005 (INSEE 2015). A couple who married in 1970 has a 12% chance of ever getting divorced, compared to 44% for couples who married in 2014 (INSEE 2016). Trends are similar in many countries around the world (OECD 2011). Separation has many consequences for those involved, especially financially. Divorce has been associated with a reduction in income (see for example McKeever

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and Wolfinger (2001); Avellar and Smock (2005); Tach and Eads (2015)). In France, it is estimated that women's average standard of living drops by 14–25% in the year following a divorce, whereas men's living standards are estimated to fall by 3–7% (Costemalle 2017).

Since separation means the end of the economies of scale associated with cohabitation and the sharing of certain expenses, a decline in living standards after separation is to be expected. What remains an open question, however, is the extent to which the income shock of separation affects households' ability to maintain a minimum level of consumption necessary to meet basic needs. The studies that look at the effect of separation on income provide information on relative changes in the financial situation, but not so much on whether households have difficulty meeting their basic needs in absolute terms. Households could vary in their ability to adapt to lower budgets by being more or less able to turn to less expensive options. The question of households' ability to maintain a minimum level of consumption is important. When households are unable to meet their basic needs, there can be costly negative impacts on human capital, such as poorer health. Lower economic resources have been associated with poorer adult and child outcomes, including poorer mental and physical health and lower educational attainment (McLanahan et al. 2013; Tach and Eads 2015).

This study addresses this gap in the literature by examining whether couple separation affects households' ability to meet basic consumption needs, with a focus on food consumption as a fundamental necessity. More precisely, this study estimates the effects of couple separation on household disposable income, food expenditures and quantities purchased, diet quality, and body weight. Looking at the quantity of food purchased, diet quality, and body weight is crucial because it is more informative about whether households are having difficulty meeting their basic dietary needs than changes in income and even food expenditures would suggest. A fall in income and food expenditures does not necessarily signal a decrease in actual food consumption as households might be able to shop for bargains and substitute for cheaper products instead.

A major obstacle to studying this issue is the difficulty in obtaining individual-level data on household composition and income, as well as reliable and detailed data on food consumption. For this study, I use consumer panel data from *Kantar Worldpanel* for France, which include basic demographic information on household members, household composition, and detailed information on food purchases entered by households via scanners after each grocery purchase. Although men are included in the sample, most post-separation observations involve female-headed households. The analysis therefore concentrates on women, which is also particularly relevant given existing evidence that they tend to bear the financial consequences of separation. In an event study approach, I examine how the outcome variables evolve in the years before and after the separation, relative to the period just before separation and compared to households where no separation is observed. I control for time-invariant differences across households and the impact of macro-level shocks by including household and year fixed effects. To identify vulnerable households and explore potential adaptation mechanisms, the analysis also examines heterogeneity by pre-separation income, family composition, and employment

status. I perform several robustness checks by selecting control households differently, omitting control households altogether and calculating estimates that are robust to treatment effect heterogeneity, as proposed in the recent two-way fixed effects literature.

Several key findings emerge from this study. First, I find that women suffer significant and permanent losses of economic resources after separation. In the first year after separation, their disposable income is around 20% lower relative to pre-separation levels and remains 30% lower until the end of the observation window up to 7 years after the separation. Second, women appear to cut back on food consumption after a separation. Food expenditures and quantities purchased decline by 20–40% relative to pre-separation levels. Third, the changes in income and food consumption are accompanied by a 1.5% decline in the women's body mass index (BMI¹) during the first 3 years after separation. I find evidence for an increase in the probability of being underweight (BMI of less than 18.5) as well as being of normal weight, while the probability of being overweight (BMI of over 25) decreases. The weight loss occurs despite an increase in the share of unhealthy food products purchased consisting of more salty, sweet, fatty, and convenience foods, which are calorie-dense. Importantly, the effects on income and food purchases are not simply a mechanical consequence of the departure of a household member. If, instead of adjusting for household composition, per capita income and food purchases are used, the results are qualitatively equivalent. I find no effect when an adult other than the partner (for example, an adult child) leaves the household. If the effect were purely mechanical, I would expect to find similar results when any adult household member leaves the household. Fourth, the effects on income are stronger in high-income households, but food purchases and body weight decline more strongly in low-income households and single-parent households. The probability of being underweight after separation increases in low-income households, but not in high-income households. Labour market participation does not appear to significantly buffer the effects of separation. In contrast, entering a new relationship seems to mitigate the impact, although the estimates are imprecise. I also find effects for men, though they are more moderate. Income declines by approximately 8%, and food purchases fall by 10–20%, though these estimates are not statistically precise.

This study contributes to the literature on the economic consequences of separation in three key ways. First, it goes beyond commonly used indicators such as income and expenditures by incorporating direct measures of nutritional well-being, including food quantities purchased, diet quality, and body weight. These outcomes provide a more complete picture of living standards and vulnerability, recognizing that households may adapt to lower budgets without immediately reducing calorie intake or nutritional adequacy. Second, it provides medium and long-term estimates of separation effects using detailed longitudinal data on household consumption. While many studies have documented short-term income declines following divorce,

¹ Defined as body weight divided by height squared. A commonly used measure to standardise weight for height and a rule of thumb to broadly categorise a person as underweight, normal weight, overweight, or obese. The results are qualitatively the same when using body weight directly.

typically ranging from 23% to 40% in the year after separation (Hoffman 1977; Duncan and Hoffman 1985b; Bianchi and McArthur 1991; Holden and Smock 1991; McLanahan and Sandefur 1994; Peterson 1996; Galarneau and Sturrock 1997; McKeever and Wolfinger 2001; Avellar and Smock 2005; Tach and Eads 2015), fewer studies examine longer-term consequences. Where such studies exist, they often rely on dated samples or limited covariate adjustment (Weiss 1984; Duncan and Hoffman 1985a; Fisher and Low 2009; De Vaus et al. 2014). This study addresses these gaps by tracking outcomes over several years and accounting for both time-varying household characteristics and unobserved heterogeneity. Third, it provides new evidence from France, a context that differs significantly from the United States, where most prior research has been conducted. In 2017, public spending on family benefits in France, including cash transfers, services, and tax relief, represented over 3.5% of GDP, compared to only 1% in the United States (OECD 2017). This difference makes France a valuable setting for examining whether more extensive social protection alters the consequences of separation. This study is most closely related to Page and Stevens (2004), who examine the effects of family structure on income and food spending in the United States, and to Bonnet et al. (2021), who study divorce effects on living standards and labour supply in France. The present analysis builds on this work by incorporating nutritional and anthropometric outcomes, offering a broader perspective on how separation affects household well-being.

Overall, the study provides evidence that couple separation leads to a significant and lasting decline in living standards for women, particularly those in low-income and single-parent households. Reductions in food quantities purchased and body weight suggest that some households struggle to meet basic nutritional needs, even in a country with a comparatively generous social safety net. While there is also some evidence of adverse effects for men, these are more moderate and less precisely estimated. Taken together, the findings highlight the importance of going beyond income-based indicators to identify vulnerability and suggest that policy support may be needed to ensure that all households, especially the most economically fragile, can maintain access to adequate nutrition and basic living standards following separation.

The remainder of the paper is as follows. Section 2 describes the data and details the empirical strategy, Sect. 3 presents and discusses the results, and Sect. 4 concludes.

2 Method

2.1 Data

This study draws on detailed data from a representative sample of French households collected by *Kantar Worldpanel*, covering the period from 2005 to 2014. The dataset is well suited to this analysis because it combines rich information on household characteristics and income with detailed records of food purchases, allowing for the construction of both financial and consumption-based measures of living standards. *Kantar Worldpanel* is a private firm specializing in consumer panels and

market research, similar to Nielsen in the United States. Participating households are equipped with scanners to record food purchases with barcodes. Items without barcodes are entered manually by household members.² The dataset provides information on individual and household characteristics, including household composition, household disposable income bins where income includes any income and transfers (earnings, pensions, alimony payments, government transfers), the socioprofessional category, age, sex, height, weight, education level, and labour market status of each household member. Information on food purchases includes product type, quantity, price and purchase date.

As the data on individual and household characteristics are updated annually, the time interval for analysis in this study is the year. I construct household food quantities purchased as the sum of all products purchased annually, measured in kilograms, and household food expenditure as the sum of annual food expenditures, expressed in euros. The share of unhealthy food products is defined as the ratio of the annual quantity in kilograms of prepared food products (such as pizza, sauerkraut, cassoulet), salty-fatty products (such as finger food, crisps, crackers, appetisers), and sweet-fatty products (such as candy, chocolate, cookies, pastries, ice creams, jams) to the total amount of annual food purchases, also measured in kilograms.

I use information on body weight and height to calculate the body mass index (BMI) of each household member. BMI is defined as weight divided by height squared. It is a commonly used measure to standardise weight for height and serves as a rule of thumb to categorise individuals as underweight (BMI under 18.5 kg/m²), normal weight (18.5–24.9), overweight (25–29.9), or obese (30 or more). BMIs under 20 and over 25 have been associated with higher all-cause mortality, with the risk increasing with distance from the 20–25 range.

I do not have data on food consumed outside the home, but households report the number of meals typically eaten at home for each day of the week. I use this information to calculate the weekly average number of meals eaten at home in a given year, in order to investigate whether separation affects eating habits at home as a potential mechanism behind the observed changes in food purchases.

A limitation of the *Kantar Worldpanel* data is that it does not include direct information on the marital or partnership status of household members. Households are classified into young, mid-age and old single or couple households and family households. The status changes from couple to single household when a partner leaves, but family households remain classified as family as long as children are present. To overcome this limitation, I exploit the fact that each individual is assigned a status code that is not reassigned to other household members in case the member leaves the household. Status 1 is always assigned to the female household member who is in charge of the household, as opposed to status 3, which designates a dependent female, such as a child. Status 2 is always assigned to a male household member who is assumed to be in charge of the household, as opposed to status 4, which denotes a dependent male, such as a child. I define separation as the departure

² For more information, see the *Kantar Worldpanel* website <https://www.kantarworldpanel.com/global/Consumer-Panels>.

from the household of an individual with status 1 or 2. I am therefore not distinguishing between the separation of cohabiting or married couples. This approach may also capture some instances of partner death rather than separation. However, this is likely to be rare in the working-age population. In France, only about 6% of single-parent families result from the death of a partner, and fewer than 5% of family dissolutions before age 45 are due to death rather than separation (INSEE 2015; INED 2018). I show in Sect. 3.2 that results are robust when restricting the sample to individuals younger than 45 years, for whom partner death is an unlikely source of bias.

I observe a total of 42,000 households for an average duration of 5.9 years, while the maximum observation window is 10 years. The results presented in this study are based on analyses using a sample of treatment households that is unrestricted, except for the requirement that the household be observed at least one year before separation, in the year of separation, and at least one year after separation. This ensures that the effects of separation can be identified. As this restriction has no effect on the estimated coefficients, I avoid imposing further limitations on the sample of separating households, in order to retain as many separation events as possible.

The control group is restricted to households observed for at least 7 consecutive years. This restriction aims to avoid the appearance of pre-trends in food purchases. Compared to other outcome variables, food purchases vary more strongly across households and over time. Using a panel composed of households observed for short periods may introduce sample composition effects that could bias the results. Nonetheless, the results are qualitatively similar even without this restriction on the control sample. See Sect. 3.2 for further discussion and additional sensitivity analyses using alternative event time windows to verify that results are not driven by changes in sample composition.

Table 1 reports summary statistics for both the unrestricted sample and the subsample restricted to households observed for at least 7 consecutive years, with observations pooled across households and years. The two samples are broadly similar, although the restricted sample has higher average food purchases and older household members. Households included in the panel for only short periods may report food purchases less consistently. The higher average age in the restricted sample may reflect different time constraints, with older individuals potentially having more availability to remain in the panel. The final sample comprises 10,033 households, observed for an average of 8.6 years.

Table 2 provides national statistics for France to compare with the study data. In 2010, average household disposable income in France was EUR 2919, which is close to the sample average of EUR 2646. The inactivity rate in the sample is also similar to the national level. Household size in the sample is slightly larger (2.6 vs. 2.3 in the general population). The average age, particularly of men, is somewhat higher in the sample. However, the results remain robust when restricting the sample to individuals under age 45 (see Sect. 3.2 for results and discussion).

Table 3 compares summary statistics for treatment households in the year before separation with non-single households in the control group. In separating households, both income and food quantities purchased are lower, and household members are younger on average than in the control group. For this reason, I apply household

fixed effects and adjust for partner age in all regressions. The results are also qualitatively similar when the control group is omitted entirely or constructed differently, including using propensity score matching (see Sect. 3.2).

Out of the 1038 households in which a separation is observed, 854 involve the departure of a male partner (individual with status 2), and 184 involve the departure of a female partner (status 1). The “remaining” household is defined as the one in which the partner continues to respond to the *Kantar Worldpanel* survey. In *Kantar Worldpanel*, the panelist responsible for grocery shopping and reporting household purchases is typically a woman, and is often the one who continues to be observed after separation. At the time of separation, 475 of the households are couple-only households. The remaining 563 include at least one additional household member. Among them, 306 households include at least one child under age 18, and 206 include at least one child under age 12. The rest are composed of other adult members in addition to the separating couple.

Table 4 shows the number of households observed at each year relative to the year of separation. Since not all households are observed throughout the full 10-year window, the sample composition varies by event time. A total of 1038 households are observed in the year before, during, and after separation, but fewer observations are available in earlier and later years. The results remain qualitatively similar when households with fewer observations are gradually excluded, and when applying the estimator proposed by De Chaisemartin and d’Haultfoeuille (2020), which accounts for unbalanced panels. See Sects. 3.2 and 3.3 for further results and discussion.

2.2 Empirical strategy

To estimate the effects of couple separation on household living standards, I use an event study framework that tracks the evolution of outcome variables before and after the separation. The analysis compares households that experience a separation to those that do not, and contrasts outcomes each year to the year immediately preceding the separation. Specifically, I estimate the following model:

$$Y_{ht} = \alpha_h + \gamma_t + \sum_{j=\underline{j}}^{\bar{j}} \beta_j D_{ht}^j + \rho X_{ht} + \epsilon_{ht},$$

where Y_{ht} denotes the outcome for household h in year t , α_h and γ_t are household and year fixed effects, D_{ht}^j denotes the treatment indicator for a separation occurring $j \in [\underline{j}, \bar{j}]$ periods away from t , and X_{ht} is a vector of time-varying household characteristics. The error term ϵ_{ht} is clustered at the household level. The variables of interest are the event time coefficients β_j , which measure the impact of separation relative to the households that do not separate, and, since the event time dummy $j = -1$ is omitted, relative to the year just before the separation.

The outcome variables include household disposable income, food expenditures, the quantity of food purchased in kilograms, the share of unhealthy foods in total purchases, and the body weight of household members. While income and expenditure are commonly used measures of living standards, they may not fully

reflect a household's ability to meet basic needs. Income can underestimate actual resources, and a reduction in expenditure may not imply reduced consumption if households switch to cheaper alternatives. Measures of food quantity, diet quality, and body weight offer a more direct view of nutritional sufficiency and material hardship.

Following Page and Stevens (2004), the main specifications use the log of income and food purchases, while controlling for household size in X_{ht} . This accounts for changes in household composition from the arrival or departure of members in both treated and control households. The estimated event time effects therefore capture the additional impact of losing a partner, over and above the general effect of a change in household size. In robustness checks, I estimate models using per capita outcomes and consumption unit adjustments. In the latter, the first adult counts as 1, additional individuals aged 15 or older as 0.7, and children under 15 as 0.5, to reflect age-based needs and economies of scale. The results are robust to these alternative specifications.

Identifying causal effects of couple separation is challenging because separation is unlikely to be exogenous. First, households that experience a separation may differ systematically from those that do not. Second, time-varying shocks may both increase the likelihood of separation and directly influence the outcome variables. To address potential biases, I include both household and year fixed effects. Household fixed effects absorb all time-invariant differences across households, and year fixed effects account for macroeconomic shocks common to all households. The regressions also include households that do not separate as controls, a standard feature in event study designs that improves statistical precision by leveraging both the timing of events and comparisons with untreated units (Miller 2023). While the event time coefficients are identified using within-household variation in the treated group, year fixed effects and the coefficients on time-varying controls are identified using variation from both treated and control households. To assess whether differences between treated and control households might bias results despite fixed effects, I conduct two further robustness checks. First, I reweight the control group using propensity scores to make it more comparable to the treated group on observable characteristics. Second, I estimate models using only treated households, relying exclusively on the timing of separation. Both approaches produce results that are qualitatively consistent with the main findings.

To address concerns about time-varying unobserved shocks, I test for pre-trends in the outcomes. If, for example, a health shock reduces income and later leads to separation, I would expect to see a decline in income or food purchases before separation. In the data, I find no such pre-trends in income, food quantities, or body weight. There is a modest increase in the share of unhealthy food purchases before separation, but other outcomes remain stable. This supports the view that the estimated effects are not primarily driven by shocks occurring before separation. Nevertheless, I cannot rule out bias from shocks that simultaneously cause separation and affect outcomes within the same year. I return to this point in the discussion of results.

In all regressions, I use the longest available event window to capture both short- and long-run effects. Treated households are observed for up to 7 years before and

8 years after separation, so the event time ranges from -7 to $+8$. However, the panel is unbalanced, and estimates for different event years are based on different samples. This does not necessarily introduce bias, but could confound interpretation if households systematically differ depending on when they are observed relative to the event. In sensitivity analyses, I restrict the sample to households observed over balanced windows before and after separation to verify that the main results are not driven by changes in sample composition. The findings remain robust.

I explore heterogeneity in treatment effects by pre-separation household income, employment status, and presence of children to identify the most vulnerable households. In addition to heterogeneity by observed characteristics, I consider potential heterogeneity in unobserved ways. Recent literature shows that event study estimates can be biased when treatment effects vary across units and over time (Sun and Abraham 2021; De Chaisemartin and d'Haultfoeuille 2020). To address this, I implement the method proposed by De Chaisemartin and d'Haultfoeuille (2020), which estimates group-time average treatment effects using not-yet-treated households as a comparison group. These estimates closely match the main results.

Finally, I examine potential adaptation mechanisms, including shifts in eating out versus eating at home, entry into the labour market, and the formation of new partnerships. While these analyses offer insights into adaptive behaviour, they should be interpreted with caution due to the endogenous nature of these responses.

3 Results

3.1 Impact of separation on disposable income, food purchases, diet quality and body weight

Figure 1 shows point estimates on the event time dummies and 95% confidence intervals, based on standard errors clustered at the household level. All regressions use the preferred model specification that includes household and year fixed effects, household composition, and the partners' ages. The outcome variables are the logarithm of household disposable income, food quantities purchased, the partner's BMI, and the share of unhealthy food in total food purchases. The treatment group consists of households where a male partner leaves a female partner, resulting in a female-headed household after separation. The event time dummy for the year before the separation ($j = -1$) is set to zero. Figure 1 therefore shows how household income, food purchases, diet quality and the female partner's body weight evolve in households where the male partner leaves, relative to the year before the separation ($j = -1$) and relative to households where no separation occurs. Table 5 in the Appendix presents the corresponding regression results.

Several key findings emerge from Fig. 1. First, separation leads to large and lasting losses in economic resources. Panel A shows no differences in (household-size-adjusted) disposable income between separating and control households in the years leading up to separation. Income then drops sharply by more than 20% in the first year after separation ($j = 1$), and stabilises at around 30% below pre-separation levels from the second year onward. Second, food quantities purchased decline

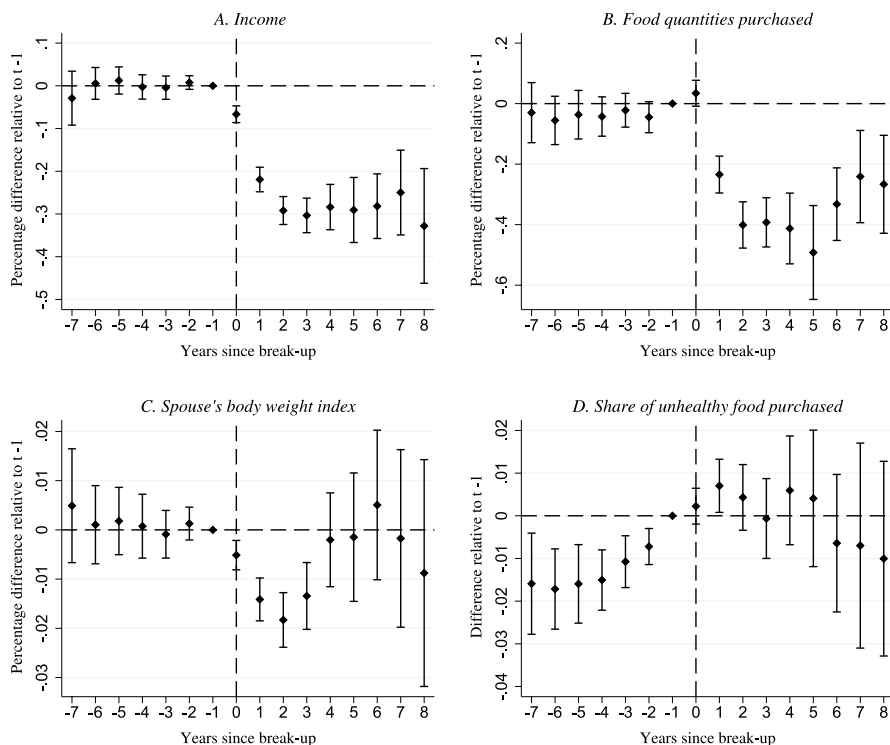


Fig. 1 Trend in outcome variables around separation. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The dependent variables are the income, food quantities purchased, remaining partner's BMI (a measure of weight relative to height; results for body weight are the same) and the share of unhealthy food products purchased by household i in year j . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

markedly after separation. Panel B shows no pre-trends, followed by a sudden 25% drop in the year after separation. Purchases remain between 20% and 40% lower, slightly recovering toward the end of the observation window. Food expenditures follow an identical pattern and are therefore not shown. Third, the decline in income and food purchases is accompanied by a reduction in women's BMI.³ As shown in Panel C, BMI falls by about 1.5% in the first 3 years after separation, before returning to pre-separation levels and aligning with the control group from year 4 onward. Fourth, the observed weight loss occurs despite a shift toward more calorie-dense foods. Panel D shows that the share of unhealthy food purchases including salty,

³ Body mass index is defined as weight divided by height squared. It is a widely used measure to assess weight status, accounting for both height and body composition. Results are similar when using weight directly.

sweet, fatty, and convenience items increases gradually before separation and rises further in the first and second years after separation. It temporarily exceeds the level observed in control households, although the difference is no longer statistically significant in later years.

The analysis above focuses on female-headed households after separation, where the male partner has left. The observed decline in income likely reflects the departure of the higher earner, as men typically have higher incomes than their female partners. This interpretation is supported by the heterogeneity analyses below, which show larger declines among households with higher pre-separation income.

One might then expect living standards to improve for men following separation. However, the data do not support this. In households where the male partner remains and the female partner leaves, disposable income falls by around 10% and food purchases decline by approximately 18%. These estimates are only marginally statistically significant, likely due to the limited number of male-headed treated households ($n = 184$). These patterns are shown in Panel B of Fig. 4.

These gender differences are consistent with the literature, where a large body of research has shown that women experience significant effects (Hoffman 1977; Duncan and Hoffman 1985b; Bianchi and McArthur 1991; Holden and Smock 1991; McLanahan and Sandefur 1994; Peterson 1996; Galarneau and Sturrock 1997; McKeever and Wolfinger 2001; Avellar and Smock 2005; Tach and Eads 2015), whereas the effects for men have proved to be more heterogeneous and less severe overall (Smock 1994; Galarneau and Sturrock 1997; McManus and DiPrete 2001; Bonnet et al. 2021). In France, it has been estimated that the average standard of living declines by 14–25% for women, compared to 3–7% for men (Costemalle 2017). The larger decline for women is commonly attributed to persistent gender gaps in earnings and caregiving responsibilities.

The reason for the financial decline for men and part of the financial decline for women is likely due to the loss of economies of scale from shared living arrangements, such as housing and utility costs (Bonnet et al. 2015). Since the data capture disposable income net of transfers, men's post-separation income also reflects financial obligations such as child support. The decline in women's living standards following separation therefore likely results from both the loss of the higher earner's income and the loss of shared cost advantages from cohabitation.

When pooling all separations, regardless of which partner leaves, the estimates are nearly identical to those obtained for households in which the male partner leaves and the female partner remains. This is shown in Panel A of Fig. 4 in the Appendix. The similarity reflects the structure of the sample. Most post-separation observations are of female-headed households. In *Kantar Worldpanel*, the panelist, who is responsible for grocery shopping and reporting household purchases, is typically the woman and continues to be observed after separation. While the women who remain in the data may not represent all women who separate, the estimates more closely reflect their experience than that of men. For this reason, I focus the remainder of the analysis on households in which the male partner leaves, thereby capturing the effects of separation on women.

3.2 Sensitivity analyses

The estimated declines in income and food purchases are not mechanical consequences of household size reduction but reflect the impact of separation on household-size-adjusted outcomes. Since all regressions control for household size, the event time coefficients capture changes in outcomes net of the effect of household composition. Panels A and B in Fig. 6 show that the results are also qualitatively similar when instead using per capita income and food purchases. These specifications directly adjust the dependent variables rather than relying on household size controls. The corresponding regression outputs are reported in columns 1 and 2 of Table 7 in the Appendix. Panels C and D in Fig. 6 and columns 3 and 4 of Table 7 further show that the findings are robust to adjusting income and food purchases by consumption units, which account for age-specific needs and economies of scale. The first adult is counted as 1, additional persons aged 15 or older as 0.7, and children under 15 as 0.5. This type of adjustment is commonly used to better reflect resource needs across household types.

To test whether the results are specific to the departure of a partner, Fig. 13 in the Appendix presents estimates for cases in which other household members leave. In contrast to separation, these departures are associated with slight increases in household-size-adjusted income (between 3% and 5%), temporary increases in food purchases, no effect on the woman's BMI, and a gradual decline in the share of unhealthy food purchases. While these results are not the focus of this paper, they are consistent with scenarios in which a dependent adult child or elderly parent moves out, potentially improving household finances. This evidence, together with the results from the per capita and consumption-unit-adjusted robustness exercises, suggests that the effects observed in the main analysis are not a simple mechanical consequence of a household member leaving the household but that these effects are net of the effects of a change in household size.

The results are also robust to using the original levels of the outcome variables rather than their logarithmic transformations. Panels A to C in Fig. 7 in the Appendix illustrate these findings, with regression results reported in columns 5 to 7 of Table 7.

The main regressions include household and year fixed effects, household size, and dummies for the age of both partners. Table 8 shows that excluding the age dummies or replacing household size with consumption units does not materially affect the estimates.

To account for the unbalanced nature of the panel, I test the robustness of the results to alternative event windows. To reduce variation in sample composition, the main results are based on control households observed for at least 7 consecutive years. When this restriction is removed, results remain qualitatively similar except for the emergence of a slight upward trend in food purchases before separation. See Fig. 11 in the Appendix. As food purchases are more volatile than other outcomes, using a less stable panel may amplify sample-driven effects. Treated households are observed up to 7 years before and 8 years after separation, but sample size varies by event time (see Table 4 in the Appendix). The event time coefficients for -1 , 0 and 1 are based on all separations, but the other event time estimates are based on fewer

households, which means that the event time estimates are not all estimated from the same sample of households. While the main analysis uses the full window to capture a long path of treatment effects, I re-estimate the models using only households observed for at least 2 years before and 4 years after separation. Results are shown in Fig. 8 in the Appendix. The event time coefficients -2 to 4 are estimated from the same 126 households, whereas the event time coefficients -5 , -4 and -3 are based on variation from 22, 25 and 52 households and the event time coefficients 5 , 6 and 7 are based on 48, 38 and 15 households. Focusing on the event time coefficients -2 to 4 as they are calculated using the same households, shows that income declines by around 20–32%, food purchases drop by around 20–40%, the women's BMI declines during 3 years and then reverts back to pre-separation levels and the share of unhealthy food purchases increases slightly around the time of separation. As the number of treated households has been reduced, the estimates are more noisily estimated, but the results are qualitatively similar to the results from the main regressions. These findings confirm that the results are not driven by shifts in the composition of the treated sample over time.

I also assess the sensitivity of the results to the choice of control group. The main specification includes never-separated households as controls, thereby leveraging both within-household variation and comparisons across treated and untreated units. Figure 9 presents results from regressions that include only treated households, relying solely on the timing of separation for identification. These results are similar to the main findings. Income declines by around 25% compared to 30% in the baseline regressions, and food purchases drop by more than 50% compared to 20–40% in the baseline, though the differences are not statistically significant. The results for BMI are unchanged. The upward trend in unhealthy food purchases before separation disappears, suggesting that control households may not be ideal for this particular outcome. However, the overall similarity of estimates supports the validity of using untreated households as controls.

To further address possible differences between treated and control households, I apply a propensity score approach. After retaining the 4616 untreated households with the highest propensity scores (out of 27,774), the results remain unchanged, as can be seen in Fig. 10 in the Appendix.

To ensure that results are not confounded by partner death, I exclude separations involving individuals older than 45 at the time of the event. Under age 45, fewer than 5% of family dissolutions are due to death (INSEE 2015). The restricted sample includes 444 treated households. As shown in Fig. 12, results remain qualitatively unchanged, although estimates become noisier and the increase in unhealthy food purchases is no longer visible.

Finally, I conduct placebo tests to verify that the observed patterns are not driven by chance. First, I randomly reassign separation dates within treated households and re-estimate the model 100 times. Second, I randomly select a subsample of untreated households, assign random separation dates, and repeat the procedure 100 times. Figure 14 shows that the estimated coefficients in these placebo tests are tightly clustered around zero. In some cases, random dates produce slight upward trends in income and food purchases, but no sudden drop occurs. The actual event time coefficients from the main analysis lie well outside the 95th percentile of the

placebo coefficient distributions, providing evidence that the effects are not due to random variation.

3.3 Treatment effect heterogeneity and mechanisms

This section explores how the effects of separation vary across household types and discusses potential mechanisms underlying these differences.

Households may buffer the financial impact of separation by drawing on savings or cutting spending in other areas such as leisure or durable goods. If these adjustments are less feasible for low-income households, we would expect larger effects on food consumption, diet quality, and body weight in these groups. Working partners may be better able to maintain their living standards, whereas the presence of children may constrain a partner's ability to do so. To examine these hypotheses, I estimate separate regressions by pre-separation household income, employment status, and household composition.

I also briefly explore whether a shift in food consumption from home to eating out, entry into the labour market, or the formation of a new relationship serve as adjustment mechanisms that could help explain some of the observed patterns.

As the main effects are driven by the experience of women (see Sect. 3), I continue to focus on households in which the male partner leaves and the female partner remains. This means the results reflect the effects of separation on women.

3.3.1 Heterogeneity of treatment effects by pre-separation household income

Figure 2 presents regression results separately for households in the bottom and top 30% of the pre-separation per capita disposable income distribution. The left-hand panels show results for low-income households, while the right-hand panels show results for high-income households. Panel A shows a persistent decline in disposable income for both groups following separation, with a larger drop among high-income households. Income falls by nearly 40% in the high-income group, compared to declines of around 10–20% in the low-income group. Panel B shows that food purchases drop sharply and immediately in low-income households by 25% in the first year and up to 50% by year 4, before a partial recovery in year 5. In high-income households, food purchases decline more gradually, reaching about 50% below baseline by year 4. Panel C indicates that the drop in body mass index (BMI) of the remaining partner is more pronounced in low-income households. Panel D shows that the share of unhealthy food purchases slightly rises prior to separation in both groups. After separation, this trend continues among high-income households but flattens among low-income households.

In summary, the income shock is larger for high-income households, while reductions in food purchases and body weight are more immediate and severe among low-income households. Only the differences in income effects are statistically significant when using event time coefficients, but the differences in food purchases

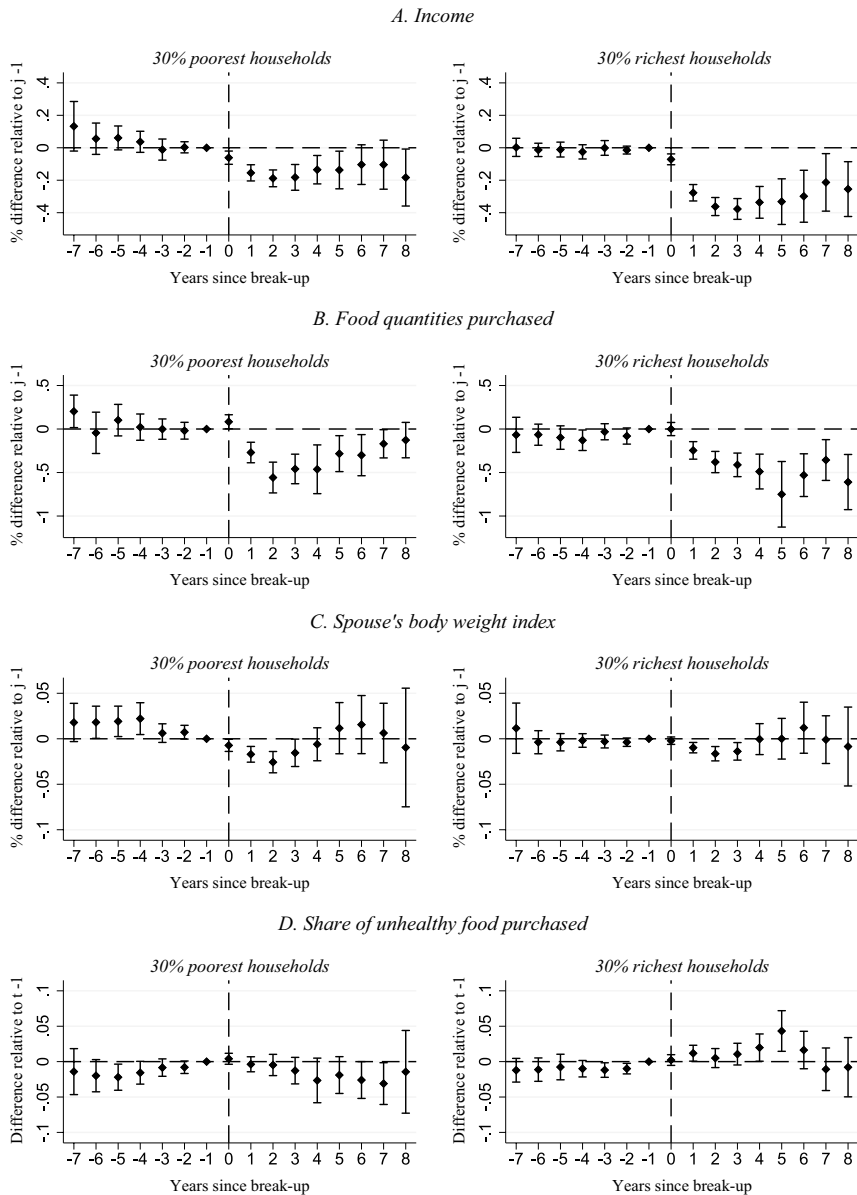


Fig. 2 Trend in outcome variables around separation, by pre-separation per capita income. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The left-hand panels present results for the 30% of households with the lowest pre-separation per capita incomes, while the right-hand panels show results for the 30% of households with the highest incomes. The dependent variables are the logarithm of income, food quantities purchased, remaining partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

also become statistically significant when using a single post-separation dummy to improve precision.⁴

The finding that income declines are more pronounced in households with higher pre-separation income is consistent with previous research. For example, Fisher and Low (2016) show that women from the highest-income households experience the largest and most persistent declines in their standard of living following separation. These high-income households may therefore appear more vulnerable. However, the sharper drop in income among high-income households likely reflects the higher earnings of the partner who leaves, rather than greater vulnerability. By contrast, the more immediate and severe reductions in food purchases and body weight among low-income households suggest that these households are less able to smooth consumption and may in fact be more exposed to the economic shock of separation. Supporting this interpretation, I find that the probability of being underweight increases only among low-income households. In higher-income households, the shift in BMI distribution is driven by a reduction in the probability of being overweight or obese, rather than an increase in underweight status. See Fig. 15 in the Appendix. This suggests that weight loss among low-income households may be less voluntary and more likely to reflect material hardship. This pattern is consistent with differences in saving capacity. Low-income households may have fewer financial buffers and less room to reallocate spending. In contrast, high-income households may have accumulated assets that help cushion the effects of separation. These results underscore the importance of looking beyond income to consumption-based measures when evaluating changes in well-being and identifying the most vulnerable populations.

3.3.2 Heterogeneity of treatment effects in relation to the presence of children

Figure 3 shows results separately for couple-only households (left-hand panels) and households with children under age 18 at the time of separation (right-hand panels). Income declines by around 20% in couple-only households, compared to a 40% decline in households with children. Food purchases also fall more sharply in family households, with reductions of up to 40%, whereas declines are more progressive in couple-only households. Women's body weight decreases significantly in both groups, but the effect is almost twice as large in households with children. Overall, the effects of separation on women are more pronounced when children are present, although the difference is statistically significant only for income.⁵

Households with children are more likely to fall within the bottom 30% of the pre-separation income distribution than couple-only households. When examining treatment effect heterogeneity by family type within income groups, I find that the

⁴ Statistical significance is assessed using an interaction model that includes either event time dummies or a single post-separation dummy, interacted with a dummy for households in the top 30% of the pre-separation per capita income distribution. A difference is considered statistically significant if the interaction term is significant at the 5% level.

⁵ Statistical significance is assessed using an interaction model that includes either event time dummies or a single post-separation dummy, interacted with a dummy for family composition groups. A difference is considered statistically significant if the interaction term is significant at the 5% level.

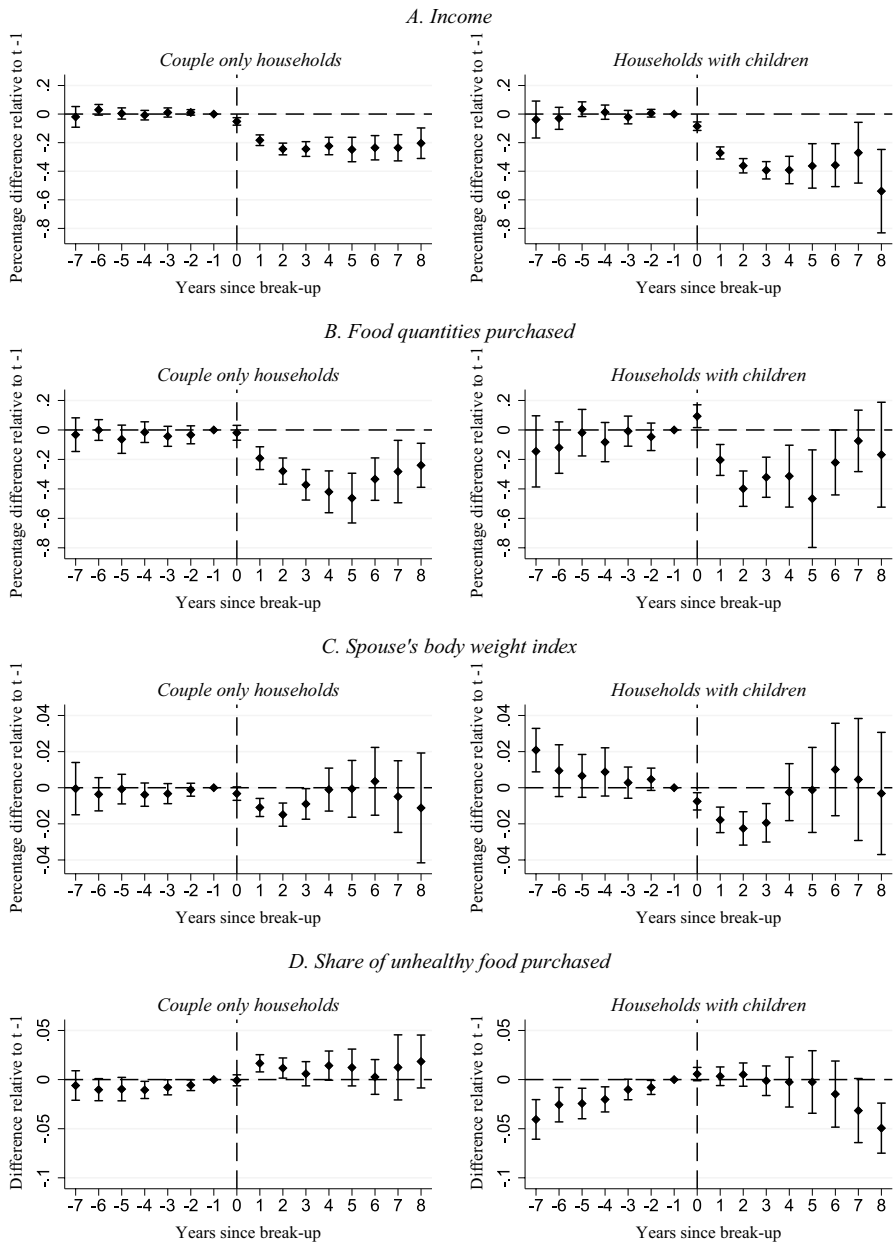


Fig. 3 Trend in income variables around separation, by family composition (presence of children). The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The left-hand panels present results for couple-only households, while the right-hand panels show results for households with children. The dependent variables are the logarithm of income, food quantities purchased, remaining partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

impacts of separation remain generally larger in households with children than in couple-only households. However, the estimates are imprecise, and the differences are not statistically significant. See Fig. 16 in the Appendix.

Some of the observed differences in food purchases could reflect custodial arrangements. Children may be registered in the household even if they do not reside there full-time. In France, following separation, 76% of children are primarily cared for by their mother, 9% by their father, and 15% live in alternating residence arrangements. Even when not the primary caregiver, the non-custodial parent usually has regular visitation, often including weekends (Bonnet et al. 2015). The average number of meals eaten at home increases slightly after separation (see column 1 in Table 9 and the section on mechanisms below), but this may be an imperfect proxy for children's presence and consumption. While this may introduce some measurement error, the stronger effect on women's body weight in households with children suggests a genuine reduction in overall calorie intake, consistent with a decline in food purchases that exceeds changes in household needs. Taken together, these results point to heightened vulnerability among single-parent households following separation.

3.3.3 Heterogeneity of treatment effects by pre-separation employment status

Figure 17 in the Appendix shows the effects of separation by the woman's pre-separation employment status. The left-hand panels show results for women who were employed before separation, and the right-hand panels for those who were not.

The decline in income is greater among employed women, while the drop in food purchases is more pronounced among women who were not employed before separation. This pattern is consistent with dual-earner households experiencing a sharper loss in income due to the departure of a high-earning partner, assuming similar partner earnings, while inactive women may face greater difficulty adjusting, as reflected in deeper cuts to food consumption.

There is little difference in BMI loss across the two groups. The share of unhealthy food purchases declines among households where the woman was employed, while it remains largely unchanged in households where she was inactive.

These differences should be interpreted with caution, as none are statistically significant.⁶ Labour market participation is also likely to change in response to separation and is discussed below as a potential mechanism for mitigating declines in living standards.

3.3.4 Heterogeneity in treatment effects due to unobserved factors

Treatment effects may vary not only along observable characteristics but also in unobserved ways. If this is the case, the main estimates reflect a weighted average

⁶ Statistical significance is assessed using an interaction model that includes either event time dummies or a single post-separation dummy, interacted with a dummy for pre-separation employment status. A difference is considered statistically significant if the interaction term is significant at the 5% level.

of the underlying effects, where the weights may be unintuitive or undesirable. In particular, some weights may be negative, potentially biasing the average treatment effect (Sun and Abraham 2021; De Chaisemartin and d'Haultfoeuille 2020). To address this concern, I apply the approach proposed by De Chaisemartin and d'Haultfoeuille (2020), which uses not-yet-treated units and a parallel trends assumption to estimate treatment effects by group before averaging them. This method yields results that are qualitatively identical to those of the main analysis, as shown in Fig. 18 in the Appendix.

3.3.5 Mechanisms: eating out versus eating at home, labour market participation, and repartnering

Several mechanisms may help explain the observed changes in living standards following separation. One concern is that the decline in food purchases might reflect a shift from eating at home to eating out, rather than a true drop in food consumption. Although food purchased outside the home is not recorded in the data, I observe the average number of meals eaten at home per week, which serves as a proxy for meals consumed at home versus outside the home. As shown in column 1 of Table 9, this number increases after separation. This suggests that the decline in food purchases is not driven by substitution toward food outside the home. If anything, eating out appears to decrease, possibly due to its higher cost and lower appeal when dining alone. The concurrent drop in BMI further supports the interpretation that total food intake declines after separation.

Labour market participation may also serve as an adjustment mechanism. As shown in column 2 of Table 9, the probability that the woman remains inactive falls after separation. Above, I showed that being employed prior to separation does not protect women from declines in income or food consumption. I now examine whether entering the labour market after separation helps mitigate these effects. Figure 19 shows outcome trajectories for households in which the woman enters the labour market following separation. While estimates are less precise due to smaller sample sizes, the direction of effects suggests that labour market entry does not fully offset the economic consequences of separation. Household income declines by approximately 40–50%, and BMI decreases by 2.5% up to 5 years after separation. Food purchases appear to decline by around 25%, although these coefficients are imprecisely estimated. These results should be interpreted with caution, as they likely reflect selection. Women who become economically active may be those most negatively affected, which suggests that remaining inactive would have led to even poorer outcomes. As such, the estimates should be viewed as descriptive evidence rather than causal effects.

Repartnering is another potential adjustment mechanism. Column 3 of Table 9 shows that the probability of entering a new relationship increases in years 2 and 3 after separation. To assess whether repartnering helps mitigate the negative effects of separation, I estimate treatment effects separately for households where a new partner joins. Figure 20 shows that in households where a new couple forms, the negative effects of separation are less persistent. Income still declines by about 20% in the first 2 years after separation but returns to pre-separation levels thereafter.

Food purchases also appear to fall in repartnered households, but estimates are not statistically significantly different from 0 after year 3. While entering the labour market does not appear to mitigate the decline in living standards, forming a new partnership is associated with a quicker recovery in income. This finding is consistent with previous research, such as Page and Stevens (2004), which shows that remarriage reduces the long-term economic costs of separation. However, as with labour market participation, repartnering is likely subject to selection, and these results should be interpreted as descriptive evidence only.

3.4 Discussion

This study finds that separation leads to persistent declines in the living standards of women in France. Disposable income falls by around 30%, food purchases drop by 20% to 40%, and body weight declines, consistent with reduced caloric intake. These changes persist for several years and are not driven by compositional effects. Reductions are particularly pronounced in low-income and single-parent households, which also show a higher probability of underweight status post-separation. Labour market participation offers limited protection. Women who were employed before separation experience smaller reductions in food purchases but still face losses. There is suggestive evidence that repartnering may help mitigate some effects, but estimates are imprecise due to the small number of observed cases. The evidence suggests that both partner income loss and loss of economies of scale play a role, and that neither transfers nor own earnings are sufficient to prevent the decline in living standards post-separation.

These findings are broadly consistent with existing literature. In the United States, Page and Stevens (2004) document a 50% drop in disposable income and a 35% decline in food spending after separation. A reason the estimated income effects may appear more modest in this study is measurement error. Income is reported in bins, which likely introduces attenuation bias and pushes estimates toward zero. As a result, the estimated 30% drop in income may be a lower bound. This also cautions against using my results to infer an income elasticity of food demand. A 40% drop in food purchases from a 30% income fall would imply an elasticity greater than one, which is inconsistent with the empirical literature, where elasticities typically fall between zero and one. Another possible reason is that the effects are overall smaller in France due to more generous public transfers. Bonnet et al. (2021) report a disposable income decline of 18.5% for women, while Costemalle (2017) finds declines of 14–25%, depending on marital status.

The effects of separation in France appear to last longer than in the US. I find little evidence of recovery over time, whereas Page and Stevens (2004) report that food purchases partially recover within 6 years. Page and Stevens (2004) attribute this recovery mainly to remarriage. I rarely observe a new partner joining the household, which may explain the lack of aggregate recovery in my sample. For households that do repartner, I also find that income reverts to pre-separation levels 4 years after separation.

The decline in body weight is consistent with findings from some previous studies (Lee et al. 2004; Eng et al. 2005), though others report weight gain post-separation (Mata et al. 2018). I find no comparable estimates for changes in the nutritional quality of purchases. A few studies have explored post-separation dietary changes, though typically focusing on specific items (Lee et al. 2004; Vinther et al. 2016).

Although the main results reflect outcomes for women and children, since most post-separation households in the data are headed by women, I also find modest effects for men. Income falls by around 8% and food purchases decline by around 18%. This is consistent with a broad literature showing more severe and consistent post-separation impacts for women, as in (Hoffman 1977; Duncan and Hoffman 1985b; Bianchi and McArthur 1991; Holden and Smock 1991; McLanahan and Sandefur 1994; Peterson 1996; Galarneau and Sturrock 1997; McKeever and Wolfinger 2001; Avellar and Smock 2005; Tach and Eads 2015), with more heterogeneous and generally weaker effects for men (Smock 1994; Galarneau and Sturrock 1997; McManus and DiPrete 2001; Bonnet et al. 2021).

A key question is whether the results can be interpreted as causal effects of separation. The study design supports this interpretation in several ways. Household fixed effects account for all time-invariant differences, and time fixed effects control for common macroeconomic shocks. Robustness checks show that the findings are not driven by control group selection, time windows, or sample composition. Placebo tests using randomly assigned separation dates reveal no similar patterns, suggesting the observed effects are unlikely to be due to chance. I also find no similar declines when another household member, rather than the partner, leaves the household. Some bias from unobserved, time-varying shocks cannot be fully ruled out. For example, sudden health events could affect income, diet, and relationship stability simultaneously. However, the absence of pre-trends, the sharp timing and persistence of the changes point to separation as the driver of the results.

Another central question is whether the observed effects are relevant from a policy perspective. One interpretation is that the decline in living standards following separation is so severe that many households cannot maintain minimum consumption levels to meet their nutritional needs. This is reflected in sharp reductions in food purchases and measurable weight loss. These findings may seem surprising. One might expect that in a country with a well-developed welfare system like France, public and private transfers would at least prevent households from falling below subsistence thresholds. If that is not the case, policy intervention may be justified both on ethical grounds and to prevent broader societal costs arising from unmet basic needs.

An alternative explanation is that some women may intentionally lose weight after separation, for example to improve their chances of finding a new partner. This could help explain the decline in the probability of being overweight and the rise in the probability of being of normal weight. However, it does not account for the increase in underweight status, except in rare cases such as eating disorders. In addition, the strongest reductions in food purchases and body weight are observed among low-income and single-parent households, which are arguably less able to smooth consumption after an income shock. In these groups, the increase in underweight prevalence is not matched by similar patterns among higher-income households,

where weight changes appear to reflect a shift from overweight to normal weight. These patterns suggest that, at least for some low-income households, the reductions in consumption and body weight are driven by financial constraints rather than preference.

Financial pressure may also influence behaviour indirectly. For women in economically insecure households, weight loss may be seen less as a personal goal and more as a strategy to improve prospects on the dating market, especially if repartnering is viewed as the only realistic way to restore living standards. Prior studies have found that households often regain their pre-separation standard of living only after repartnering (Page and Stevens 2004), and I show suggestive evidence of the same. Women from higher-income households may face less urgency to re-enter the dating market, given greater financial security. These dynamics suggest that some behavioural changes after separation may reflect economic necessity rather than personal preference.

Mental health could also play a role. Separation may lead to depression or related challenges that reduce appetite and food intake. If mental health effects are more severe in financially strained households, this would reinforce the interpretation that economic vulnerability is central to the observed outcomes.

Taken together, these findings indicate that the stronger effects observed in low-income households are more likely to reflect reduced living standards than voluntary lifestyle changes. The fact that body weight loss reaches unhealthy levels in these households, alongside a rise in underweight prevalence, points to unmet basic needs. If the decision to seek a new partner is shaped by financial constraints, this raises concerns about constrained autonomy and economic dependence after separation. Some individuals may feel unable to leave unsatisfactory relationships or may enter new ones primarily for economic survival. Similarly, if mental health effects like depression are contributing to lower food intake, and are themselves exacerbated by economic strain, this provides an additional reason for policy intervention.

The findings raise concerns about the capacity of welfare systems in high-income countries to protect households from falling below basic living standards after separation. They also show the importance of looking beyond income when assessing the effects of separation. Changes in food consumption, body weight, and diet quality offer more direct indicators of households' ability to meet essential needs. The results suggest that some separated households, especially those with low incomes or headed by single parents, struggle to maintain adequate nutrition, with potentially serious implications for health and social policy.

Policy intervention may be justified not only on ethical grounds but also for economic and public health reasons. The observed rise in underweight prevalence and the increase in the share of unhealthy food products purchased point to a deterioration in diet quality, which may lead to poorer health and lower productivity over the long term. While some individuals shift from overweight into the normal weight range, this cannot be seen as a health gain when it reflects involuntary weight loss

and worsening nutrition. It would be misguided to view reduced purchasing power as beneficial simply because it lowers calorie intake.

A policy priority could be to increase support for single-parent households. Children, though not responsible for their family situation, are often part of the most severely affected households. Without adequate support, they risk lasting disadvantages in health, education, and well-being, with long-term costs for both individuals and society. More broadly, strengthening the social safety net would help ensure that all households can meet basic needs after separation.

4 Conclusion

This study provides new evidence on the long-term effects of couple separation on women's living standards in France, with a particular focus on food consumption and nutritional well-being. Using detailed panel data and an event-study design, I show that separation leads to sharp and persistent declines in disposable income, food purchases, and women's body weight. These effects are especially pronounced in low-income and single-parent households, where the risk of underweight status increases.

The findings challenge the view that welfare systems in high-income countries fully shield households from material hardship. In France, despite a generous safety net, some households struggle to maintain adequate nutrition after separation. Labour market participation offers limited protection, and while repartnering is associated with partial recovery, it may also reflect constrained choices shaped by economic need.

More broadly, the results highlight the importance of looking beyond income when assessing the impact of separation. Using indicators such as food quantities purchased, diet quality, and body weight provides evidence that some households fall below subsistence thresholds following separation, with potential long-term consequences for health and well-being.

Ensuring that households can meet their basic needs after separation is a matter of public health, social justice, and economic efficiency. Strengthening support for low-income, single-parent families and improving enforcement of existing support mechanisms could help prevent nutritional hardship and promote more resilient household trajectories following family dissolution.

Appendix

See Tables [1](#), [2](#), [3](#), [4](#), [5](#), [6](#), [7](#), [8](#), [9](#) and Figs. [4](#), [5](#), [6](#), [7](#), [8](#), [9](#), [10](#), [11](#), [12](#), [13](#), [14](#), [15](#), [16](#), [17](#), [18](#), [19](#) and [20](#)

Table 1 Summary statistics, pooled household-year observations

	Hh. observed ≥ 7 years		All households		Mean diff. (std. err.)
	Mean (std. dev.)	n	Mean (std. dev.)	n	
Household income (EUR)	2667.16 (1413.96)	80,764	2646.61 (1419.32)	183,870	20.56 (5.985)
Food quantity (kg)	764.84 (430.38)	80,764	624.82 (435.28)	183,870	140.0 (1.831)
BMI of female partner	25.09 (4.74)	76,876	24.92 (4.85)	173,027	0.172 (0.0209)
Share of unhealthy food purchases	0.19 (0.11)	80,764	0.21 (0.12)	183,870	- 0.0202 (0.000502)
Household size	2.51 (1.32)	80,764	2.61 (1.37)	183,870	- 0.0997 (0.00572)
Age partner 1	53.04 (14.85)	80,764	47.66 (15.33)	183,870	5.377 (0.0641)
Age partner 2	54.48 (15.02)	80,764	49.1 (15.47)	183,870	5.380 (0.0647)
Partner 1 inactive = 1	0.41 (0.49)	80,764	0.32 (0.47)	183,870	0.0870 (0.00200)
Partner 2 inactive = 1	0.37 (0.48)	80,764	0.27 (0.44)	183,870	0.0978 (0.00192)
Household calorie needs	3417.47 (1797.38)	77,600	3508.97 (1801.73)	174,641	- 91.50 (7.767)
Meals at home per day	2.15 (1.12)	79,975	2.17 (1.17)	175,762	- 0.0180 (0.00492)

Summary statistics of pooled household-year observations using all available household observations, compared to the sample restricted to households observed for at least 7 consecutive years. The last column shows mean differences with standard errors in parentheses.

Table 2 Statistics for France

	Mean	Description and source
Household income (EUR)	2918.7	Average household disposable income, <i>Revenus et patrimoine des ménages</i> , Insee https://www.insee.fr/fr/statistiques/5371205?sommaire=5371304
BMI of female partner	23.6	Insee, 2000 de Saint Pol (2006)
Household size	2.26	<i>Tableaux de l'économie française, Édition 2020</i> , Insee https://www.insee.fr/fr/statistiques/4277630?sommaire=4318291
Age partner 1 (women)	42.0	Âge moyen et âge médian de la population, Insee, 2013 https://www.insee.fr/fr/statistiques/2381476#:text=p%20%3A%20domm%C3%A9es%20provisoires%20arr%C3%AAt%C3%A9es%20%C3%A0%20partir%20de%202014
Age partner 2 (men)	39.1	Âge moyen et âge médian de la population, Insee, 2013 https://www.insee.fr/fr/statistiques/2381476#:text=p%20%3A%20domm%C3%A9es%20provisoires%20arr%C3%AAt%C3%A9es%20%C3%A0%20partir%20de%202014
Partner 1 (woman) inactive = 1	0.35	<i>Tableaux de l'économie française Édition 2019, Population active</i> , Insee, 2013 https://www.insee.fr/fr/statistiques/3676623?sommaire=3696937
Partner 2 (man) inactive = 1	0.25	<i>Tableaux de l'économie française Édition 2019, Population active</i> , Insee, 2013 https://www.insee.fr/fr/statistiques/3676623?sommaire=3696937

Statistics for France from diverse sources.

Table 3 Summary statistics, pooled household-year observations

	Treatment households		Control households		Mean diff. (std. err.)
	Year of separation		Couple households only		
	Mean (std. dev.)	n	Mean (std. dev.)	n	
Household income (EUR)	2650.84 (1355.96)	1038	2977.1 (1434.33)	56,303	− 326.3 (7.27)
Food quantity (kg)	737 (381.95)	1038	883.01 (423.32)	56,303	− 146.0 (11.03)
BMI of female partner	24.84 (4.8)	992	24.96 (4.73)	53,620	− 0.116 (0.77)
Share of unhealthy food	0.22 (0.12)	1038	0.19 (0.11)	56,303	0.0285 (8.49)
Household size	3.03 (1.16)	1038	3.04 (1.14)	56,303	− 0.0114 (0.32)
Age partner 1	49.16 (16.05)	1038	50.95 (13.72)	56,303	− 1.787 (4.14)
Age partner 2	49.34 (17.92)	1038	52.96 (14.09)	56,303	− 3.625 (8.16)
Partner 1 inactive = 1	0.33 (0.47)	1038	0.37 (0.48)	56,303	− 0.0366 (2.43)
Partner 2 inactive = 1	0.3 (0.46)	1038	0.31 (0.46)	56,303	− 0.0163 (1.12)
Household calorie needs	4060.53 (1534.27)	999	4117.07 (1581.54)	54,095	− 56.54 (1.12)
Meals at home per day	2.24 (1.03)	1023	2.56 (0.98)	55,781	− 0.324 (40.79)

Summary statistics of treated households in the year of separation and control couple households. The last column shows mean differences with standard error in parentheses.

Table 4 Household observations by year of distance to separation

Distance to separation	All households	Male partner leaves	Female partner leaves
- 7	71	61	10
- 6	162	139	23
- 5	259	217	42
- 4	345	284	61
- 3	545	437	108
- 2	787	639	148
- 1	1038	854	184
0	1038	854	184
1	1038	854	184
2	697	571	126
3	465	379	86
4	226	187	39
5	111	93	18
6	88	74	14
7	54	44	10
8	28	25	3

Number of treated households observed by year of distance to separation. For example, 71 households are observed 7 years prior to separation.

Table 5 Main results - Evolution of the outcome variables around the time of separation for households that are female-headed after separation

	Income (log)	Food quantity (log)	BMI (log)	Unhealthy food (share)
Event time - 7	- 0.0289 (0.032)	- 0.0299 (0.051)	0.00491 (0.006)	- 0.0159** (0.006)
Event time - 6	0.00563 (0.019)	- 0.0556 (0.041)	0.00104 (0.004)	- 0.0172*** (0.005)
Event time - 5	0.0124 (0.016)	- 0.0366 (0.041)	0.00180 (0.003)	- 0.0160*** (0.005)
Event time - 4	- 0.00266 (0.015)	- 0.0427 (0.033)	0.000747 (0.003)	- 0.0151*** (0.004)
Event time - 3	- 0.00434 (0.014)	- 0.0219 (0.028)	- 0.000890 (0.002)	- 0.0108*** (0.003)
Event time - 2	0.00767 (0.008)	- 0.0449 (0.026)	0.00128 (0.002)	- 0.00720*** (0.002)
Event time - 1	0 (.)	0 (.)	0 (.)	0 (.)
Event time 0	- 0.0665*** (0.010)	0.0343 (0.022)	- 0.00513*** (0.002)	0.00225 (0.002)

Table 5 (continued)

	Income (log)	Food quantity (log)	BMI (log)	Unhealthy food (share)
Event time 1	– 0.219*** (0.015)	– 0.234*** (0.031)	– 0.0141*** (0.002)	0.00703* (0.003)
Event time 2	– 0.292*** (0.017)	– 0.401*** (0.039)	– 0.0183*** (0.003)	0.00431 (0.004)
Event time 3	– 0.303*** (0.021)	– 0.392*** (0.042)	– 0.0134*** (0.003)	– 0.000639 (0.005)
Event time 4	– 0.284*** (0.027)	– 0.413*** (0.060)	– 0.00202 (0.005)	0.00596 (0.006)
Event time 5	– 0.291*** (0.039)	– 0.492*** (0.079)	– 0.00148 (0.007)	0.00408 (0.008)
Event time 6	– 0.282*** (0.039)	– 0.332*** (0.061)	0.00506 (0.008)	– 0.00642 (0.008)
Event time 7	– 0.250*** (0.051)	– 0.241** (0.078)	– 0.00174 (0.009)	– 0.00698 (0.012)
Event time 8	– 0.328*** (0.068)	– 0.267** (0.083)	– 0.00877 (0.012)	– 0.0100 (0.012)
Household size	0.0555*** (0.004)	0.153*** (0.007)	0.00103 (0.001)	0.00265** (0.001)
Constant	7.291*** (0.096)	12.55*** (0.179)	3.133*** (0.022)	0.184*** (0.021)
Observations	80,860	80,860	77,111	80,860
R^2	0.158	0.092	0.033	0.048
Year fixed effects	Yes	Yes	Yes	Yes
Household fixed effects	Yes	Yes	Yes	Yes

Robust standard errors clustered at the level of the household in parentheses. The table shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The dependent variables are the logarithm of household disposable income, logarithm of household food quantities purchased, the logarithm of the BMI of the remaining partner (the woman), and the share of unhealthy food products purchased in total amount of food purchased. In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 6 Evolution of the probability of being underweight, normal weight, overweight or obese of the remaining partner around the time of separation

	Underweight	Normal weight	Overweight	Obese
Event time – 7	– 0.00448 (0.007)	0.0119 (0.027)	– 0.0151 (0.030)	0.0316 (0.022)
Event time – 6	– 0.00287 (0.005)	0.0438 (0.023)	– 0.0474 (0.027)	0.0151 (0.014)
Event time – 5	– 0.000860 (0.006)	0.0170 (0.019)	– 0.0158 (0.022)	0.00429 (0.013)
Event time – 4	0.00722 (0.007)	0.00886 (0.016)	– 0.00306 (0.018)	– 0.00455 (0.011)
Event time – 3	0.00140 (0.005)	0.0143 (0.013)	– 0.00393 (0.013)	– 0.00435 (0.008)
Event time – 2	– 0.00169 (0.003)	0.00263 (0.009)	– 0.00304 (0.009)	0.0102 (0.006)
Event time – 1	0 (.)	0 (.)	0 (.)	0 (.)
Event time 0	0.00466* (0.002)	0.0154* (0.007)	– 0.00951 (0.007)	0.00273 (0.005)
Event time 1	0.00748* (0.004)	0.0400*** (0.011)	– 0.0330** (0.011)	– 0.00737 (0.007)
Event time 2	0.00626 (0.005)	0.0492*** (0.013)	– 0.0373** (0.013)	– 0.00770 (0.009)
Event time 3	0.00911 (0.006)	0.0375* (0.016)	– 0.0462** (0.018)	0.00458 (0.012)
Event time 4	0.00322 (0.007)	– 0.00107 (0.024)	– 0.0163 (0.027)	0.0213 (0.018)
Event time 5	– 0.000850 (0.012)	– 0.0167 (0.034)	– 0.00304 (0.037)	0.00910 (0.023)
Event time 6	– 0.0272 (0.018)	0.0307 (0.038)	– 0.0278 (0.039)	0.0116 (0.027)
Event time 7	– 0.0455 (0.026)	0.0469 (0.044)	0.0000760 (0.042)	– 0.0176 (0.027)
Event time 8	– 0.0421 (0.031)	0.0431 (0.054)	– 0.0170 (0.051)	– 0.00222 (0.031)
Household size	0.000546 (0.001)	– 0.00155 (0.003)	– 0.000476 (0.003)	0.000201 (0.002)
Constant	0.0726* (0.031)	0.467*** (0.072)	0.355*** (0.101)	0.0250 (0.047)
Observations	80,860	80,860	80,860	80,860
R^2	0.006	0.005	0.008	0.010
Year fixed effects	Yes	Yes	Yes	Yes
Household fixed effects	Yes	Yes	Yes	Yes
Partners' age dummies	Yes	Yes	Yes	Yes

Table 6 (continued)

Robust standard errors clustered at the level of the household in parentheses. The table shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The dependent variables are dummy variables equal to 1 if the female partner in household i in year t is underweight (variable equal to 1 for a BMI < 18.5 and 0 otherwise), normal weight (variable equal to 1 for a BMI ≥ 18.5 and < 25 and 0 otherwise), overweight (variable equal to 1 for a BMI ≥ 25 and < 30 and 0 otherwise) or obese (variable equal to 1 for a BMI > 30 and 0 otherwise). In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 7 Evolution of the outcome variables per capita, per consumption unit and in levels around the time of separation

	(1) Per capita income	(2) Per capita food purchases	(3) Per cons. unit income	(4) Per cons. unit food purchases	(5) Income	(6) Food purchases	(7) BMI
Event time - 7	- 0.0315 (0.030)	- 0.0325 (0.048)	- 0.0313 (0.031)	- 0.0323 (0.050)	- 60.19 (81.801)	20.62 (37.087)	0.147 (0.158)
Event time - 6	- 0.00160 (0.019)	- 0.0628 (0.041)	- 0.0000452 (0.019)	- 0.0613 (0.041)	- 12.37 (50.562)	- 1.627 (24.755)	0.0271 (0.104)
Event time - 5	0.00833 (0.017)	- 0.0408 (0.041)	0.0127 (0.016)	- 0.0364 (0.041)	16.02 (42.330)	16.53 (22.447)	0.0473 (0.090)
Event time - 4	- 0.00339 (0.015)	- 0.0434 (0.033)	- 0.000629 (0.014)	- 0.0407 (0.033)	- 8.836 (41.073)	- 3.417 (19.468)	0.0440 (0.093)
Event time - 3	- 0.00348 (0.014)	- 0.0211 (0.028)	0.000145 (0.014)	- 0.0175 (0.028)	5.510 (35.718)	15.47 (15.230)	- 0.0142 (0.068)
Event time - 2	0.00809 (0.008)	- 0.0445 (0.026)	0.00943 (0.008)	- 0.0431 (0.026)	21.48 (20.076)	0.158 (12.855)	0.0396 (0.048)
Event time - 1	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Event time 0	- 0.0719*** (0.010)	0.0289 (0.022)	- 0.0727*** (0.010)	0.0281 (0.022)	- 156.0*** (24.885)	- 33.70** (10.780)	- 0.121*** (0.040)
Event time 1	- 0.0883*** (0.016)	- 0.103*** (0.031)	- 0.105*** (0.015)	- 0.120*** (0.031)	- 482.7*** (37.774)	- 113.2*** (13.723)	- 0.345*** (0.058)
Event time 2	- 0.157*** (0.018)	- 0.266*** (0.039)	- 0.181*** (0.017)	- 0.290*** (0.039)	- 648.6*** (44.212)	- 170.3*** (15.618)	- 0.447*** (0.074)
Event time 3	- 0.169*** (0.021)	- 0.258*** (0.042)	- 0.196*** (0.021)	- 0.285*** (0.042)	- 682.4*** (53.712)	- 165.8*** (17.229)	- 0.322*** (0.091)

Table 7 (continued)

	(1) Per capita income	(2) Per capita food purchases	(3) Per cons. unit income	(4) Per cons. unit food purchases	(5) Income	(6) Food purchases	(7) BMI
Event time 4	-0.153*** (0.027)	-0.282*** (0.059)	-0.180*** (0.027)	-0.309*** (0.059)	-597.2*** (83.288)	-153.0*** (23.354)	-0.0344 (0.128)
Event time 5	-0.158*** (0.037)	-0.359*** (0.079)	-0.182*** (0.037)	-0.384*** (0.079)	-600.1*** (122.775)	-190.8*** (29.289)	-0.0340 (0.176)
Event time 6	-0.135*** (0.038)	-0.185*** (0.061)	-0.163*** (0.038)	-0.214*** (0.061)	-581.6*** (119.209)	-153.2*** (30.407)	0.102 (0.210)
Event time 7	-0.102* (0.050)	-0.0931 (0.074)	-0.135** (0.051)	-0.127 (0.075)	-477.0** (164.296)	-108.0** (38.282)	-0.0958 (0.244)
Event time 8	-0.157* (0.076)	-0.0957 (0.079)	-0.197** (0.073)	-0.136 (0.082)	-644.7*** (156.443)	-141.5* (57.626)	-0.338 (0.345)
Household size	-0.295*** (0.004)	-0.198*** (0.006)	-0.227*** (0.004)	-0.129*** (0.006)	145.5*** (11.383)	114.3*** (4.023)	0.0269 (0.020)
Observations	80,860	80,860	80,860	80,860	80,860	80,860	77,111
R ²	0.391	0.070	0.292	0.058	0.130	0.121	0.029
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Age dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Robust standard errors clustered at the level of the household in parentheses. The table shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The dependent variables are per capita or per consumption unit disposable household income, food quantities purchased, and disposable household income, household food quantities purchased, the woman's BMI measured in levels. In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 8 Evolution of outcomes around the time of separation - robustness to different model specifications

	Log income		Log food		Log BMI		Share unhealthy food	
Event time -7	-0.00759 (0.032)	-0.00793 (0.032)	-0.00770 (0.050)	-0.0112 (0.051)	0.00830 (0.006)	0.00831 (0.006)	-0.0174** (0.006)	-0.0173** (0.006)
Event time -6	0.0153 (0.019)	0.0148 (0.019)	-0.0474 (0.042)	-0.0508 (0.043)	0.00322 (0.004)	0.00322 (0.004)	-0.0186*** (0.005)	-0.0185*** (0.005)
Event time -5	0.0201 (0.016)	0.0208 (0.016)	-0.0270 (0.041)	-0.0272 (0.041)	0.00297 (0.003)	0.00300 (0.003)	-0.0168*** (0.005)	-0.0166*** (0.005)
Event time -4	0.00342 (0.015)	0.00405 (0.015)	-0.0352 (0.033)	-0.0347 (0.033)	0.00159 (0.003)	0.00161 (0.003)	-0.0159*** (0.004)	-0.0158*** (0.004)
Event time -3	-0.00431 (0.014)	-0.00299 (0.014)	-0.0180 (0.029)	-0.0156 (0.029)	-0.000761 (0.002)	-0.000717 (0.002)	-0.0110*** (0.003)	-0.0109*** (0.003)
Event time -2	0.00623 (0.008)	0.00679 (0.008)	-0.0446 (0.026)	-0.0444 (0.026)	0.00133 (0.002)	0.00136 (0.002)	-0.00685** (0.002)	-0.00676** (0.002)
Event time -1	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)
Event time 0	-0.0643*** (0.010)	-0.0651*** (0.010)	0.0351 (0.022)	0.0348 (0.022)	-0.00480** (0.002)	-0.00484** (0.002)	0.00179 (0.002)	0.00166 (0.002)
Event time 1	-0.188*** (0.014)	-0.180*** (0.014)	-0.189*** (0.031)	-0.188*** (0.031)	-0.0115*** (0.002)	-0.0110*** (0.002)	0.00805* (0.003)	0.00959** (0.003)
Event time 2	-0.261*** (0.016)	-0.254*** (0.016)	-0.356*** (0.038)	-0.358*** (0.038)	-0.0154*** (0.003)	-0.0150*** (0.003)	0.00540 (0.004)	0.00681 (0.004)
Event time 3	-0.272*** (0.020)	-0.266*** (0.020)	-0.352*** (0.041)	-0.356*** (0.041)	-0.0108*** (0.003)	-0.0104** (0.003)	0.0000122 (0.005)	0.00131 (0.005)
Event time 4	-0.259*** (0.027)	-0.252*** (0.027)	-0.370*** (0.060)	-0.373*** (0.060)	-0.000617 (0.005)	-0.000210 (0.005)	0.00647 (0.006)	0.00774 (0.006)

Table 8 (continued)

	Log income	Log food	Log BMI	Share unhealthy food
Event time 5	- 0.276*** (0.039)	- 0.476*** (0.078)	- 0.00150 (0.007)	0.00598 (0.008)
Event time 6	- 0.271*** (0.040)	- 0.332*** (0.059)	0.00492 (0.008)	- 0.00502 (0.008)
Event time 7	- 0.244*** (0.051)	- 0.226*** (0.076)	- 0.00206 (0.009)	- 0.00728 (0.012)
Event time 8	- 0.321*** (0.068)	- 0.242*** (0.082)	- 0.00901 (0.012)	- 0.00988 (0.012)
Household size	0.0697*** (0.004)	0.180*** (0.006)	0.00137* (0.001)	0.00413*** (0.001)
Consumption unit	0.0113*** (0.001)	0.0263*** (0.001)	0.000268* (0.000)	0.000816*** (0.000)
Constant	7.660*** (0.009)	12.79*** (0.017)	3.210*** (0.002)	0.184*** (0.002)
Observations	80,860	80,860	77,111	80,860
R ²	0.131	0.081	0.021	0.035
Year FE	Yes	Yes	Yes	Yes
Household FE	Yes	Yes	Yes	Yes

Robust standard errors clustered at the level of the household in parentheses. The table shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The dependent variables are the logarithm of household disposable income, the logarithm of food quantities purchased, the logarithm of the woman's BMI and the share of unhealthy food purchases in total food purchases. All regressions include household and year fixed effects. The data cover the period from 2005 to 2015.

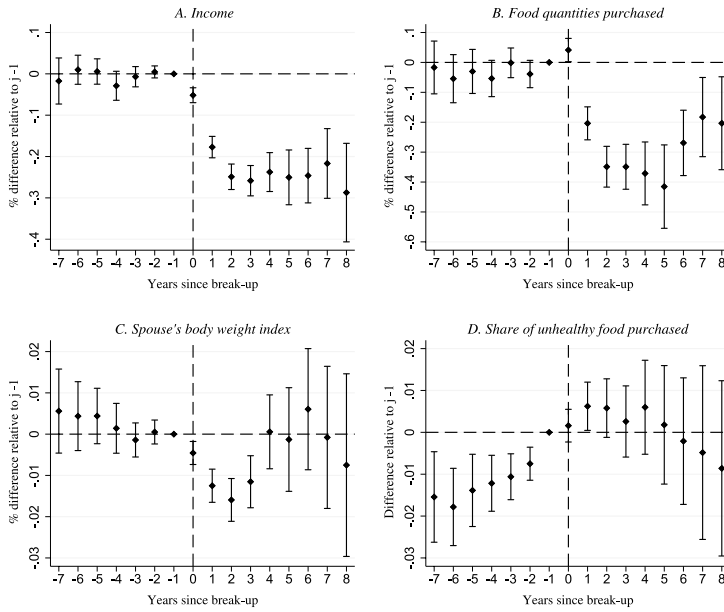
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 9 Evolution of meals eaten at home, female partner's labor market status, and repartnering status around the time of separation

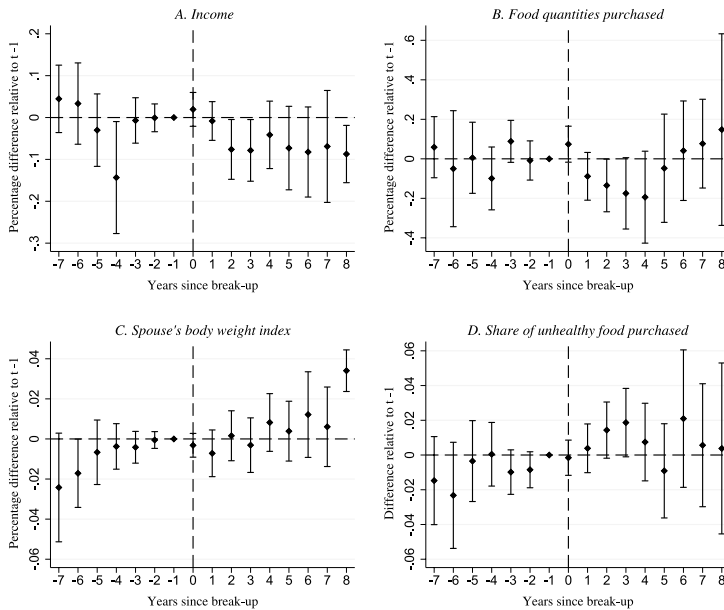
	Nb. meals	Women is inactive = 1	Women repartnered = 1
Event time - 7	0.0834 (0.056)	- 0.00227 (0.024)	0.00210 (0.002)
Event time - 6	0.0175 (0.030)	- 0.00466 (0.023)	0.00467** (0.002)
Event time - 5	0.0678* (0.029)	0.00164 (0.018)	0.00400** (0.001)
Event time - 4	0.0306 (0.024)	- 0.00663 (0.014)	0.00358** (0.001)
Event time - 3	0.00975 (0.014)	- 0.0105 (0.011)	0.000606 (0.001)
Event time - 2	0.0249 (0.013)	- 0.000990 (0.006)	- 0.0000905 (0.001)
Event time - 1	0 (.)	0 (.)	0 (.)
Event time 0	- 0.0767*** (0.011)	- 0.0155** (0.005)	- 0.0000642 (0.000)
Event time 1	0.225*** (0.019)	- 0.0320*** (0.007)	0.0000181 (0.000)
Event time 2	0.0816*** (0.019)	- 0.0428*** (0.009)	0.0506*** (0.009)
Event time 3	0.0571** (0.020)	- 0.0299** (0.012)	0.0296** (0.009)
Event time 4	0.117* (0.055)	- 0.0474*** (0.014)	0.0281* (0.013)
Event time 5	0.146 (0.096)	- 0.0210 (0.026)	0.0104 (0.016)
Event time 6	- 0.0116 (0.048)	- 0.0339 (0.029)	0.00684 (0.015)
Event time 7	- 0.0172 (0.060)	- 0.0258 (0.041)	- 0.00855 (0.007)
Event time 8	- 0.0782 (0.124)	- 0.0753 (0.039)	- 0.000133 (0.008)
Constant	0.901*** (0.004)	0.445*** (0.003)	- 0.000192 (0.000)
Observations	80,027	80,860	80,860
R^2	0.010	0.023	0.032
Year fixed effects	Yes	Yes	Yes
Household fixed effects	Yes	Yes	Yes

Robust standard errors clustered at the level of the household in parentheses. The table shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The dependent variables are the average number of meals eaten at home in a typical week and the labour market status of the female partner who remains in the household after separation, measured as a dummy variable equal to one if she is inactive.

Fig. 4 Trends in outcome variables around separation for **a** all households, regardless of the sex of the partner who remains, and **b** households in which the male partner remains after separation. The figure shows event time coefficients relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). **a** Results for all households, while **b** shows results for households where the remaining partner is male. The dependent variables are the logarithm of income, food quantities purchased, remaining partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household



(a) Effect of separation, regardless of the sex of the partner remaining in the household



(b) Effect of separation for households where the male partner remains

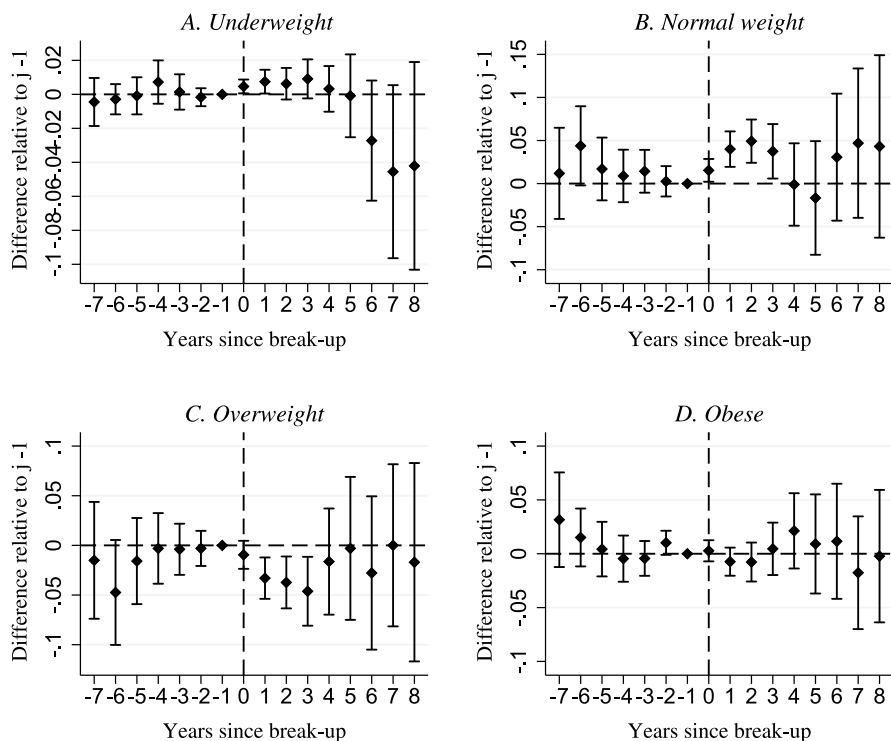


Fig. 5 Trends in the probability of being underweight, normal weight, overweight or obese around separation. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The dependent variables are dummy variables indicating whether the female partner in household i in year t is underweight (variable equals 1 for a BMI < 18.5 and 0 otherwise), of normal weight (variable equals 1 for a BMI ≥ 18.5 and < 25 and 0 otherwise), overweight (variable equals 1 for a BMI ≥ 25 and < 30 and 0 otherwise) or obese (variable equals 1 for a BMI > 30 and 0 otherwise). In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

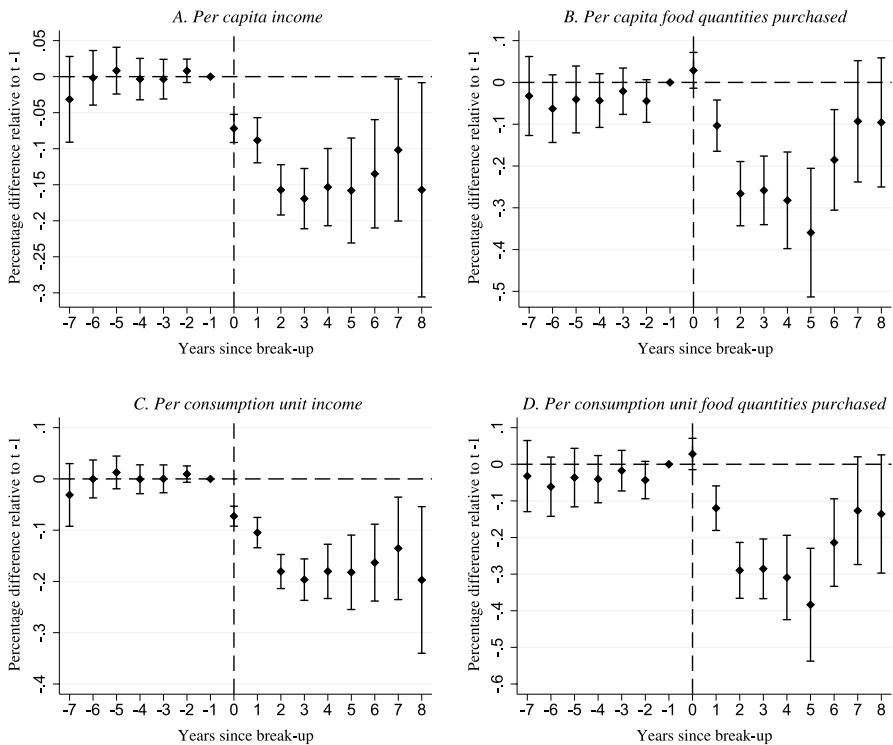


Fig. 6 Trend in outcome variables around separation using per capita or per consumption unit income and food purchases. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The dependent variables are the per capita or per consumption unit income, food quantities purchased by household i in year j . Consumption units are constructed by assigning a weight of 1 to the first adult, 0.7 to each additional person aged 15 or older, and 0.5 to each child under 15, to reflect age-specific needs and economies of scale. In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

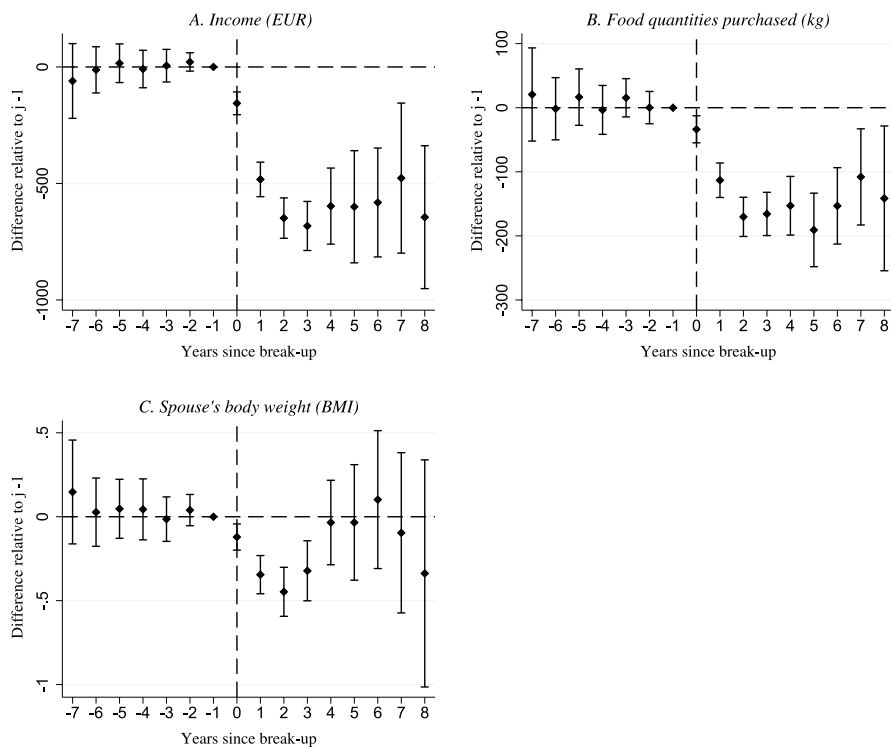


Fig. 7 Trend in outcome variables around separation using the original non-transformed dependent variables. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs, and relative to the year just before separation ($j = -1$). The dependent variables are the income, food quantities purchased, remaining partner's BMI, the share of unhealthy food products purchased in total quantities purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

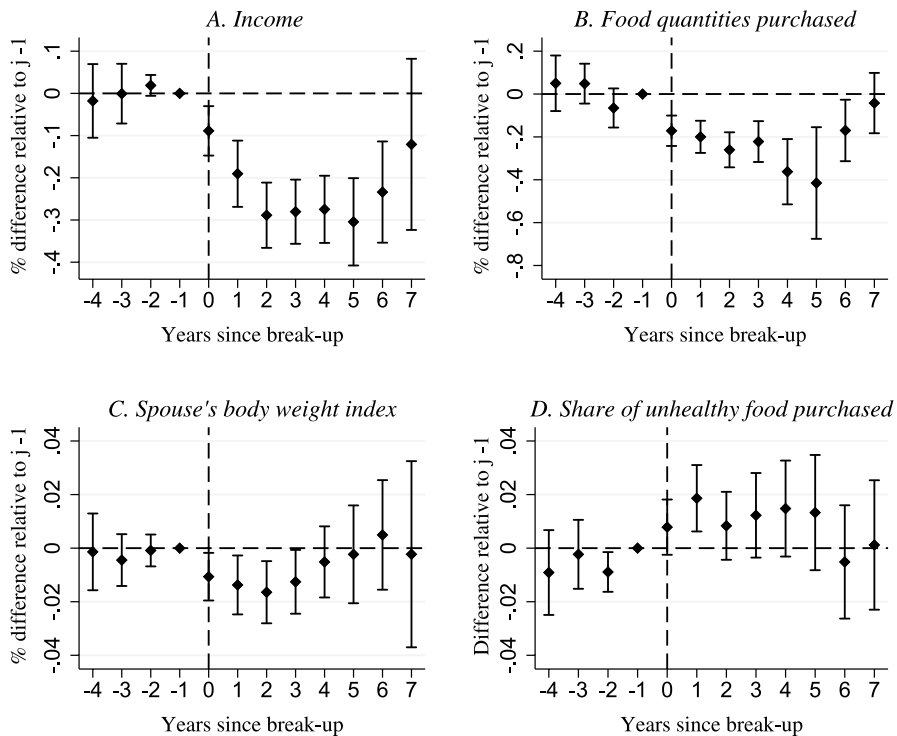


Fig. 8 Trend in outcome variables around separation excluding treated households that are observed fewer than 2 periods before separation and fewer than 4 periods after separation. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The event time coefficients -2 to 4 are estimated off of the same 126 households, whereas the coefficients -5 , -4 and -3 are estimated using data from 22, 25 and 52 households and the event time coefficients 5 , 6 and 7 are estimated using data from 48, 38 and 15 households. The dependent variables are the logarithm of income, food quantities purchased, remaining partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

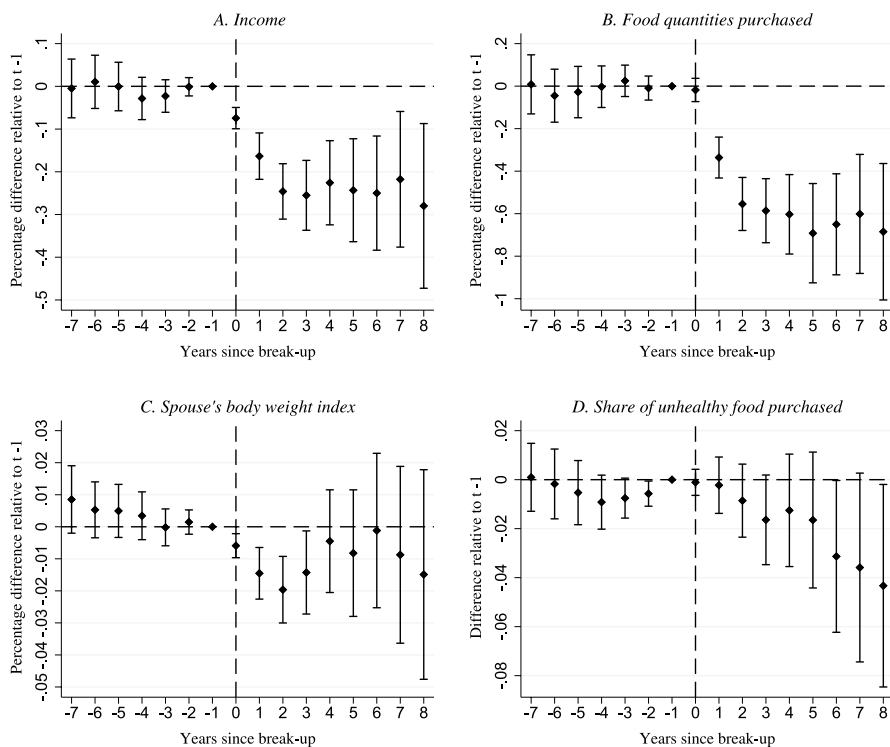


Fig. 9 Trend in outcome variables around separation excluding the control group from the regression. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the year just before separation ($j = -1$). The dependent variables are the logarithm of income, food quantities purchased, female partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

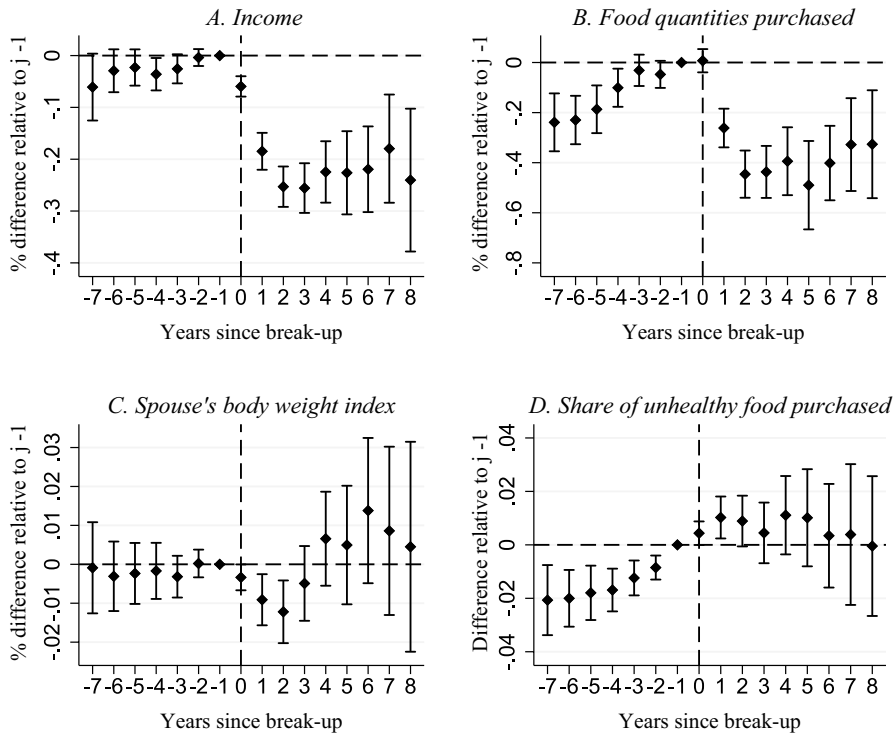


Fig. 10 Trend in outcome variables around separation including only the 4616 untreated households with the highest propensity scores. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The control group consists of 4616 households with the highest propensity score. The dependent variables are the logarithm of income, food quantities purchased, female partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

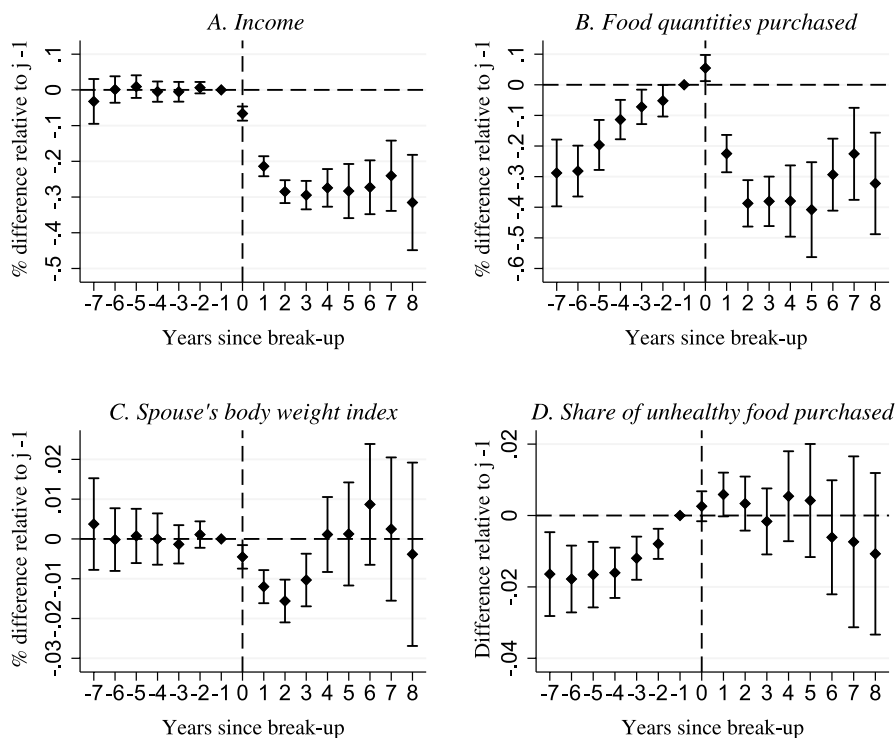


Fig. 11 Trend in outcome variables around separation including untreated households observed for fewer than 7 consecutive years. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The control group includes all untreated households, including those observed fewer than 7 consecutive years. The dependent variables are the logarithm of income, food quantities purchased, female partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

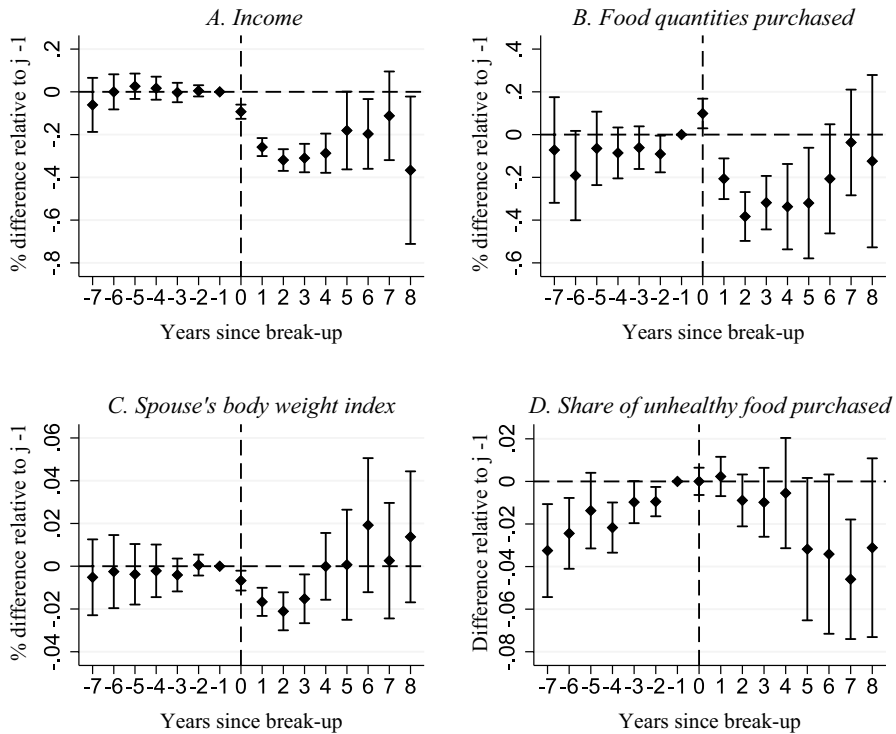


Fig. 12 Trend in outcome variables around separation excluding treated households where one of the partners is older than 45 years at the time of separation. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The treatment group is restricted to households where both partners are less than 45 years old at the time of the separation. The dependent variables are the logarithm of income, food quantities purchased, remaining partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

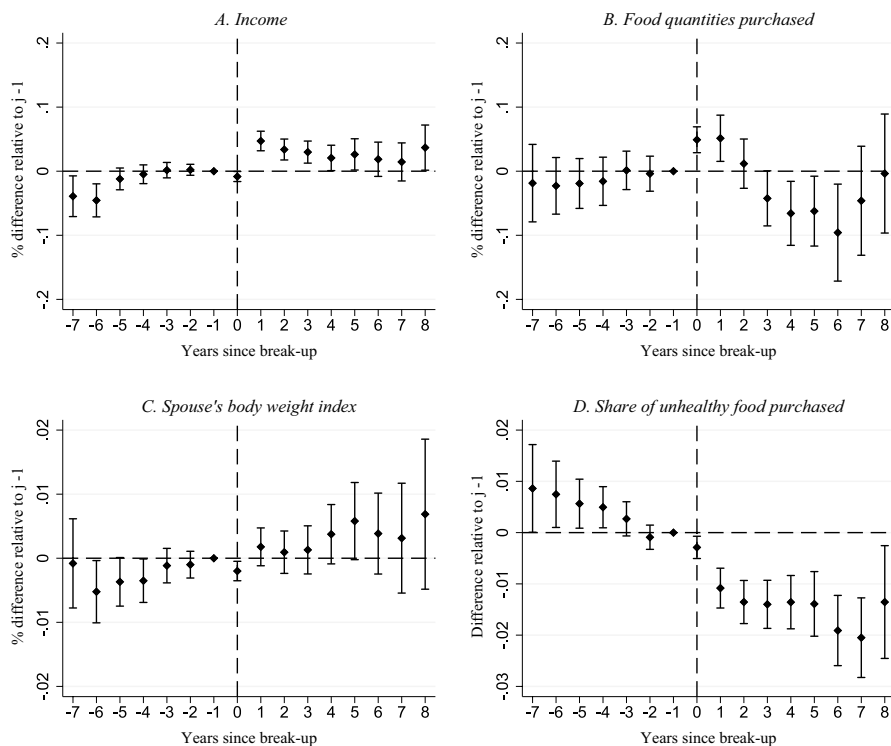
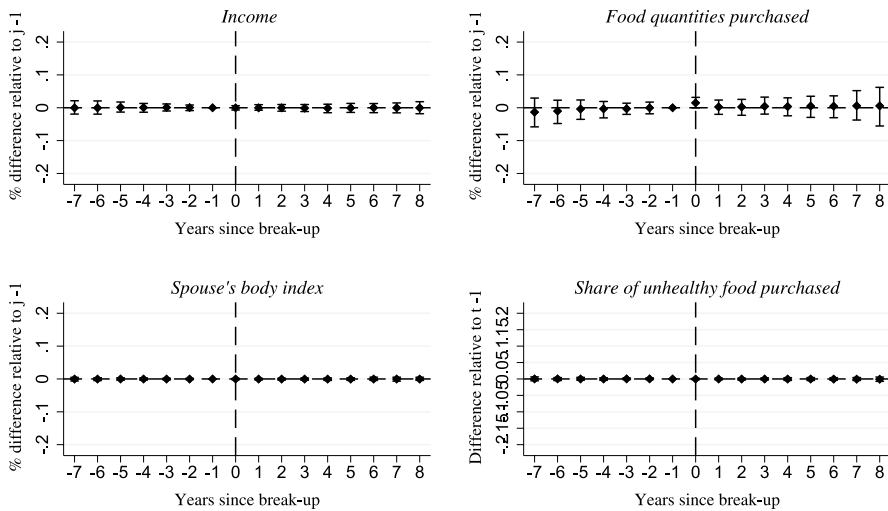


Fig. 13 Trend in outcome variables around the time another person than the partner leaves the household. The figure shows event time coefficients relative to the control group of households where no person other than the partner leaves the household and relative to the year just before the person other than the partner leaves the household ($j = -1$). The dependent variables are the logarithm of income, food quantities purchased, female partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

Placebo using random separation dates in households that do not separate



Placebo using reshuffled separation dates in households that separate

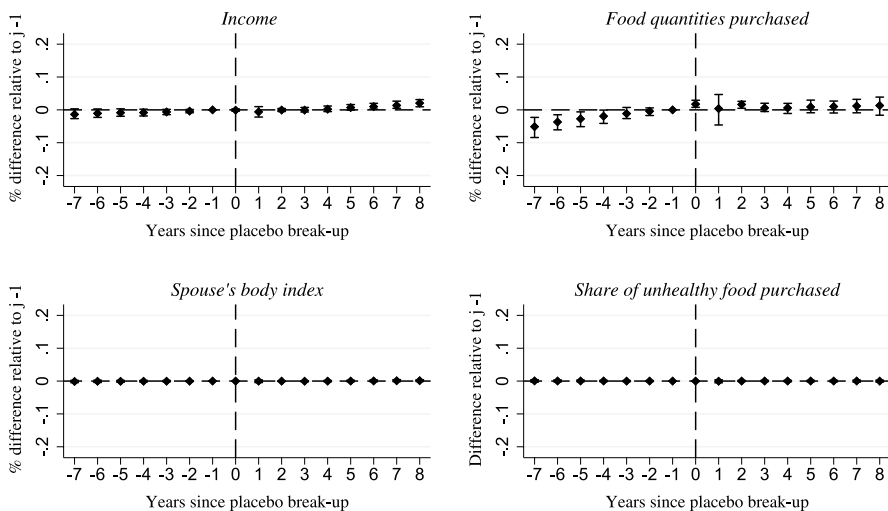
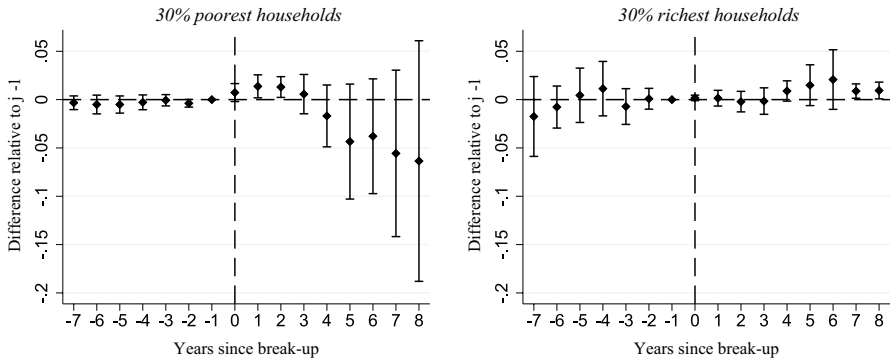


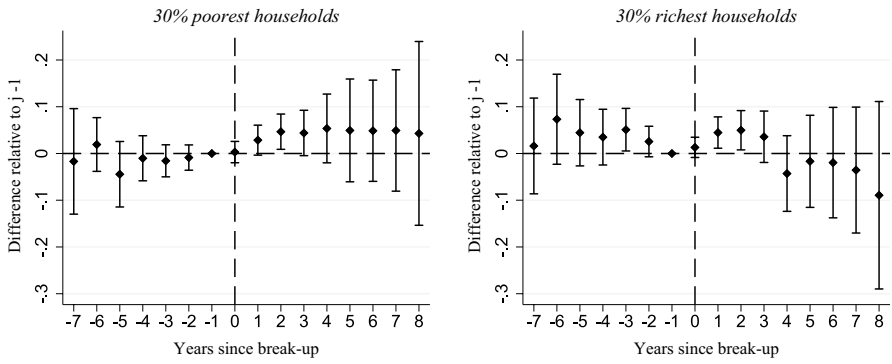
Fig. 14 Trend in outcome variables around placebo dates of separation. The figure shows the mean and the 95th percentile of the coefficient distributions of placebo exercises, that is, event time coefficients estimated relative to the placebo control group of households and relative to the year just before the placebo date of separation ($j = -1$). The upper four graphs show the effects of assigning random separation dates in households that do not separate, while the lower four graphs show the effects of randomly reassigning separation dates in the households that separate. The dependent variables are the logarithm of income, food quantities purchased, female partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

Fig. 15 Trend in the probability of being underweight, normal weight or overweight or obese, by household income. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The left-hand panels present results for the 30% of households with the lowest pre-separation per capita incomes, while the right-hand panels show results for the 30% of households with the highest incomes. The dependent variables are dummy variables indicating whether the female partner in household i in year t is underweight (variable equals 1 for a BMI < 18.5 and 0 otherwise), of normal weight (variable equals 1 for a BMI ≥ 18.5 and < 25 and 0 otherwise), overweight (variable equals 1 for a BMI ≥ 25 and < 30 and 0 otherwise), or obese (variable equals 1 for a BMI > 30 and 0 otherwise). In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

A. Underweight



B. Normal weight



C. Overweight or obese

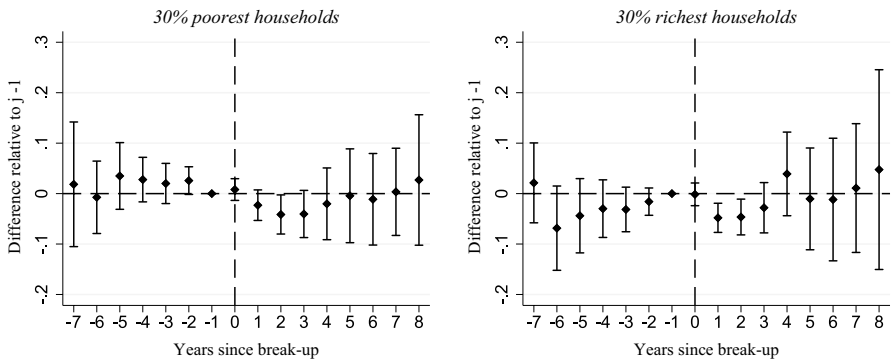


Fig. 17 Trend in outcome variables around separation, by pre-separation employment status of the female partner. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The left-hand panel presents results for households where the woman is employed and the right-hand panel where the woman is not employed. The dependent variables are the logarithm of income, food quantities purchased, female partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

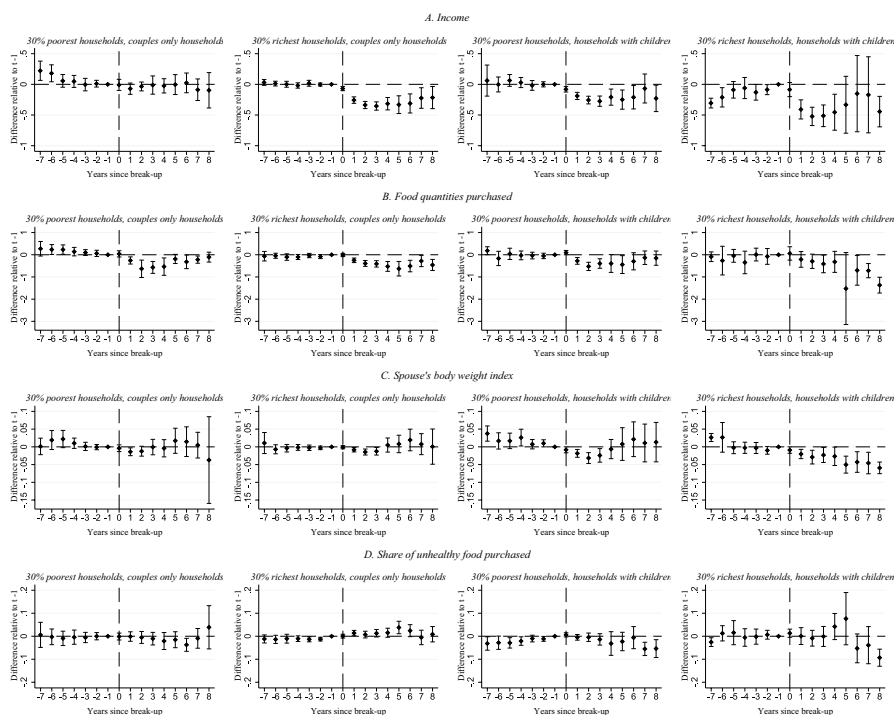
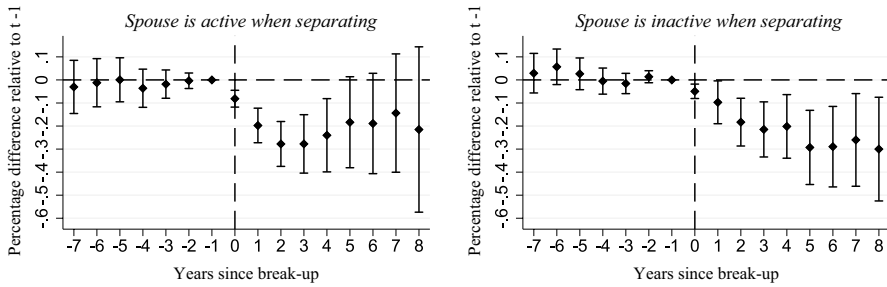
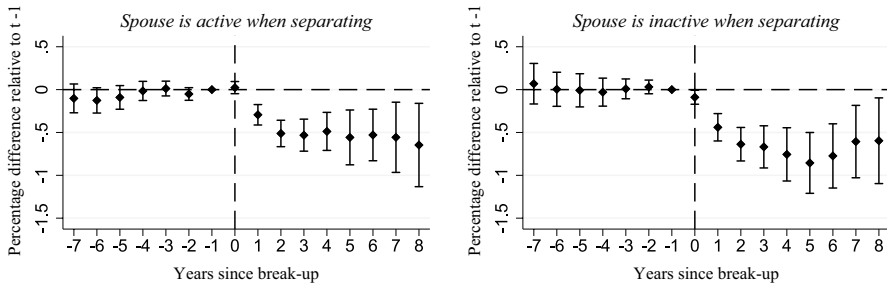


Fig. 16 Trend in outcome variables around separation, by family composition and pre-separation income. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The panels show the results of separate regressions for household groups defined by pre-separation household income and family composition (couple-only households or households with children under 18 at the time of the separation). The dependent variables are the logarithm of income, food quantities purchased, female partner's BMI, and the share of unhealthy food products in total food purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

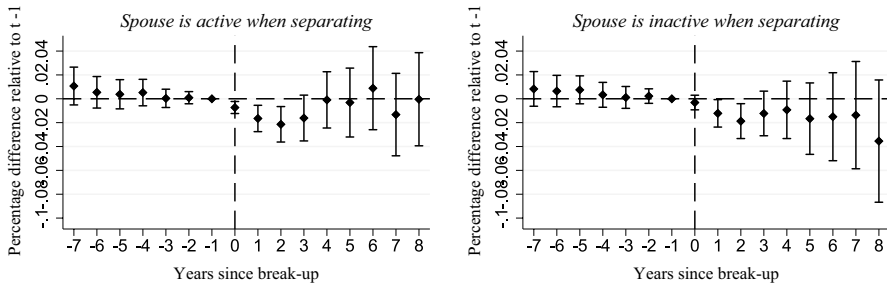
A. Income



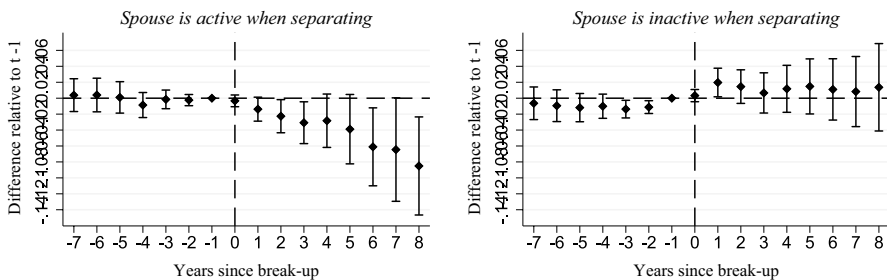
B. Food quantities purchased



C. Spouse's body weight index



D. Share of unhealthy food purchased



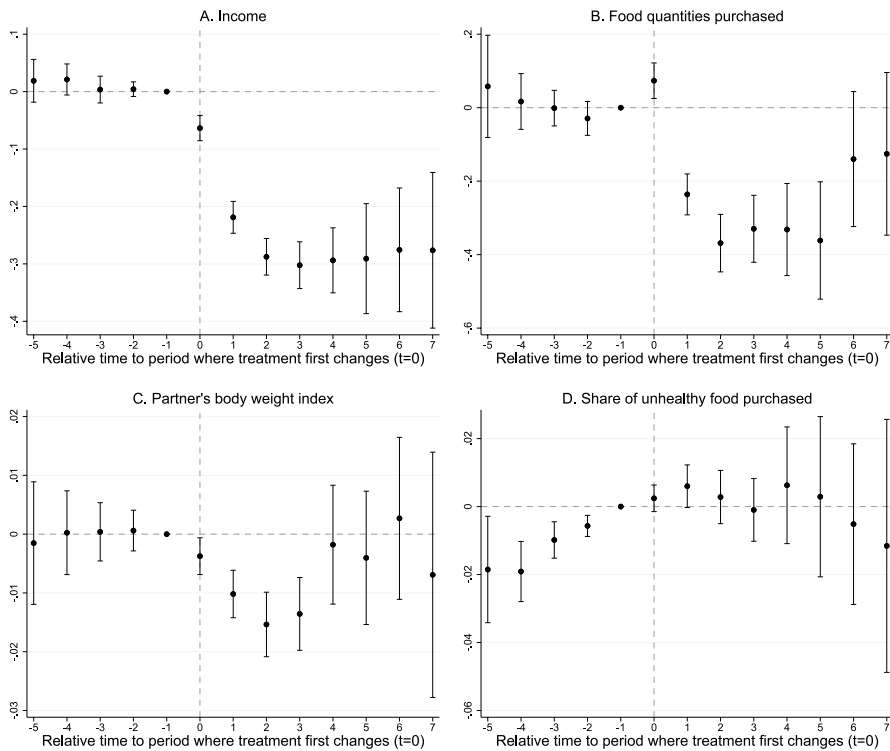


Fig. 18 Trend in outcome variables around separation, robustness to unobserved effect heterogeneity. The figure shows coefficients estimated using the approach proposed by De Chaisemartin and d'Haultfoeuille (2020) for estimates that are robust to unobserved effect heterogeneity (implemented via the *did_multiplegt* package). The approach relies on not-yet-treated units and the parallel trends assumption to identify treatment effects for each treated unit type, which can then be averaged together. The dependent variables are the logarithm of income, food quantities purchased, female partner's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

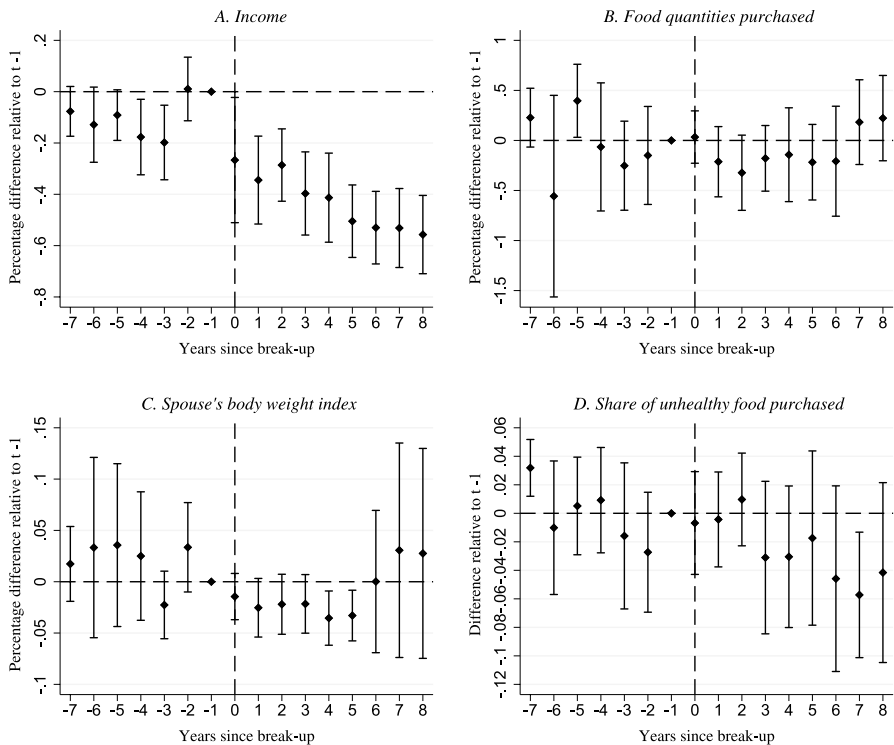


Fig. 19 Trend in outcome variables around separation for the subgroup of households in which the woman becomes active in the labour market after separation. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The figure presents results for the subgroup of households in which the remaining partner (the woman) becomes employed after the separation. The dependent variables are the logarithm of income, food quantities purchased, the woman's BMI, and the share of unhealthy food products in total food purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

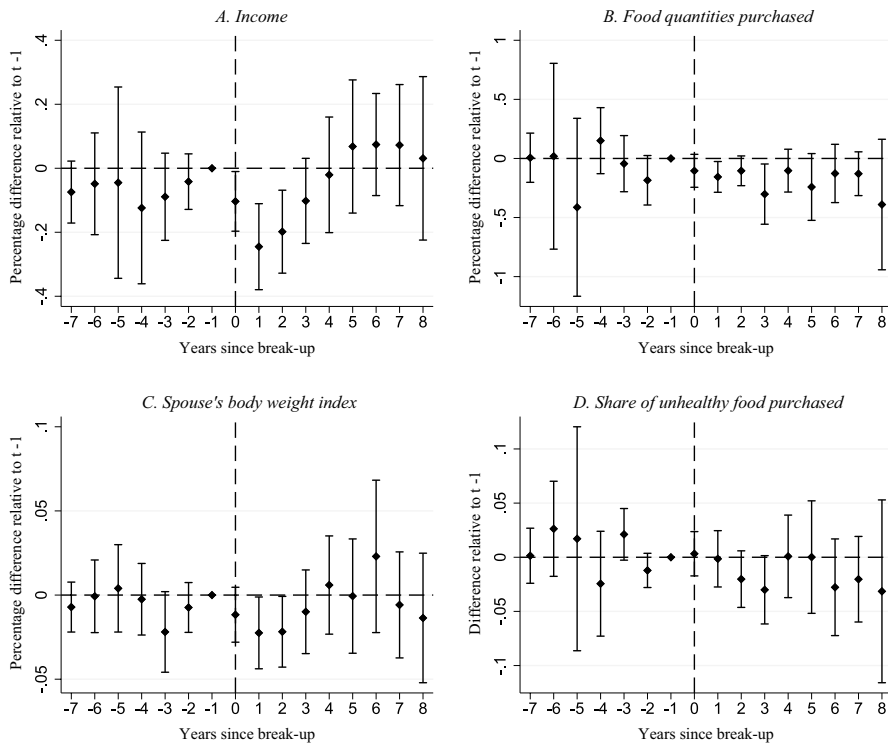


Fig. 20 Trend in outcome variables around separation for the subgroup of households in which the woman enters a new relationship after the separation. The figure shows event time coefficients for the treatment group of households where the male partner leaves the female partner, relative to the control group of households where no separation occurs and relative to the year just before separation ($j = -1$). The figure shows results for the subgroup of households in which the women enters a new relationship after the separation. The dependent variables are the logarithm of income, food quantities purchased, woman's BMI, and the share of unhealthy food products purchased by household i in year t . In addition to household and year fixed effects and household size, all regressions include dummies for both partners' ages. The data cover the period from 2005 to 2015. The 95% confidence intervals are based on standard errors clustered at the level of the household

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Author contributions JM made substantial contributions to the conception of the work, the analysis and interpretation of data; JM drafted the work; JM approved the version to be published and agrees to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Data availability The data cannot be made publicly available by the author as this study uses data from a proprietary consumer panel which the author is not authorised to share. The author will provide information on how to obtain the data from Kantar Worldpanel upon request.

Declarations

Conflict of interest The authors declare no conflict of interest.

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