Child Penalties in Personal Finances: Evidence from Bank Data

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Abstract

We study how parenthood affects gender differences in personal financial behavior using comprehensive, high-frequency bank data covering roughly one third of the adult population in Iceland. Exploiting sharp changes around the birth of the first child in an event-study framework, we show that parenthood generates large and persistent financial child penalties for women. At childbirth, women sharply reduce savings, draw down private pension balances, increase reliance on consumer credit, and disengage from risky asset markets, while men show no comparable response. These effects persist for over two decades after the first birth. To assess whether these patterns are mechanically driven by income losses associated with parental leave, we decompose financial responses into components implied by income changes and behavioral adjustments conditional on income. Income-based mechanical effects explain essentially none of the observed responses; the financial child penalties are driven overwhelmingly by behavioral changes. We interpret these findings through a framework in which parenthood induces endogenous specialization in financial engagement under asymmetric time constraints and limited commitment within households. When separation risk is non-negligible and financial engagement is individual-specific, changes in personal financial behavior reallocate financial risk and control across partners in non-neutral ways. Our results identify parenthood as a central and previously underexplored driver of gender inequality in personal finances, even in a highly gender-egalitarian setting.

Keywords: gender inequality; financial decision making; consumer credit; household finance
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1. Introduction

Gender differences in financial behavior, such as savings, portfolio choice, and participation in risky asset markets, are well documented and economically consequential. These differences shape long-run wealth accumulation, retirement preparedness, and financial resilience, yet their origins remain poorly understood. A parallel literature in labor economics has established that parenthood is a central driver of gender inequality in earnings and employment, generating large and persistent "child penalties" borne disproportionately by mothers. Whether parenthood similarly reshapes gender differences in personal financial behavior is largely unexplored. As a result, the total economic consequences of parenthood for gender inequality remain only partially understood, as existing estimates of the child penalty are almost entirely confined to labor market outcomes.

Existing research on gender differences in financial behavior typically explains observed gaps through differences in preferences, beliefs, risk tolerance, or financial literacy, abstracting from major life-cycle events. At the same time, the child-penalty literature has focused almost exclusively on labor market outcomes (see, e.g., Kleven et al. 2024), without examining how parenthood affects individual savings, investment, and borrowing decisions. If parenthood reshapes financial engagement or reallocates financial risk within households, its consequences for personal balance sheets may extend beyond what is captured by labor market outcomes alone.

We address this gap using detailed administrative bank data from Iceland that track individual-level balances, transactions, borrowing, and investment at high frequency over time. The institutional setting is particularly well suited for studying individual financial behavior: bank accounts and financial assets are held at the individual level rather than jointly. These features allow us to observe personal financial choices within couples and to study how parenthood affects individual financial positions rather than household aggregates.

Using an event-study design centered on the birth of the first child, we document large and immediate changes in women's personal finances at childbirth. Women sharply reduce savings and saving flows, draw down private pension balances, increase reliance on consumer credit, and disengage from risky asset markets. Men's financial behavior shows no comparable

change at childbirth. These changes persist for over two decades and thus shape long-run financial trajectories.

A natural concern is that these patterns simply reflect mechanical responses to income losses associated with parental leave as opposed to behavioral changes conditional on income. To address this, we decompose changes in financial behavior into components implied by income changes and residual adjustments conditional on income, using pre-child income–behavior relationships. Strikingly, income-based mechanical effects explain essentially none of the observed responses, so that the total financial child penalty is entirely driven by behavioral adjustments. We also provide direct evidence that parenthood reduces women's attention to personal finances, as captured by account logins, and show that households partially compensate women's income losses through intra-household transfers.

We interpret these findings through a framework in which parenthood induces endogenous specialization in financial engagement under asymmetric time constraints and limited commitment within households. Financial decision-making requires time and attention, and the arrival of a child disproportionately increases non-market demands on mothers. In settings with limited commitment, understood as the presence of separation risk and incomplete insurance across relationship states, specialization in financial engagement reallocates not only tasks but also financial risk and control. As a result, parenthood generates persistent divergence in individual financial positions that can have long term consequences for individual welfare.

Our paper makes three contributions. First, we document large and persistent child penalties in personal finances, identifying parenthood as a central driver of gender differences in financial behavior as it both creates new gender differences and increases existing ones. Second, we show that these penalties are not primarily driven by income changes, but by behavioral adjustments conditional on income. Third, we bridge the household finance and child-penalty literatures by highlighting how parenthood reallocates financial risk within households under limited commitment, even in a highly gender-egalitarian setting. If parenthood generates large and persistent financial child penalties even in this context, similar or stronger effects are likely to arise in settings with lower gender equality or weaker family support systems.

Our analysis draws on comprehensive administrative bank data that allow us to observe

individual financial behavior at high frequency and with minimal measurement error. Unlike survey-based measures of saving, borrowing, and investment, which rely on recall and stylized reporting, the bank data capture actual balances, transactions, and portfolio choices as they evolve over time. This granularity is essential for studying sharp behavioral responses around childbirth and for distinguishing changes in financial engagement from slow-moving life-cycle trends. Detailed discussion of data construction and representativeness is provided in Section 2.

The Icelandic institutional setting is particularly well suited for our analysis. Financial accounts and assets are held at the individual level rather than jointly, and a large share of couples are unmarried at the time they become parents. As a result, we can observe personal financial choices within couples and study how parenthood affects individual financial positions rather than household aggregates. This feature primarily improves measurement and helps discipline interpretation: under limited commitment, understood as the presence of separation risk and incomplete insurance across relationship states, changes in personal saving and investment have direct implications for individual exposure to financial risk.

Our paper contributes to the growing literature on gender differences in financial decision-making by identifying parenthood as a central life-cycle event shaping these differences. While existing studies document persistent gender gaps in saving, portfolio choice, and market participation (see, e.g., Olafsson and Thornqvist 2018; Ke 2021, 2025; D'Acunto 2020; D'Acunto et al. 2021b,a), they typically abstract from family formation. We show that many of these gaps emerge or widen sharply at childbirth and persist long thereafter.

Our paper also contributes to a large literature on gender inequality more generally and to the recent literature investigating the impact of parenthood on gender gaps in labor market outcomes, including Bertrand et al. (2010), Angelov et al. (2016), Kleven et al. (2019), Kleven et al. (2019), Cortés and Pan (2023), Kleven et al. (2021), Andresen and Nix (2022), Kleven (2022), and Kleven et al. (2024). This literature establishes the importance of child penalties in labor market outcomes, in particular in high-income countries. We expand the literature by shifting the focus to financial choices, which is crucial to get a full picture of the child penalties.

The remainder of the paper proceeds as follows. Section 2 describes the institutional setting and the administrative bank data, and discusses sample construction and representativeness.

Section 3 outlines the event-study methodology used to estimate the effects of parenthood on earnings and financial behavior. Section 4 presents the main empirical results, documenting large and persistent child penalties in women's personal finances and that men show no comparable response. It also decomposes changes in savings and risky asset participation into mechanically predicted responses based on income changes and residual behavioral adjustments, showing that behavioral responses dominate income-based predictions. Section 5 provides a conceptual framework to interpret the findings, emphasizing endogenous specialization in financial engagement under asymmetric time constraints and limited commitment. Section 6 discusses potential underlying mechanisms using survey evidence, Section 7 considers broader implications and policy relevance, and Section 8 concludes.

2. Data

The data we use come from one of the largest banks in Iceland that provides us with access to comprehensive, detailed, and highly disaggregated panel data on personal finances of about one third of the adult Icelandic population. More specifically, the data contain individual and family identifiers, detailed information on demographics, bank account transactions (time, location, merchant, product category, and transaction amount), providing us with a detailed measure of individuals' consumption by category, all bank account balances, bank account overdraft limits and use, credit card transactions and limits, all loans (including mortgages, car loans and leases, and consumer loans), and financial portfolios (including daily information on portfolio composition and all sales and purchases of stocks, bonds, and funds).

2.1. Using Bank Data to document Financial Behavior

Detailed and accurate high-frequency panel data on consumption and financial choices of individuals are notoriously hard to come by (see, e.g., Gelman et al. 2014; Kolsrud et al. 2018). Questions regarding consumption and many financial decisions, for instance the use of consumer credit and investments in risky asset markets, are normally analyzed empirically using self-reported survey data. As discussed by Kolsrud et al. (2018), such survey measures may be very problematic. Survey responses rely on participants' recall of bank account balances

at the interview day or their estimate of average balances while consumption measures are based on stylized questions regarding spending by broad categories over a certain period or an expenditure diary (for instance, the diary surveys of the Consumer Expenditure Survey, CEX, in the US and Living Costs and Food Survey, LCF, in the UK). Such survey-based measures of consumption and financial decision making may suffer from measurement error (Zinman 2009). Specifically, respondents may, for instance, have little incentive to answer the questions accurately, may not understand the wording of the questions, or they may simply forget some of their past actions. Moreover, this type of measurement error or noise in survey-generated data can increase with the length of the recall period (de Nicola and Giné 2014). Furthermore, surveys can generate systematically biased data if respondents, for instance, suffer from either agreement or justification bias and report how they believe they should behave rather than how they behave in practice, are concerned about surveyors sharing the information, or have stigma about their consumption habits (Karlan and Zinman 2008).

A sizable literature now avoids the problems associated with survey data by exploiting the recent availability of highly accurate register data to capture financial behavior, consumption, and wealth. These data are the most comprehensive in the Nordic countries and include detailed information on asset holdings by year-end and annual income. These annual snapshots are then used to infer financial behavior, including, stock market participation, portfolio diversification, etc. (see, e.g., Calvet et al. 2009; Olafsson and Pagel 2018) and to impute consumption and wealth returns (see, e.g., Koijen et al. 2014; Browning and Leth-Petersen 2003; Sodini et al. 2016; Fagereng and Halvorsen 2017; Fagereng et al. 2017, 2020; Bach et al. 2020; Fagereng et al. 2021). As discussed by Koijen et al. (2014), there are considerable discrepancies between the registry-based and the survey-based measures.

However, although the use of register data to capture certain financial behaviors overcomes the problems associated with survey data, both types of data suffer from long reporting intervals. This low frequency of survey and register data challenges the analyses of various questions regarding aspects of personal finances that change frequently, including investments in risky asset markets. For instance, yearly snapshots of an individual's financial portfolio may suggest that she does not participate in risky asset markets while more frequent information would

reveal that she went in and out of the market between surveys.

This study overcomes the problems associated with the use of survey and register-based measures of financial behavior by using transaction-level administrative data from a retail bank. Specifically, the paper is based on a research collaboration agreement with one of the largest retail banks in Iceland that provides us with access to comprehensive, detailed, and highly disaggregated panel data on personal finances of about one third of the adult population.

We further validate the quality and timing of the transaction data by applying the same event-study specification used in the main analysis to expenditure categories with well-understood responses around childbirth; these results are reported in Appendix C.

2.2. Setting

Using data from Iceland has three main advantages when studying financial decision making. First, Icelandic consumers use electronic means of payments almost exclusively,[1] which implies that the data capture the financial lives of the users better than transaction-level bank data in other settings would. Second, the administrative bank data are more representative of the underlying population than bank data obtained in other settings. This is because: i) the bank we collaborate with services a large share of the population - making bank data from it more representative of the underlying population than bank data obtained from banks that service a small, and likely more selective, part of the population and ii) all adult individuals in Iceland need to have a bank account.[2] Olafsson and Pagel (2017), Carvalho et al. (2024), Cirelli and Olafsson (2025) discuss in more detail the representativeness of bank data in Iceland. Third, bank accounts in Iceland are personal and cannot be shared, even within households. The fact that there are no "joint" accounts in Iceland means that all transactions we observe are related to the individual under investigation and not her spouse, which allows us to identify all transfers between the individual and her spouse. While the absence of joint accounts sharpens the measurement of individual financial behavior, the economic mechanisms we study—specialization in financial engagement under separation risk—do not rely on this institutional feature and apply more

[1] ATM withdrawals make up approximately one percent of spending transactions by amounts or transactions volume.

[2] There are many reasons for this. For instance, checks are not used in Iceland and if individuals want to receive salary payments or state benefits, they need a bank account.

broadly whenever commitment is limited.

Table 1 reports that the average age, among the bank customers of our collaborating bank, is 46 for men and 47 for women. It also shows that men earn, on average, 33% more than women while their average monthly expenditures are 15% higher and that men are, on average, more liquid than women, as they have both larger bank deposits and larger credit lines. Men's monthly savings (as captured by average amount transferred to savings accounts) are also higher. Furthermore, men are more likely to participate in equity and risky asset markets. The value of the financial portfolios of men is also significantly higher than those of women and their holdings of stocks and funds are also significantly higher. Furthermore, if they do invest in risky asset markets, then the share of their financial portfolio that they invest in risky assets is higher. However, women are more likely to subscribe to fund investments while men are more likely to invest directly in funds or stocks, making them more likely to invest in general. They also sell financial assets more often. Men do therefore, on average, trade more frequently than women. These results are all consistent with existing studies that have documented gender differences in financial behavior (see, e.g., Barber and Odean 2001; Olafsson and Thornqvist 2018; Ke 2021; Guiso and Zaccaria 2023).

Table 1: Summary Statistics

	Overall	Men	Women	$\frac{M-W}{W}$
Age	47	46	47	-0.02***
	(18)	(18)	(18)	
Income				
Labor Earnings	568,326	647,084	486,120	0.33***
	(2,762,145)	(3,485,189)	(1,702,674)	
Account Balances[1]				
Liquidity	3,288,366	3,416,444	3,155,075	0.08***
	(10,450,428)	(10,732,944)	(10,146,694)	
Total Deposits	2,998,940	3,092,779	2,901,336	0.07***
	(10,415,682)	(10,649,890)	(10,165,852)	
Checking Accounts	532,280	630,746	429,536	0.47***
	(3,765,955)	(4,518,753)	(2,765,914)	
Savings Accounts	2,398,871	2,373,890	2,425,261	-0.02***
	(9,381,690)	(9,289,479)	(9,478,337)	
Overdraft (Indicator)	0.22	0.22	0.22	0.02***
	(0.41)	(0.42)	(0.41)	
Conditional Overdraft Balance	675,266	767,346	577,485	0.33***
	(1,738,933)	(2,131,898)	(1,178,760)	
Transfer to Savings (Indicator)	0.56	0.53	0.60	-0.12***
	(0.50)	(0.50)	(0.49)	
Transfer to Savings	189,782	199,461	179,681	0.11***
	(2,500,373)	(2,951,437)	(1,919,450)	
Risky Investments[2]				
Financial Portfolio Value	18,268,314	19,245,910	16,946,309	0.14***
	(74,912,844)	(62,997,663)	(88,506,633)	
Stocks Value	3,094,489	3,352,822	2,744,981	0.22***
	(52,992,330)	(32,056,036)	(72,239,960)	
Funds Value	4,119,471	4,675,578	3,366,940	0.39***
	(26,806,051)	(31,378,641)	(18,906,751)	
Participation				
Risky Asset Market Participation	0.12	0.13	0.10	0.30***
	(0.32)	(0.34)	(0.30)	
Equity Market Participation	0.08	0.10	0.06	0.56***
	(0.28)	(0.30)	(0.25)	
Direct Stock Market Participation	0.06	0.08	0.05	0.76***
	(0.24)	(0.27)	(0.21)	
Risky Asset Share	0.44	0.45	0.43	0.05***
	(0.36)	(0.36)	(0.35)	
Trading Indicator	0.03	0.03	0.02	0.38***
	(0.16)	(0.17)	(0.15)	
Obs	7,546,927	3,855,508	3,690,235	
N	129,376	67,580	61,897	

Summary statistics of active customers by gender. A customer is active if she resides in Iceland, is at least 18 years old, has a checking account at the bank, and has had income in at least 12 out of the last 24 months and at least 24 inflows in the last 24 months. At the beginning of the sample period, activity filters are relaxed. Standard deviations are in parentheses. All amounts have been deflated using the CPI provided by Statistics Iceland with September 2024 as a base month. [1] Liquidity is defined as checking account balances + savings account balances + overdraft limits - overdraft balances + credit card limits - credit card balances + prepaid credit card balances. Account balances are the sum of checking and savings account balances. The financial portfolio is defined as the sum of cash holdings and financial assets. The financial portfolio is assessed on the last day of a month. The market value of assets is conditional on participating or having participated previously. [2] Risky asset market participation is an indicator that is one if the individual held either stocks directly or funds. Stock market participation indicates holding stocks directly. Funds are equity funds, liquidity funds, or mixed funds. The risky asset share is conditional on participation.

2.3. Representativeness and External Validity

The project setting involves two main concerns. The first relates to the representativeness of the customers of the bank while the second relates to external validity, more specifically the generalizability of research findings regarding gender differences in Iceland, where gender equality is considered high.

The fact that the bank we collaborate with services about one third of the population partly addresses concerns about the representativeness of the sample. We have demographic data for the entire population from Statistics Iceland and a comparison of our sample of bank customers and the underlying population reveals that the bank customer population appears to be representative.

Iceland is widely regarded as a highly gender-egalitarian society, particularly with respect to labor market participation and family policies. This makes it a conservative setting in which to study gender differences in financial behavior. If parenthood generates large and persistent financial child penalties even in this context, similar or stronger effects are likely to arise in environments with weaker family support systems or lower gender equality. Moreover, while Iceland's individual account structure sharpens the measurement of personal financial behavior, the mechanisms emphasized in this paper, that is specialization in financial engagement under time constraints and limited commitment, do not rely on this institutional feature and apply broadly whenever separation risk is non-negligible and financial engagement is individual-specific.

2.4. Sample Selection

We use a panel dataset of daily spending, income, borrowing, saving, and investing of 133,751 individuals from January 2018 to September 2024, equating to about 44.7% of the total adult population in Iceland. We restrict the sample for analysis to individuals who appear to bank exclusively with the collaborating bank. More specifically, we restrict our sample to individuals who are registered as living in Iceland and appear to be economically active, specifically individuals for whom we observe monthly income arrivals (labor market income or unemployment benefits, pension payments, invalidity benefits, and student loans). This restriction excludes

cases where individuals are holding dormant accounts, or conducting their main banking activity via an account at another bank. This leaves us with 129,376 active customers. For the event study analysis, we restrict our sample to individuals that have their first child born during our sample period and are not single at the time of birth, which we do by only including individuals that are cohabiting at the time of birth or start cohabiting at most six months after childbirth. This sample consists of 3,778 men and 3,472 women.

Table 2 reports that, on average, women become parents a couple of years earlier than men, which corresponds to the average age difference between couples. Among individuals who become parents during our sample period, the average gender labor income gap increases from 24% before parenthood to 56% after parenthood. Furthermore, we do observe previously established gender differences among men and women before they become parents: Women are less likely to participate in equity and risky asset markets pre-pregnancy, and if they do participate in risky asset markets, their risky share is lower, that is, they devote a smaller share of their financial portfolios to risky assets. Women also trade less frequently than men. However, pre pregnancy, men and women are similarly liquid. Furthermore, despite lower earnings, women have larger savings and similar monthly savings flows.

Table 2: Summary statistics of active customers by gender, pre pregnancy and post parenthood

	Pre-pregnancy (-24 to -10)			Post-birth (0 to 24)			$\frac{\text{Post}-\text{Pre}}{\text{Pre}}$	
	Men	Women	$\frac{M-W}{W}$	Men	Women	$\frac{M-W}{W}$	Men	Women
Age	29	27	0.08***	32	29	0.08***	0.07***	0.08***
	(6)	(4)		(6)	(5)			
Income								
Labor Earnings	837,439	660,436	0.27***	877,803	594,351	0.48***	0.05***	-0.10***
	(2,139,318)	(1,572,311)		(2,657,284)	(2,361,599)			
Account Balances[2]								
Liquidity	1,598,254	1,597,407	0.00	1,589,685	1,389,061	0.14***	-0.01	-0.13***
	(3,426,809)	(3,247,695)		(3,782,077)	(3,695,651)			
Total Deposits	1,474,553	1,518,515	-0.03*	1,459,753	1,330,568	0.10***	-0.01	-0.12***
	(3,410,742)	(3,226,475)		(3,779,237)	(3,695,700)			
Checking Account	328,839	263,321	0.25***	332,892	250,195	0.33***	0.01	-0.05*
	(1,459,854)	(1,297,826)		(1,464,929)	(1,162,958)			
Savings Account	1,079,157	1,218,865	-0.11***	1,039,641	1,012,452	0.03*	-0.04**	-0.17***
	(2,920,306)	(2,914,684)		(3,256,020)	(3,324,458)			
Overdraft (Indicator)	0.20	0.15	0.34***	0.21	0.16	0.34***	0.05***	0.05***
	(0.40)	(0.36)		(0.41)	(0.37)			
Conditional Overdraft Balance	743,719	552,282	0.35***	806,243	555,847	0.45***	0.08***	0.01
	(1,603,795)	(716,118)		(1,727,883)	(919,062)			
Transfer to Savings (Indicator)	0.63	0.70	-0.11***	0.60	0.62	-0.03***	-0.04***	-0.11***
	(0.48)	(0.46)		(0.49)	(0.49)			
Transfer to Savings	201,078	192,519	0.04	195,805	165,664	0.18***	-0.03	-0.14***
	(938,706)	(941,752)		(1,199,300)	(1,540,286)			
Risky Investments[2]								
Financial Portfolio Value	4,024,627	4,065,365	-0.01	4,121,727	4,484,302	-0.08*	0.02	0.10
	(7,210,097)	(7,671,682)		(9,371,922)	(18,372,742)			
Stocks Value	991,942	474,120	1.09***	1,136,907	657,686	0.73***	0.15*	0.39***
	(4,257,113)	(1,820,333)		(5,180,865)	(2,500,828)			
Funds Value	622,385	804,162	-0.23***	652,030	1,136,673	-0.43***	0.05	0.41
	(2,749,982)	(3,081,943)		(4,229,876)	(10,675,623)			
Participation								
Risky Asset Market Participation	0.11	0.07	0.49***	0.12	0.07	0.63***	0.12***	0.02
	(0.31)	(0.26)		(0.33)	(0.26)			
Equity Market Participation	0.09	0.05	0.76***	0.10	0.05	0.85***	0.20***	0.14***
	(0.28)	(0.21)		(0.30)	(0.23)			
Direct Stock Market Participation	0.07	0.03	1.05***	0.08	0.04	1.00***	0.16***	0.19***
	(0.26)	(0.18)		(0.27)	(0.20)			
Risky Asset Share	0.37	0.36	0.04*	0.40	0.39	0.03**	0.08***	0.09***
	(0.33)	(0.32)		(0.34)	(0.33)			
Trading Indicator	0.040	0.020	0.959***	0.043	0.019	1.213***	0.077***	-0.047
	(0.196)	(0.141)		(0.203)	(0.138)			
Obs	43,732	39,695		89,554	80,448			
N	3,413	3,061		4,856	4,429			

Summary statistics of active customers by gender. A customer is active if she resides in Iceland, is at least 18 years old, has a checking account at the bank, and has had income in at least 12 out of the last 24 months and at least 24 inflows in the last 24 months. At the beginning of the sample period, activity filters are relaxed. Standard deviations are in parentheses. All amounts have been deflated using the CPI provided by Statistics Iceland with September 2024 as a base month. [1] Liquidity is defined as checking account balances + savings account balances + overdraft limits - overdraft balances + credit card limits - credit card balances + prepaid credit card balances. Cash holdings are the sum of checking and savings account balances. Co-holding amounts are overdrafts that could be covered using cash holdings in other accounts. [6] The financial portfolio is defined as the sum of cash holdings and financial assets. The financial portfolio is assessed on the last day of each month. The market value of assets is conditional on participating or having participated previously within the sample period. Risky asset market participation is an indicator that is one if the individual held any non-cash assets. Equity market participation indicates holding stocks or equity funds, while direct stock market participation indicates holding stocks directly. Funds are equity funds, liquidity funds, or mixed funds. The risky asset share and the total market value are conditional on participation in the last 6 months.

Post childbirth, the gender gap in participation in equity and risky asset markets as well as in direct stockholding increases. Furthermore, the gender gap in the propensity to trade risky assets is also greater post parenthood. However, post parenthood, the savings reverses, that is, men hold more savings and the gender gap in average monthly savings increases. Overall, we find that gender gaps in financial choices change from pre pregnancy to post parenthood. This evidence motivates our empirical strategy to conduct an event study analysis of the influence

of parenthood on the gender gap in financial choices, that is, whether there is a child penalty in personal finances and whether this differs across men and women.

3. Empirical Evidence on Parenthood and Gender Inequality

A growing body of work uses rich panel data to quantify the effects of parenthood on the employment and earnings of men and women. These studies conclude that a large share of the gaps in labor market outcomes comes from the differential impact of parenthood on men and women: the so-called "child penalty", borne disproportionately by mothers. However, parenthood may also contribute to gender gaps in dimensions beyond labor market outcomes. In this section, we first document that labor market outcomes in our setting follow the same pattern as in the existing literature. We then turn to the impact of parenthood on financial choices, which, to the best of our knowledge, have not previously been examined in this context.

3.1. Event-Study Approach

We follow Kleven et al. (2019) and employ an event study approach to estimate child penalties in both earnings and financial choices. The estimation exploits sharp changes in women's outcomes relative to men around the birth of the first child, indicated by event time "t = 0". As proposed by Kleven et al. (2019), the following specification is run separately for men and women:

$$Y_{ist}^{g} = \sum_{j \neq -10} \alpha_j^g \mathbb{I}[j = t] + \sum_k \beta_k^g \mathbb{I}[k = age_{i,s}] + \sum_y \gamma_y^g \mathbb{I}[y = s] + v_{ist}^g, \tag{1}$$

where Y_{it}^g is the outcome for individual i of gender $g = w, m$ at time (month-by-year) s and at event time t. On the right side, $\mathbb{I}[j = t]$ is a set of event time dummies. The second and third terms, $\mathbb{I}[k = age_{i,s}]$ and $\mathbb{I}[y = s]$, are age and month × year fixed effects, to control non-parametrically for lifecycle trends and time trends. Month -10 is omitted. Under this framework, the impact of parenthood is identified under the assumption that the exact timing of parenthood is orthogonal to non-child dynamics in both labor market outcomes and financial choices of

women relative to men. A more detailed discussion of identification in this event-study setup and its validation against IV-approaches is provided by Kleven et al. (2019).

The inclusion of age dummies is crucial because women are, on average, two years younger than men at first birth. Equation (1) is estimated in levels rather than logs to retain zeros in the data and capture both extensive and intensive margin responses. The estimated level responses are then converted into percentage effects by calculating:

$$P_t^g = \frac{\hat{\alpha}_t^g}{\mathbb{E}[\tilde{Y}_{it}^g | t]}, \tag{2}$$

where $\tilde{Y}_{it}^g$ is the predicted outcome when the contribution of the event time coefficients is omitted, that is, it is the counterfactual outcome absent children.

Finally, after estimating the effect of parenthood on women and men separately and converting the level effects into percentage effects we define the child penalty as the effect of having children on women relative to men 24 months after childbirth, namely

$$ChildPenalty = \mathbb{E}[P_t^m - P_t^w | t \in A] - \mathbb{E}[P_t^m - P_t^w | t \in B], \tag{3}$$

where P_t^g are the gender specific impacts, that is, the penalty is specified as the average effect across treated (post parenthood) event times net of the average effect across untreated (before pregnancy) event times.[3] In other words, the child penalty measures the percentage by which women fall behind men due to children at event time "t" and a positive child penalty implies then that parenthood increases the gender gap.

In other words, the child penalty measures the percentage by which women are falling behind men due to children at event time "t" and a positive child penalty implies then that parenthood widens the gender gap.

[3] Because we omitted a base month (-10) before pregnancy, the post-birth difference $\mathbb{E}[P_t^m - P_t^w | t \in A]$ is already net of any pre-birth difference in the financial choices of men and women. The second term in (3) can therefore be omitted.

3.2. Persistence Analysis

Whether the effects of parenthood are short-lived or persistent cannot be fully assessed within our baseline event-study design, which requires first childbirth to occur during the sample period and limits follow-up to approximately six years. Restricting the sample to individuals observed for five years after childbirth would therefore substantially reduce the sample size. We therefore resort to a different event study approach for persistence analysis where we include all individuals we observe living with their children during the sample period, even though the children were born before the start of our sample period. We therefore estimate the following specification separately for men and women:

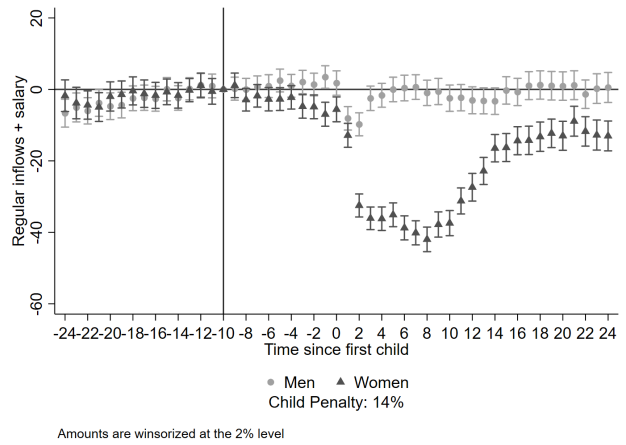
$$Y_{ist}^{g} = \sum_{j \neq -10} \alpha_j^g \mathbb{I}[j = t] + \sum_k \beta_k^g \mathbb{I}[k = age_{i,s}] + \sum_y \gamma_y^g \mathbb{I}[y = s] + v_{ist}^g, \tag{4}$$

where Y_{ist}^{g} is the outcome for individual i of gender $g = w, m$ at time (month-by-year) s and at event time t. On the right side, $\mathbb{I}[j = t]$ is a set of event time dummies and, as before, the birth of the oldest child is indicated by event time "t = 0" and $\mathbb{I}[k = age_{i,s}]$ and $\mathbb{I}[y = s]$, are age and month × year fixed effects. For all individuals, the birth month is identified by first determining the calendar month in which their age changes. The birth month is then the current month-year minus the age in the month of the age change. For individuals that do not yet have an age change (individuals born close to the end of the sample period), the first appearance in the registry data is used as their birth month.

4. Results

In this section, we present estimates of the impacts of parenthood on the trajectory of both labor market earnings, for comparison with existing studies, as well as on a wide range of financial choices of men and women. We start by showing impacts on earnings and then turn to the financial outcomes, which are the outcomes under investigation in this study.

Figure 1: Salary Payments



Note: The figure shows event time coefficients estimated from equation (2) for men and women separately and for labor earnings. The figure also reports a "child penalty", the percentage by which women are falling behind men due to children, measured at event time 24. Our sample period is January 2018- March 2023. The 95 percent confidence intervals are based on robust standard errors.

4.1. Impact on Earnings

Figure 1 plots the gender-specific impacts of parenthood, P_t^w and P_t^m, on earnings across event time. As discussed earlier, these are outcomes at event time t relative to 10 months prior to the birth of the first child (-10), where we have controlled non-parametrically for age and time trends. The figure includes 95 percent confidence bands around the event coefficients as well. The figure confirms what other studies (e.g., Kleven et al. 2019) have already shown: once life-cycle and time trends are taken out, the earnings of men and women evolve in close to a parallel fashion until parenthood. However, exactly in the month after the first child is born, the earnings of men and women diverge: both men and women experience an immediate drop in net earnings (around 13 percent for women and 10 percent for men) the month the first child is born and the drop increases the following month for women while it remains the same for men and then their earnings go back to their pre-parenthood levels. The earnings of women remain at the same level until about 10 months after the child is born and then start increasing again until it remains stable at about 13 percent below the pre-parenthood earnings. This number is not far from the 20 percent drop documented for Danish women (Kleven et al. 2019).

4.2. Impact on Personal Finances

Figure 2 plots the gender-specific impacts of parenthood on various measures of savings across event time. As before (and in all figures that follow), these are outcomes at event time t relative to 10 months prior to the birth of the first child (-10) where we have controlled non-parametrically for age as well as time trends. This figure reveals that exactly when women become mothers they significantly reduce their savings account balances, the interest they earn on their savings is likewise significantly reduced, their propensity to save (captured by transfers to savings accounts), and the amounts saved every month drops as well. For men, savings balances and flows remain stable around childbirth. Notably, on average, women have more savings than men before having children even though they earn less.

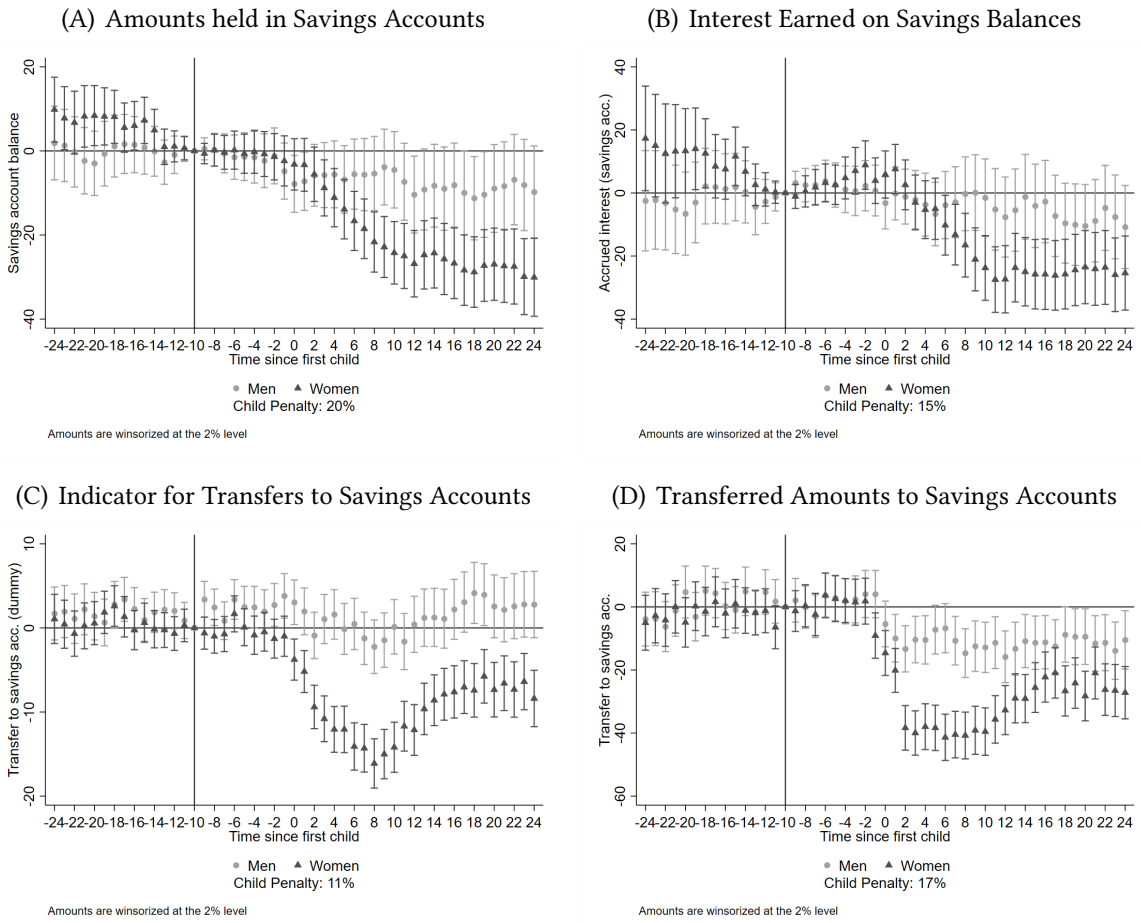
Related to this result on savings, we also examine the evolution of private pension savings around the birth of children. In Iceland, it has been possible since mid-2014 to use private pension savings tax-free for housing-related purposes, including payments toward mortgage principal or as a down-payment on a first home purchase, under arrangements extending through the end of 2025. In addition, during the COVID-19 pandemic, temporary rules allowed individuals under age 60 to withdraw funds from their private pension savings more broadly, also on a tax-free basis. Private pension savings therefore behave as a liquid form of savings in practice. Figure 3 shows that women begin to draw down their private pension savings at childbirth and remain below men's levels thereafter. The decline appears discrete and persistent.

Figure 4 plots the gender-specific impacts of parenthood on direct stock market participation and risky asset markets participation across event time. Women reduce equity and risky asset market participation sharply at childbirth, while men show no detectable change.

Figure 5 plots the gender-specific impacts of parenthood on the use of consumer credit across event time. The figure reveals that in response to childbirth, women increase their use of consumer credit (overdrafts are the dominating source of consumer credit in Iceland), both at the extensive and the intensive margin. The figure suggests that men may also increase their use of overdrafts at the intensive margin.

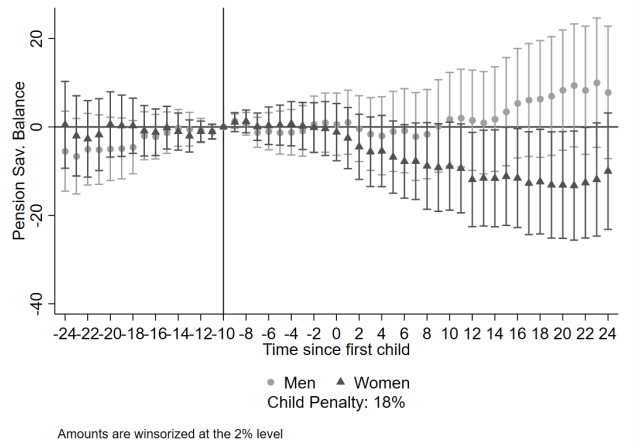
To sum, the results presented above do suggest that parenthood is a significant event in shaping financial choices and that differential changes in the financial choices of men and

Figure 2: Savings around Childbirth



Note: This figure shows event-time coefficients from equation (2) for men and women separately for multiple measures of savings behavior, relative to 10 months prior to the birth of the first child. Panels report levels of savings account balances and saving flows. Each panel reports the associated financial child penalty, measured as the gender gap at event time 24. The sample period is January 2018-March 2023. Shaded areas indicate 95 percent confidence intervals based on robust standard errors.

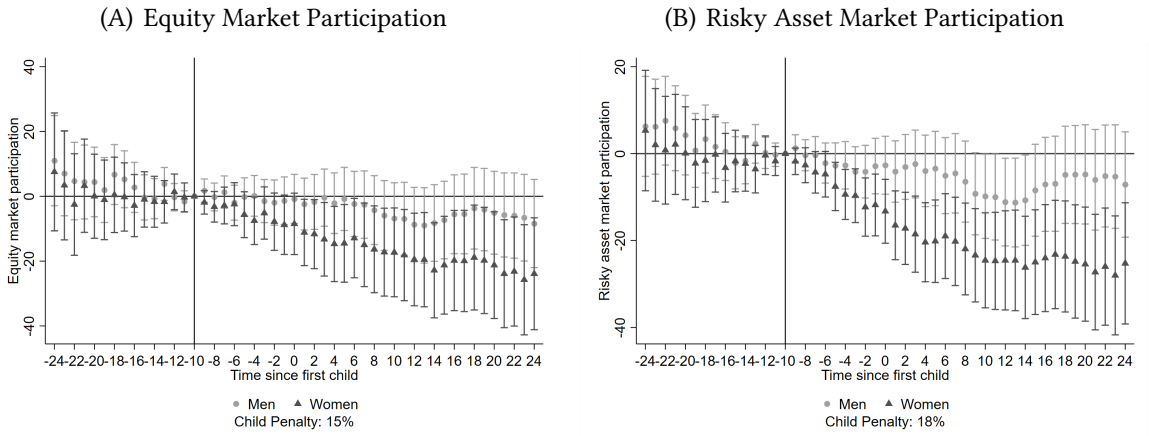
Figure 3: Private Pension Savings around Childbirth



Note: This figure shows event-time coefficients from equation (2) for men and women separately for private pension balances. The figure reports the financial child penalty at event time 24. Pension balances are deflated using the CPI. Shaded areas indicate 95 percent confidence intervals.

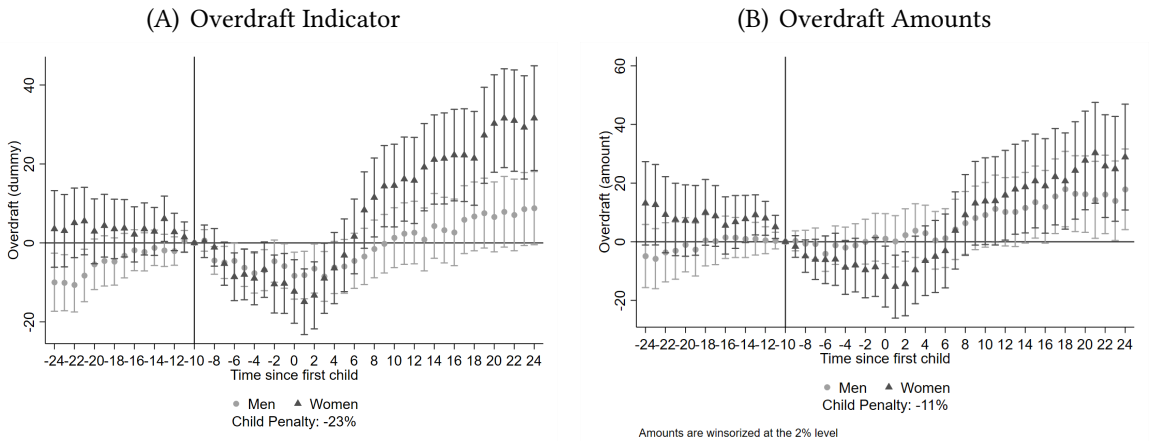
women around parenthood are of first order importance in explaining the general gender gap in financial choices.

Figure 4: Risky Asset Market Participation around Childbirth



Note: This figure plots event-time coefficients from equation (2) for men and women separately for equity market participation and overall risky asset market participation. The reported child penalty measures the gender gap at event time 24. Shaded areas indicate 95 percent confidence intervals.

Figure 5: Consumer Credit around Childbirth

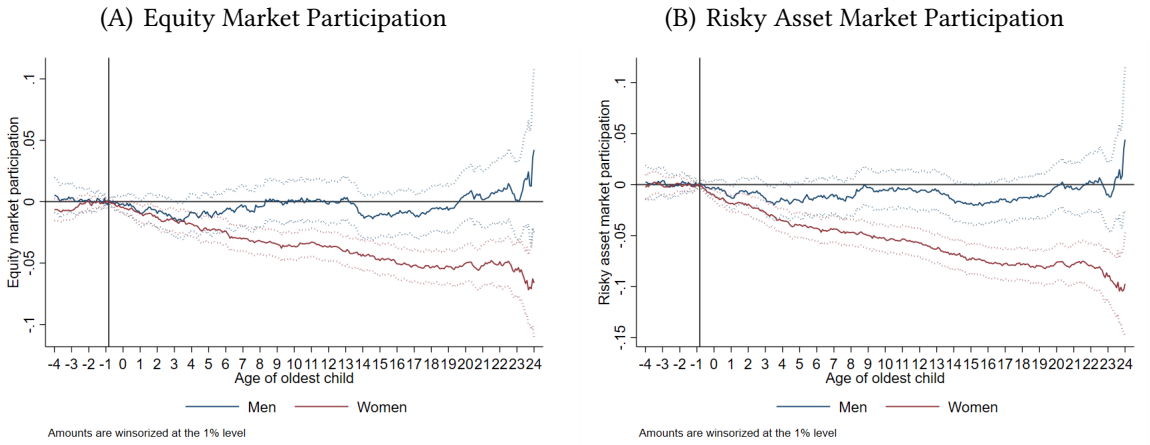


Note: This figure shows event-time coefficients from equation (2) for men and women separately for overdraft use and balances. Each panel reports the corresponding financial child penalty at event time 24. Shaded areas indicate 95 percent confidence intervals.

4.3. Persistence Results

Figure 6 plots the gender-specific impacts of the time from first parenthood on various measures of participation in risky asset markets. This figure reveals that the event study estimates in Figure 4 and discussed earlier are not merely transitory effects and that the gender gaps generated by the sharp changes in the outcomes of women relative to men around the birth of the first child remain. More specifically, the figures suggest that the origin of the gender gap in equity and risky asset market participation can be traced back to parenthood, grows over time, and remains significant even 24 years after the birth of their first child.

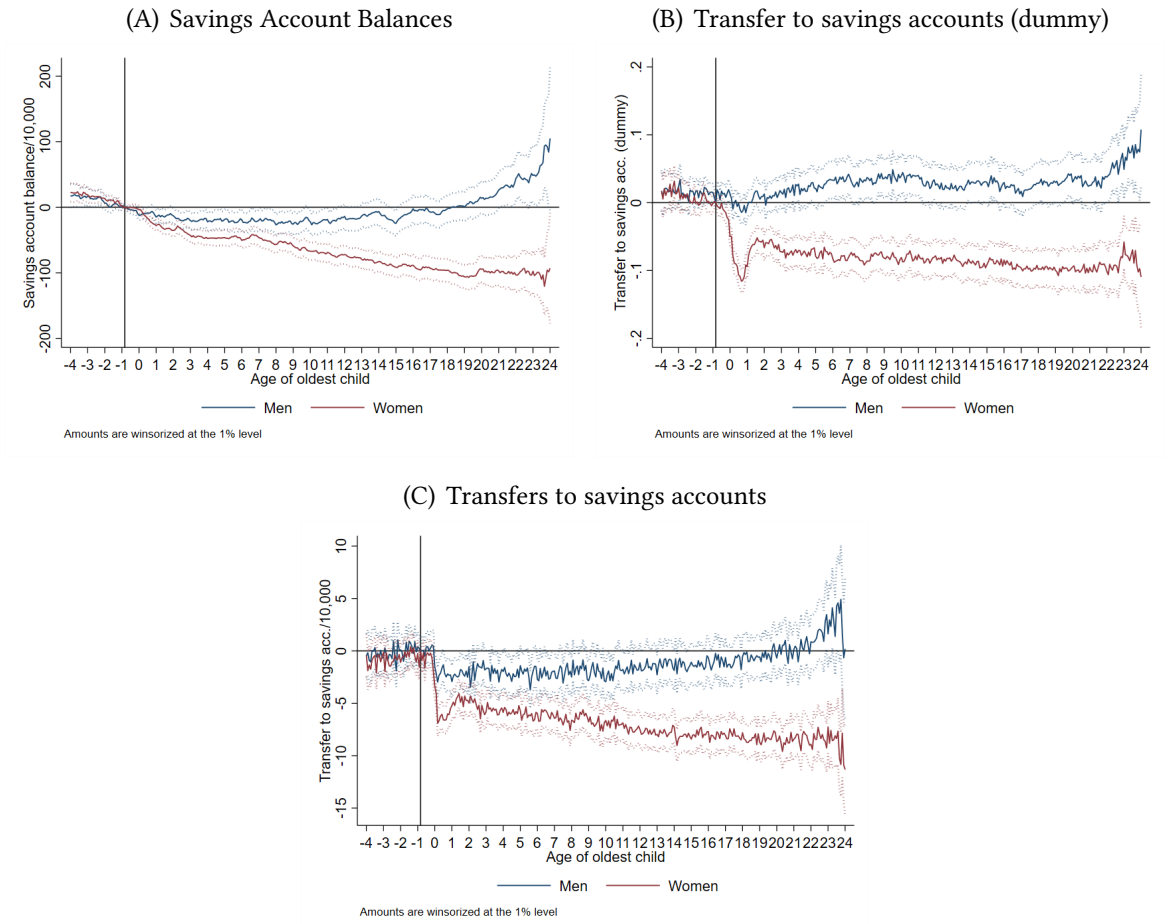
Figure 6: Long-Run Persistence of Risky Asset Market Participation after Parenthood



Note: This figure plots event-time coefficients from equation (4) for men and women separately for risky asset market participation, using time since first childbirth as the event variable. Shaded areas indicate 95 percent confidence intervals.

Figure 7 plots the gender-specific impacts of the time from first parenthood on savings. As above, this figure shows that the event study estimates for savings and borrowing are not merely transitory effects as the birth of the first child introduces a gender gap in savings that grows over time and remains significant even when the child has reached 24 years of age. More specifically, savings account balances diverge at the birth of the first child, the propensity to save (captured by transfers to savings accounts) drops and remains low for women and not for men, and the amounts transferred to savings accounts also drop for women and do not recover while they are unaffected for men.

Figure 7: Long-Run Persistence of Savings Declines upon Motherhood



Note: This figure presents event-time coefficients from equation (4) for men and women separately for savings balances and flows as a function of time since first childbirth. Shaded areas indicate 95 percent confidence intervals.

4.4. Decomposing Changes in Risky Asset Participation and Savings into Mechanical Income Effects and Behavioral Responses

An important question when interpreting changes in women's financial behavior following parenthood is whether these responses reflect mechanical income losses associated with parental leave and reduced labor supply. Standard lifecycle models of saving and portfolio choice predict that lower income and liquidity may reduce savings accumulation and participation in risky asset markets through precautionary motives, borrowing constraints, or fixed costs of participation. In this section, we assess the extent to which income changes can account for the observed financial child penalties by decomposing the total response into a component implied by income changes alone, and a residual component reflecting changes in behavior conditional

on income. To separate these channels, we implement a counterfactual decomposition in the spirit of Oaxaca–Blinder methods, adapted to a time-series setting. The key idea is to use the pre-child relationship between income and financial outcomes to construct a counterfactual prediction for post-child behavior that reflects income changes only, holding the mapping from income to financial choices fixed at its pre-child level.

Specifically, we estimate the relationship between income and each financial outcome in a pre-child window defined as event months 24 to 10 relative to the birth of the first child. This window precedes pregnancy-related adjustments and captures how financial behavior varies with income in the absence of children. We estimate these relationships separately by gender, controlling for age and calendar time effects and allowing for a flexible, non-linear mapping between income and the outcome.

$$Pr(Y_{it} = 1) = F(g(Income_{it})) + \alpha_a(i,t) + \delta_t + \mu_i, \tag{5}$$

where Y_{it} is the outcome under investigation, an indicator for participation in risky asset markets (R_{it}) or savings (S_{it}), for individual i at time (month-by-year) t. On the right side, $\alpha_a(i,t)$ are age fixed effects, δ_t are calendar time fixed effects, and μ_i are individual fixed effects. This specification captures how participation varies with income in the absence of children.

Using the estimated pre-child income–outcome relationship, we then construct counterfactual post-child predictions based on individuals' realized income after childbirth. These counterfactuals represent the levels of the financial outcomes that would be expected if individuals continued to follow their pre-child income–behavior relationship after becoming parents. We refer to these predicted outcomes as the mechanical component, as they capture the portion of the response attributable solely to income movements.

$$\hat{R}_{it}^{mech} = \hat{F}\left(\hat{g}(Income_{it}) + \alpha_a(i,t) + \delta_t + \mu_i\right), \tag{6}$$

We define the behavioral residual as the difference between observed outcomes and

their mechanically predicted counterparts. By construction, this residual captures changes in financial behavior that cannot be explained by income changes under the pre-child mapping. These residual changes reflect shifts in behavior conditional on income, including, for example, reduced financial engagement, specialization in household financial decision-making, changes in attention, or altered priorities at the onset of parenthood.

$$R_{it}^{behav} = R_{it} - \hat{R}_{it}^{mech}, \tag{7}$$

We then apply the same event-study framework used in the main analysis to three objects: (i) actual outcomes, (ii) mechanically predicted outcomes, and (iii) behavioral residuals. This allows us to decompose the overall financial child penalty into a component driven by income changes and a residual component reflecting behavioral adjustments.

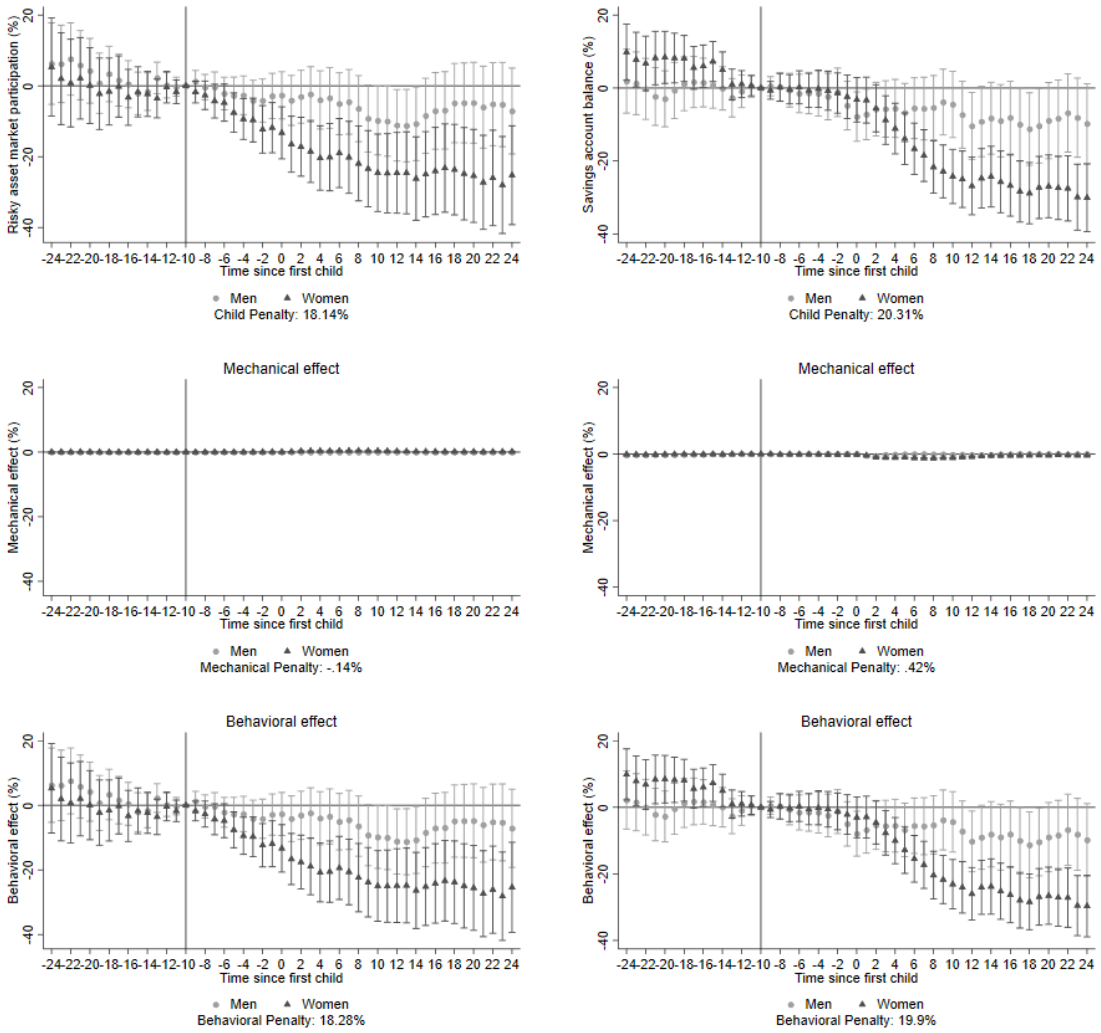
Figure 8 presents the event-study profiles for women's risky asset market participation and savings, decomposed into actual participation and savings, mechanically predicted participation and savings implied by income changes, and the behavioral residual. Two findings stand out.

First, income changes account for almost none of the observed decline in participation at childbirth. Based on pre-child income–participation and income-savings relationships, income changes associated with childbirth would mechanically predict stable participation in risky asset markets and savings account balances. Instead, observed participation and savings drop sharply and persistently. The total decline in participation and savings is therefore entirely driven by the behavioral residual.

This is highly informative. The decomposition rules out explanations based primarily on income losses, liquidity constraints, or precautionary saving responses and instead points to mechanisms operating through changes in financial engagement and attention. In both participation and savings, the mechanically predicted component is close to zero, while the observed decline is large and persistent. The total financial child penalty is therefore driven by behavioral adjustments conditional on income.

From the perspective of standard lifecycle models, this pattern is difficult to reconcile with precautionary saving motives or borrowing constraints alone. Instead, it is consistent with

Figure 8: Decomposition of Risky Asset Market Participation and Savings around Childbirth



Note: This figure decomposes changes in women's risky asset market participation and savings into mechanically predicted responses based on income changes and behavioral residuals, using the decomposition described in Section 4.4. Shaded areas indicate 95 percent confidence intervals.

mechanisms that affect financial engagement directly, such as reduced attention to financial decisions, endogenous specialization in household financial tasks, or shifts in priorities at the onset of parenthood.

We emphasize that this decomposition is descriptive rather than causal. We do not interpret the mechanically predicted component as a causal effect of income, nor the residual as evidence of suboptimal or irrational decision making. Rather, the decomposition provides a transparent accounting exercise that clarifies the relative importance of income-based and non-income channels in shaping financial responses to parenthood.

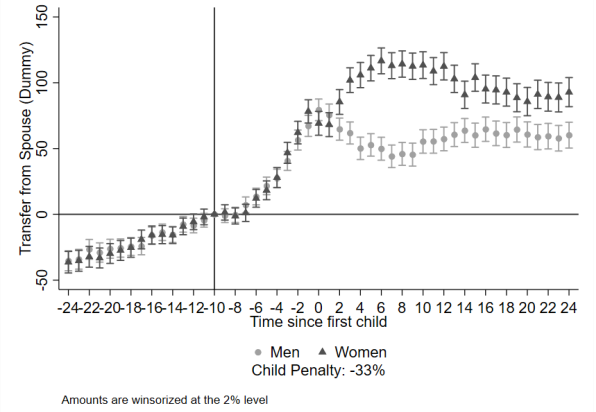
Appendix B provides additional details and robustness analyses for the decomposition,

including extensions to pension balances and consumer credit. These additional analyses confirm that the dominance of behavioral responses over mechanical income effects is a robust feature of the data.

4.5. Intra-Household Transfers and Partial Income Compensation

We next examine whether households compensate mothers for income losses associated with childbirth through intra-household transfers. Figure 9 shows event-study estimates for the propensity to receive transfers from one's partner. During pregnancy, when earnings of both men and women remain largely unchanged, transfers between partners increase symmetrically. Following childbirth, however, women become significantly more likely to receive transfers from their partners, while men become less likely to receive transfers from mothers of their children.

Figure 9: Intra-Household Transfers around Childbirth



Note: This figure plots event-time coefficients from equation (2) for an indicator of receiving a transfer from one's partner, separately for men and women. During pregnancy, transfers increase for both partners. Shaded areas indicate 95 percent confidence intervals.

These patterns indicate that households engage in partial income smoothing around childbirth. Importantly, however, these transfers do not prevent the emergence of financial child penalties in women's personal savings, investment, and engagement. This suggests that while income is partially pooled, financial decision-making and asset accumulation remain individualized, consistent with limited commitment and incomplete insurance across relationship states.

5. Conceptual Framework and Interpretation

A large literature documents persistent gender differences in financial behavior, including savings, portfolio choice, and participation in risky asset markets (Barber and Odean 2001; Calvet et al. 2009; Christiansen et al. 2015; Olafsson and Thornqvist 2018; Ke 2021; Guiso and Zaccaria 2023). Existing explanations typically emphasize differences in preferences, beliefs, financial literacy, or confidence. At the same time, a separate and extensive literature in labor economics has established that parenthood is a central driver of gender inequality in labor market outcomes, giving rise to large and persistent "child penalties" in earnings and employment (Angelov et al. 2016; Kleven et al. 2019; Cortés and Pan 2023).

Our empirical results suggest that these two strands of literature are closely connected. Parenthood is not only a key determinant of gender inequality in labor market outcomes, but also a pivotal event shaping gender differences in personal financial behavior. In this section, we provide a conceptual framework to interpret the child penalties in personal finances documented in the data and to clarify what these penalties do and do not represent.

5.1. Personal Finances and Limited Commitment within Households

A central challenge in interpreting gender differences in financial behavior is distinguishing between individual-level financial choices and household-level decision-making. Much of the household economics literature implicitly assumes full commitment within couples, so that resources are pooled and allocations are jointly insured across time and states of the world. Under such assumptions, changes in individual financial positions can often be interpreted as neutral reallocations within the household.

In practice, however, commitment within households is limited. By limited commitment, we do not mean a lack of cooperation, nor do we restrict attention to unmarried couples. Rather, limited commitment reflects the fact that households cannot write or enforce contracts that fully insure allocations across all future states of the world, in particular states involving separation or divorce. Even under formal marriage and joint asset ownership, a positive probability of separation implies that individual outside options matter and that some dimensions of economic behavior cannot be fully insured within the household.

This distinction is especially relevant for personal finances. Financial assets, savings histories, pension balances, and financial experience are tied to individuals and are not fully transferable across partners in the event of separation. While legal frameworks may govern the division of assets at divorce, they do not fully insure the distribution of financial engagement, experience, attention, or control over decision-making. As a result, individual financial positions have direct implications for individual welfare in adverse states of the world, even when couples coordinate decisions while together.

Our institutional setting makes these features particularly transparent. In Iceland, financial accounts are held at the individual level, and a large share of couples are unmarried at the time they become parents. These features imply that personal financial choices map directly into individual financial positions, and reallocations of saving or investment across partners are not automatically undone if relationships dissolve. Importantly, however, these institutional characteristics do not create the underlying mechanism; they merely make it more visible in the data. The same logic applies in settings with joint ownership and formal marriage whenever separation risk is non-negligible and financial engagement is individual-specific.

This framework clarifies why parenthood can affect personal finances even within cooperative households. When asymmetric time constraints lead one partner to disengage from investment, while the other partner remains financially engaged, individual balance sheets begin to diverge. Under limited commitment, such divergence is not neutral: because financial assets, experience, and engagement are individual-specific, differences in accumulation translate into unequal exposure to financial risk in states involving separation. Importantly, these dynamics can arise even if couples coordinate decisions and expect their relationship to remain stable. They do not require conflict, inefficiency, or differences in preferences or ability, only that financial engagement is individual-specific and relationships are not perfectly insured across states of the world.

For this reason, the financial child penalties documented in this paper should be interpreted as changes in individual financial positions and engagement, not merely as reallocations of tasks or assets within a fully insured household. Even when couples perceive themselves as operating jointly at the time of childbirth, limited commitment implies that persistent differences in

personal saving and investment behavior can have lasting distributional consequences across partners. These dynamics provide a distinct channel through which parenthood can contribute to long-run gender inequality beyond the labor market.

5.2. A Framework of Time Constraints, Endogenous Specialization and Commitment

To discipline interpretation, consider a household consisting of two adults who allocate time and effort across market work, child-related activities, and financial management. Financial decision-making, including risky asset investments, requires time, attention, and cognitive resources. These activities often involve monitoring accounts, acquiring information, and making infrequent but consequential decisions, implying fixed or convex costs in time or attention (Gabaix and Laibson 2017; Duraj et al. 2024).

The arrival of a child represents a large and persistent shock to time constraints. A substantial literature shows that mothers experience larger increases in non-market time demands than fathers, even in highly egalitarian societies (Angelov et al. 2016; Kleven et al. 2019; Goldin 2021). When such asymmetries arise, households may respond by endogenously specializing tasks, concentrating time-intensive financial decision-making on the spouse with greater available time or stronger attachment to the labor market.

Importantly, this specialization does not require differences in financial ability or preferences. Even if spouses are equally capable of making financial decisions, specialization can emerge as an efficient response to asymmetric constraints. In such a setting, the observed divergence in personal financial behavior at childbirth reflects a reallocation of responsibilities rather than a sudden change in preferences or skills.

This framework also helps explain why financial child penalties may be persistent. Once one spouse disengages from active financial decision-making, learning-by-doing and experience accumulation may reinforce specialization over time, leading to durable differences in engagement and observed outcomes even after initial time constraints relax.

In standard household models with full commitment and asset pooling, such specialization may be largely innocuous from an ex ante welfare perspective. Concentrating financial decision-making and asset accumulation on one spouse need not disadvantage the other if resources are

jointly owned and transferable across states of the world. As discussed above, these assumptions do not generally hold when separation risk is non-negligible, including in settings such as ours where many couples are unmarried and financial assets are individually owned. As a result, specialization in financial decision-making is not merely a reallocation of tasks; it is also a reallocation of risk.

This distinction is critical for interpreting our empirical results. When women reduce personal savings, draw down pension balances, or disengage from investment following childbirth, while men show no comparable response, the resulting divergence in individual financial positions increases women's exposure to separation risk. Even if such behavior reflects cooperative decision-making at the time it occurs, it is not neutral in states of the world where relationships dissolve. From an ex ante perspective, specialization under limited commitment may therefore generate outcomes that differ sharply from those predicted by models with full insurance within the household.

Observed financial child penalties may arise for several, not mutually exclusive, reasons. Couples may place substantial weight on the expected stability of the relationship at the time of childbirth, underestimating the probability or consequences of separation. Social norms may emphasize within-couple sharing and mutual support, reducing the salience of individual asset ownership. Alternatively, the immediate demands of parenthood may crowd out attention to long-run financial risks, leading to decisions that prioritize short-run liquidity or consumption needs over individual asset accumulation. Importantly, none of these mechanisms requires differences in financial ability or preferences between men and women.

The persistence of the financial child penalties we document suggests that these dynamics have long-lasting effects. Once specialization in financial engagement emerges under limited commitment, learning-by-doing, habit formation, and informational advantages may reinforce it over time. Even if time constraints later relax, re-engaging with savings and investment may be costly, and the initial divergence in individual financial positions may compound.

In sum, the interaction between asymmetric time constraints and limited commitment provides a coherent explanation for why parenthood generates persistent gender gaps in personal finances. Parenthood does not merely alter who performs financial tasks; it reshapes

individual exposure to financial risk in ways that matter precisely because relationships are not fully insured across states of the world. This interpretation implies that financial engagement may decline when time constraints increase, and that such reductions in engagement could persist if learning-by-doing and experience accumulation reinforce specialization over time.

To discipline this interpretation, Appendix A presents a simple stylized framework that formalizes how asymmetric time constraints at childbirth can generate endogenous specialization in financial engagement under limited commitment. The framework abstracts from bargaining and welfare analysis and is not estimated directly. Its purpose is to clarify how an initial shock to time constraints can lead to persistent divergence in individual savings and investment behavior, even in the absence of differences in preferences, beliefs, or financial ability. The mechanisms highlighted in the framework mirror the key empirical patterns documented in the data, including the sharp timing of the effects at childbirth, their strong gender asymmetry, and their long-run persistence.

5.3. Interpreting the Empirical Patterns

Several features of our empirical results are consistent with this conceptual framework. First, the timing of the effects is striking. Women's savings, investment, and borrowing behavior change sharply at the time of childbirth, rather than gradually over the life cycle. This temporal alignment strongly suggests that parenthood itself, rather than slow-moving preferences or cohort effects, is the key driver.

Second, the adjustments are highly asymmetric across genders. Men's personal financial behavior shows no discernible response to childbirth, while women experience large and persistent declines in savings and risky asset participation. Such asymmetry is difficult to reconcile with explanations based purely on shared household shocks but fits naturally with a specialization mechanism driven by unequal time constraints.

Third, the persistence of the effects over two decades indicates that parenthood can have long-run consequences for financial trajectories. Even if households respond optimally at the time of childbirth, the resulting specialization may lock in patterns of financial engagement that persist long after children grow older.

Finally, the patterns documented above are difficult to reconcile with explanations based on differences in perceived financial ability alone. In Section 6, we bring additional survey evidence to bear on this question and show that task specialization emerges despite broadly symmetric beliefs about financial competence.

5.4. What the Financial Child Penalty Represents

The term "child penalty" has a natural analogy to the labor market literature, but it is important to clarify its meaning in the context of personal finances. The financial child penalty we document captures the extent to which women's personal financial positions and engagement diverge from men's following parenthood. It does not, by itself, establish whether this divergence is socially inefficient, privately costly, or normatively undesirable.

At the same time, persistent disengagement from personal financial decision-making may have consequences that are not fully internalized at the household level. Individual savings and pension balances are often tied to legal ownership, bargaining power, and financial security in adverse states of the world. To the extent that parenthood leads women to accumulate fewer personal financial assets, these dynamics may contribute to gender gaps in wealth, retirement preparedness, and financial resilience later in life.

Our conceptual framing bridges the household finance literature and the child penalty literature in labor economics. While prior work has documented gender differences in financial behavior and shown that parenthood is central to labor market inequality, our results suggest that parenthood is also a key mechanism generating gender gaps in financial engagement. In this sense, child penalties in personal finances may be an important, and thus far underexplored, channel through which gender inequality persists across multiple dimensions of economic life.

6. Potential Underlying Mechanisms

Our empirical results document large and persistent child penalties in women's personal finances that are not mechanically driven by income changes. In this section, we use a combination of institutional features, the results based on the administrative bank data, and survey

evidence[4] to discipline the set of mechanisms that can plausibly account for these patterns.

6.1. Time Constraints and Financial Engagement

Financial decision-making requires time, attention, and cognitive resources. These activities often involve fixed or convex costs, such as monitoring accounts, acquiring information, and making infrequent but consequential decisions. A growing literature emphasizes that limited attention and time constraints can materially affect household financial behavior (Gabaix and Laibson 2017; Duraj et al. 2024).

The arrival of a child represents a large and persistent shock to time constraints. A substantial body of evidence shows that mothers experience larger increases in non-market time demands than fathers, even in highly gender-egalitarian societies (Angelov et al. 2016; Goldin 2021; Kleven et al. 2019). In this context, reducing engagement with time-intensive financial decisions at childbirth is a natural response to binding constraints rather than a sudden change in preferences or financial ability.

The sharp timing of the effects we document, coinciding closely with childbirth rather than unfolding gradually, strongly supports this interpretation.

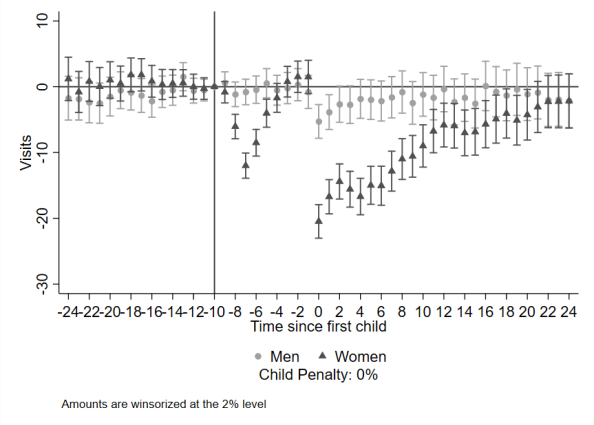
6.1.1. Parenthood and Attention to Personal Finances

We provide direct evidence that parenthood affects financial engagement through changes in attention. Figure 10 shows event-study estimates for a measure of attention to personal finances, proxied by the frequency of logins to personal banking platforms. At childbirth, women exhibit a sharp and persistent decline in attention to their personal finances, while men show no comparable change, only a minor and short-lived drop exactly at the time of childbirth. The decline begins during pregnancy, with a smaller and temporary drop during the first trimester, and deepens markedly following childbirth.

This pattern is consistent with a time-constraint mechanism: as childcare demands increase,

[4] The survey evidence comes from a survey administered to customers of the bank we collaborate with in October 2021 which separately asks both partners within a couple about their financial abilities, their spouse's financial abilities, measures their financial knowledge, decision-making ability, setup of household finances, as well as task division (including savings and investments) within the household, we are able to investigate whether culture or norms that may make mothers shy away from financial planning and investments are prevalent in our setting. This survey was conducted in relation to another project and the associated paper is still work in progress.

Figure 10: Attention to Personal Finances around Childbirth



Note: This figure plots event-time coefficients from equation (2) for the frequency of logins to personal banking platforms, separately for men and women. The vertical line denotes the birth of the first child. Shaded areas indicate 95 percent confidence intervals. Amounts are winsorized at the 2 percent level.

women reduce attention to personal financial management. Importantly, this reduction in attention persists well beyond the immediate post-birth period, mirroring the persistence of the financial child penalties documented in Section 4. These findings provide a direct behavioral link between parenthood, reduced financial engagement, and long-run divergence in personal financial outcomes.

6.2. Endogenous Specialization in Financial Tasks

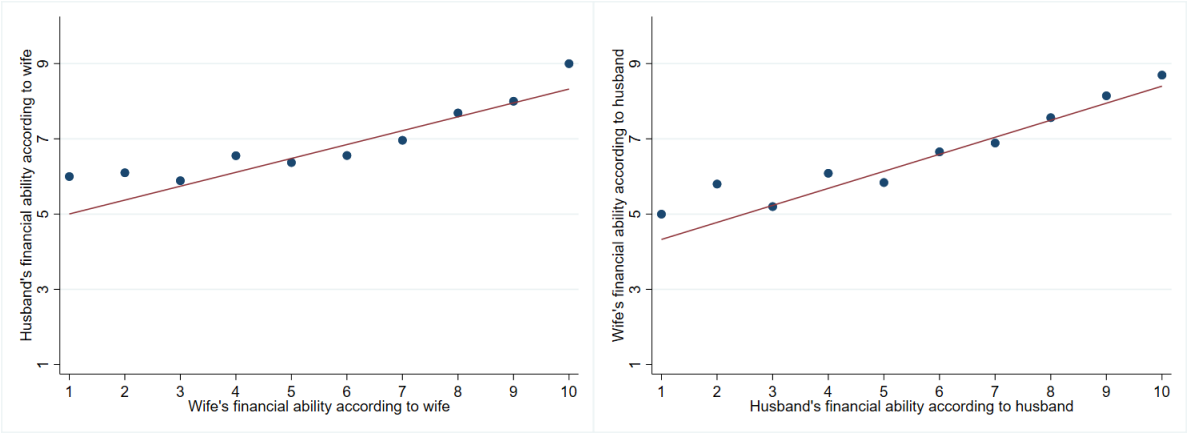
Time constraints alone do not explain why the observed financial adjustments are strongly asymmetric by gender. A natural response to asymmetric constraints within a household is endogenous specialization in tasks, including financial decision-making, as emphasized in models of household behavior with task allocation and specialization (Becker 1991; Chiappori 1992).

To assess whether such specialization reflects beliefs about relative financial ability, we supplement our administrative data with survey evidence collected from both partners within a subset of couples. The survey elicits self-assessed financial decision-making ability, assessments of the partner's ability, and information on the division of financial tasks within the household.

Two findings are particularly informative. First, neither women nor men systematically perceive men as more financially capable. As can be seen in Figure 11, the distribution of responses regarding own versus partner financial ability is remarkably symmetric across genders.

This evidence makes explanations based on perceived male superiority in financial ability unlikely, complementing prior work showing that gender differences in financial behavior are not fully explained by beliefs about ability (Ke 2021; D'Acunto et al. 2021b).

Figure 11: Comparison of Own and Spouse's Financial Ability



Note: The figures show female [male] spouse's responses to the following survey question: "On a scale of 1-10 how good are you [your spouse] at making financial decisions, where 1 means you almost always make financial mistakes, and 10 means you never make financial mistakes?"

Second, despite the absence of perceived ability differences, the survey reveals systematic specialization in financial tasks. As can be seen in Table 3, decisions related to investments, mortgages, and long-term financial commitments are more likely to be handled by male partners, while women are more likely to take responsibility for day-to-day household tasks. These patterns mirror evidence from other settings showing gendered specialization in financial decision-making within households, even in the absence of ability differences (Ke 2021; Guiso and Zaccaria 2023).

Table 3: Intra-Household Financial Task Division

	Pay Bills			Buy Groceries			Savings			Investments			Mortgages/Rent		
	All	M	F	All	M	F	All	M	F	All	M	F	All	M	F
Always Female Spouse	0.12	0.14	0.10	0.05	0.06	0.03	0.06	0.06	0.05	0.04	0.04	0.03	0.10	0.12	0.08
Mostly Female Spouse	0.15	0.15	0.16	0.40	0.42	0.38	0.18	0.20	0.16	0.06	0.07	0.05	0.07	0.07	0.08
Equally Shared	0.35	0.35	0.34	0.39	0.37	0.42	0.54	0.55	0.53	0.60	0.60	0.59	0.49	0.50	0.48
Mostly Male Spouse	0.27	0.27	0.27	0.15	0.13	0.16	0.17	0.16	0.18	0.16	0.15	0.17	0.15	0.16	0.14
Always Male Spouse	0.10	0.08	0.12	0.01	0.01	0.02	0.05	0.04	0.07	0.15	0.13	0.16	0.18	0.15	0.22

The table summarizes responses to the following survey question: "Who takes care of making decisions regarding the following in your household?". Participants are only included if both spouses responded.
[2] M stands for Male Spouse and F stands for Female Spouse

Taken together, these patterns indicate that specialization in financial engagement is not

driven by beliefs about financial competence, but instead reflects task allocation in response to constraints.

6.3. Limited Commitment, Risk Allocation, and Persistence

Under limited commitment, specialization in financial engagement reallocates not only tasks but also exposure to financial risk. When one partner reduces personal saving, draws down pension balances, or disengages from investment following childbirth, individual financial positions diverge. Even if couples coordinate decisions while cohabiting or married, such reallocations are not neutral from an ex ante perspective when separation risk is non-negligible. Crucially, financial experience, attention, and control over portfolio choices are individual-specific and not fully transferable across partners. While legal frameworks may govern the division of assets at separation, they do not insure the distribution of financial engagement or accumulated experience. As a result, specialization in financial decision-making following parenthood can generate persistent differences in individual financial outcomes both in our setting, where assets are individually held, and in environments with joint ownership and formal marriage, provided that separation remains a possibility.

Survey evidence from our setting, showing persistent gender differences in responsibility for investment and long-term financial decisions despite symmetric beliefs about financial ability, is consistent with this mechanism and suggests that specialization may endure well beyond the period of acute time constraints. This persistence is consistent with our decomposition results and with direct evidence that women reduce attention to personal finances following childbirth.

6.4. Interpreting the Sources of Financial Child Penalties

The combination of administrative and survey evidence allows us to rule out several alternative explanations. First, income changes do not explain the observed financial responses, consistent with evidence that financial participation and saving respond weakly to short-run income fluctuations (Calvet et al. 2009; Fagereng and Halvorsen 2017). Second, perceived differences in financial ability do not appear to drive specialization, as partners do not systematically view

men as more capable financial decision-makers (Ke 2021; D'Acunto et al. 2021a). Third, the abrupt timing of the changes at childbirth is inconsistent with slow-moving preference shifts or cohort effects.

Instead, the evidence points to parenthood as a catalyst for endogenous specialization in financial engagement, driven by asymmetric time constraints and reinforced by limited commitment. The resulting financial child penalties reflect persistent differences in engagement and asset accumulation at the individual level, rather than differences in income, beliefs, or innate ability.

7. Policy Relevance and Broader Implications

The existence of persistent child penalties in personal finances has important implications for policy discussions on gender inequality, household finance, and social insurance. While this paper does not take a normative stance on whether gender differences in financial behavior are optimal or inefficient, our findings highlight parenthood as a critical juncture at which long-run financial trajectories diverge.

A first implication concerns individual financial security. Personal savings, pension balances, and access to liquidity play a central role in buffering individuals against income shocks, health risks, and longevity risk. Persistent reductions in women's personal savings and pension accumulation following childbirth may therefore amplify vulnerability later in life, particularly in cases of marital dissolution or widowhood. These concerns are especially salient given evidence that women face higher old-age poverty risk in many countries (OECD 2023).

Second, our findings point to the importance of path dependence in financial behavior. Reduced engagement with savings and investment during early parenthood may limit experience accumulation, confidence, and familiarity with financial products. Even if time constraints ease later in life, re-entry into active financial decision-making may be costly, reinforcing long-run disparities. This channel also rationalizes why the behavioral component of the child penalty can dominate mechanical income effects: a temporary drop in engagement can shift households onto a lower-engagement path even after incomes recover.

Third, the results suggest that policies aimed at reducing gender gaps in financial outcomes

may be more effective if they focus on life-cycle transitions rather than solely on financial literacy or education. For example, default-based interventions such as automatic pension contributions or default investment allocations during parental leave, may help prevent persistent disengagement from long-term saving. Similarly, targeted financial planning support for new parents could mitigate the long-run impact of short-run shocks.

Our findings also speak to the design of family policies. Generous parental leave and childcare support are often justified on labor market grounds, and they may successfully reduce employment and earnings penalties. However, our results indicate that such policies do not automatically prevent financial specialization within households. Even in a highly egalitarian setting with extensive family support, parenthood generates persistent gender gaps in personal financial behavior. This suggests that complementary policies addressing individual financial accumulation during caregiving periods may be necessary to reduce long-run disparities.

Finally, our findings underscore more broadly that gender gaps in financial outcomes cannot be understood solely through participation measures or financial literacy. Parenthood affects multiple dimensions of financial behavior simultaneously, including savings, investment, borrowing, and engagement. Policies aimed at reducing gender disparities in wealth accumulation may therefore need to address life-cycle transitions rather than focusing exclusively on market participation.

We conclude by emphasizing that our study does not evaluate welfare or optimal policy. Future research combining administrative financial data with measures of household welfare, bargaining power, and long-term outcomes would be valuable in assessing whether the observed child penalties in personal finances represent efficient household responses or sources of persistent inequality that policy could productively address.

8. Conclusion

This paper studies how parenthood shapes gender differences in personal financial behavior. Using comprehensive, high-frequency administrative bank data covering a large share of the adult population in Iceland, we document large and persistent financial child penalties for women. At the birth of the first child, women sharply reduce personal savings, draw down

private pension balances, increase reliance on consumer credit, and disengage from risky asset markets. These changes emerge precisely at childbirth and persist for decades, while men show no comparable response.

A central contribution of the paper is to show that these financial child penalties are not driven by income losses associated with parental leave. Decomposing financial responses into income-based mechanical components and behavioral adjustments conditional on income, we find that the mechanical component is close to zero across outcomes. The observed declines in savings and risky asset participation are therefore almost entirely driven by behavioral changes. This finding rules out explanations based on precautionary saving motives or liquidity constraints alone and highlights the importance of mechanisms that operate independently of income.

We provide two additional pieces of evidence that shed light on these mechanisms. First, we show that women experience a sharp and persistent decline in attention to their personal finances following childbirth, as measured by engagement with personal banking platforms, while men show no comparable response. This pattern suggests that increased time constraints associated with caregiving translate directly into reduced financial engagement. Second, we show that households partially compensate mothers for income losses through intra-household transfers: following childbirth, women become more likely to receive transfers from their partners, while men become less likely to receive transfers. Despite this partial income smoothing, women's personal financial positions continue to diverge, indicating that transfers do not offset reductions in financial engagement and asset accumulation while men's personal financial behavior otherwise remains unchanged.

To interpret these findings, we emphasize the role of endogenous specialization in financial engagement under limited commitment. Parenthood introduces asymmetric time constraints that lead households to reallocate time-intensive financial decision-making. When financial experience, attention, and control over asset accumulation are individual-specific and not fully transferable, such specialization has persistent consequences for individual financial positions. Importantly, this mechanism does not rely on the absence of marriage or joint ownership. Even under formal marriage and joint asset ownership, separation risk and incomplete insurance

across relationship states imply that differences in financial engagement and experience can matter for long-run outcomes. Iceland's institutional setting, with individual accounts and high data transparency, sharpens measurement of these dynamics but does not create them.

Our findings have broader implications for understanding gender inequality and household finance. While existing research has established parenthood as a central driver of gender gaps in labor market outcomes, this paper shows that parenthood also plays a key role in shaping gender differences in financial behavior. Financial child penalties constitute a distinct and previously underexplored channel through which gender inequality can persist over the life cycle, even in settings with high gender equality and extensive family support.

Finally, our analysis highlights the importance of life-cycle transitions for financial behavior. Policies aimed at reducing gender gaps in financial outcomes may be most effective if they target moments such as childbirth, when financial engagement patterns are formed or disrupted.

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Online Appendix

Appendix A A Stylized Framework for Financial Specialization

This appendix presents a simple framework to discipline the interpretation of the empirical findings. The purpose of the framework is not to provide a fully structural model or to derive welfare results, but rather to clarify how parenthood can generate persistent gender differences in personal financial behavior through endogenous specialization under asymmetric time constraints and limited commitment.

Consider a household consisting of two adults, indexed by $g \in \{f, m\}$, who live together and may have children. Time is discrete. Individuals derive utility from consumption and from child-related outcomes. Each individual controls their own financial accounts and assets, which are legally held at the individual level. There is no full commitment between partners: in the event of separation, assets remain individually owned.

Each individual chooses consumption $c_{g,t}$, savings and investment decisions $a_{g,t+1}$, and whether to actively engage in financial decision-making. Income is exogenous and follows an individual-specific process. Parenthood may affect income, but income is taken as given in the individual's financial choice problem.

Making active financial decisions, such as participation in risky asset markets and allocation of savings across asset classes, requires time and attention. Let financial engagement incur a fixed cost $\kappa_g \geq 0$, measured in units of time or disutility. If an individual pays this cost, they can choose an optimal portfolio and savings plan; otherwise, their assets evolve passively (for instance, remain in low-return accounts).

Formally, let expected financial returns be:

$$R^{active} > R^{passive}, \tag{8}$$

If individual g engages in financial decision-making at time t, their continuation value reflects the higher return net of the cost. If they disengage, returns are lower but no cost is paid.

A.1 Parenthood and Asymmetric Time Constraints

The arrival of a child introduces an increase in non-market time demands. Let parenthood raise the effective cost of financial engagement for individual g by $\Delta\kappa_g$. Empirically, a large literature documents that parenthood disproportionately increases non-market time demands for mothers. We therefore assume:

$$\Delta\kappa_f > \Delta\kappa_m, \tag{9}$$

This asymmetry may arise from parental leave, caregiving norms, or biological constraints, but the source is not essential for the mechanism.

As a result, the net benefit of active financial engagement may fall below zero for one partner but not the other:

$$R^{active} - R^{passive} < \kappa_f + \Delta\kappa_f \quad \text{but} \quad R^{active} - R^{passive} \geq \kappa_m + \Delta\kappa_m, \tag{10}$$

In this case, it is optimal for the mother to disengage from active financial decision-making at childbirth, while the father remains engaged.

In a standard household model with full commitment and joint asset ownership, such specialization would be largely neutral: the household could pool assets and share returns across states of the world. In contrast, under limited commitment and individual asset ownership, specialization has direct implications for individual financial positions. When one partner disengages, their personal savings and risky asset participation decline, asset accumulation becomes concentrated in the engaged partner's accounts, and individual exposure to financial risk diverges across partners. Even if partners coordinate decisions ex ante and share consumption while cohabiting, individual asset ownership implies that these reallocations are not neutral in states of the world involving separation.

Even in environments with formal marriage, joint asset ownership, and strong within-household commitment, the mechanism described above can remain economically relevant when there is a positive probability of divorce or separation. Under divorce risk, current financial specialization affects not only within-household allocations but also the distribution of

assets, financial experience, and outside options across partners in future states of the world. If one partner disengages from active financial decision-making following parenthood, asset accumulation, financial expertise, and familiarity with investment opportunities may become concentrated with the other partner. In the event of divorce, legal rules governing asset division may not fully offset these differences, particularly when assets are illiquid, human capital in financial decision-making is not transferable, or bargaining outcomes depend on financial sophistication. Moreover, even when assets are formally split, differences in financial engagement and experience can persist beyond separation, affecting post-divorce portfolio choices, returns, and financial resilience. As a result, parenthood-induced specialization in financial engagement can generate persistent gender differences in individual financial outcomes even in settings with formal commitment, provided that separation is possible and financial experience is not perfectly insurable.

The framework also provides a natural explanation for persistence. Financial engagement generates experience and learning-by-doing. Let the cost of engagement decline with accumulated experience:

$$\kappa_{g,t+1} = \kappa_{g,t} - \lambda \cdot \mathbb{I}\{\text{engaged at } t\}, \tag{11}$$

Disengagement at childbirth therefore increases future costs of re-entry, reinforcing specialization even if time constraints later ease. This mechanism generates persistent divergence in financial behavior and asset accumulation following an initial shock.

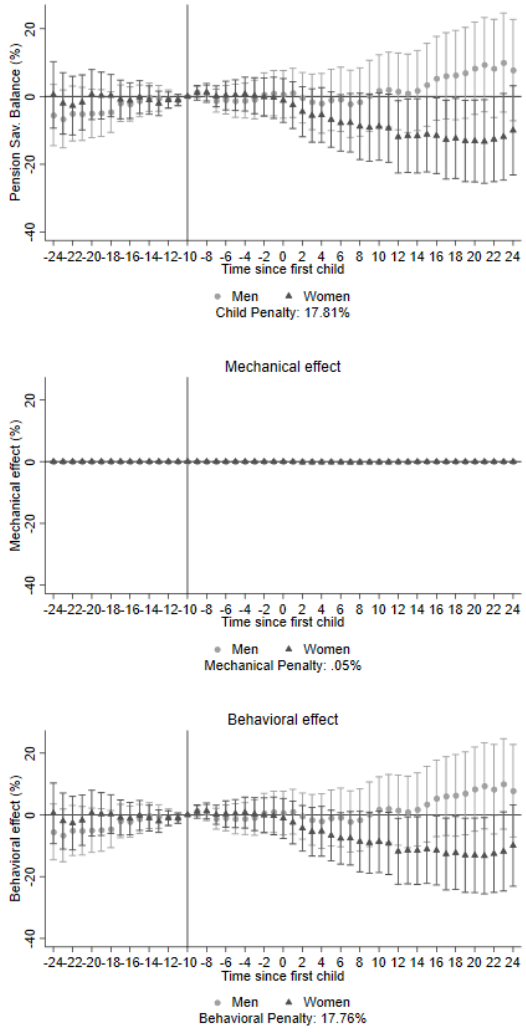
A.2 Implications for Interpretation

This stylized framework delivers three implications that align closely with the empirical findings. First is the sharp timing, that is, financial disengagement occurs discretely at childbirth, when time constraints change. Second is asymmetry where differential time costs generate gender-specific responses even without differences in preferences or ability. Last is persistence, that is, initial disengagement can have long-run effects through path dependence. Importantly, the framework does not require that women are less financially skilled or more risk-averse, nor does it rely on income changes as the primary driver. Instead, parenthood acts as a catalyst

for endogenous specialization in financial engagement under limited commitment. The framework is intentionally stylized. It abstracts from bargaining, uncertainty about separation, and endogenous fertility choices. Its purpose is not to establish optimality or welfare implications, but to clarify how the combination of asymmetric time constraints and limited commitment can generate persistent gender differences in personal finances following parenthood.

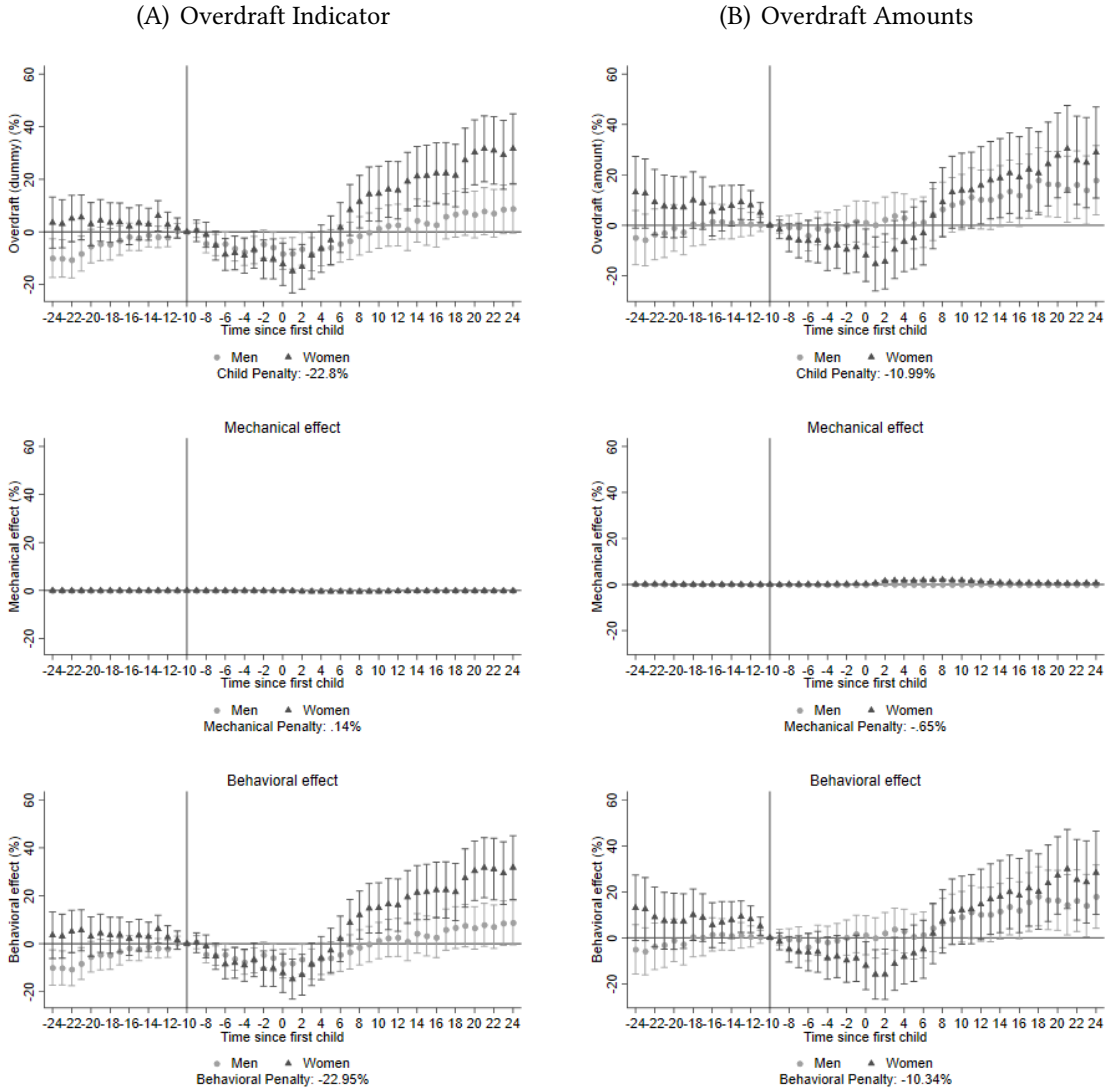
Appendix B Additional Decompositions

Figure B.1: Decomposition of Private Pension Savings around Childbirth



Note: This figure decomposes changes in women's private pension savings around childbirth into mechanically predicted responses based on income changes and behavioral residuals, using the decomposition described in Section 4.4. The figure reports event-time coefficients from equation (2) and the associated financial child penalty at event time 24. Shaded areas indicate 95 percent confidence intervals based on robust standard errors.

Figure B.2: Decomposition of Consumer Credit Use around Childbirth

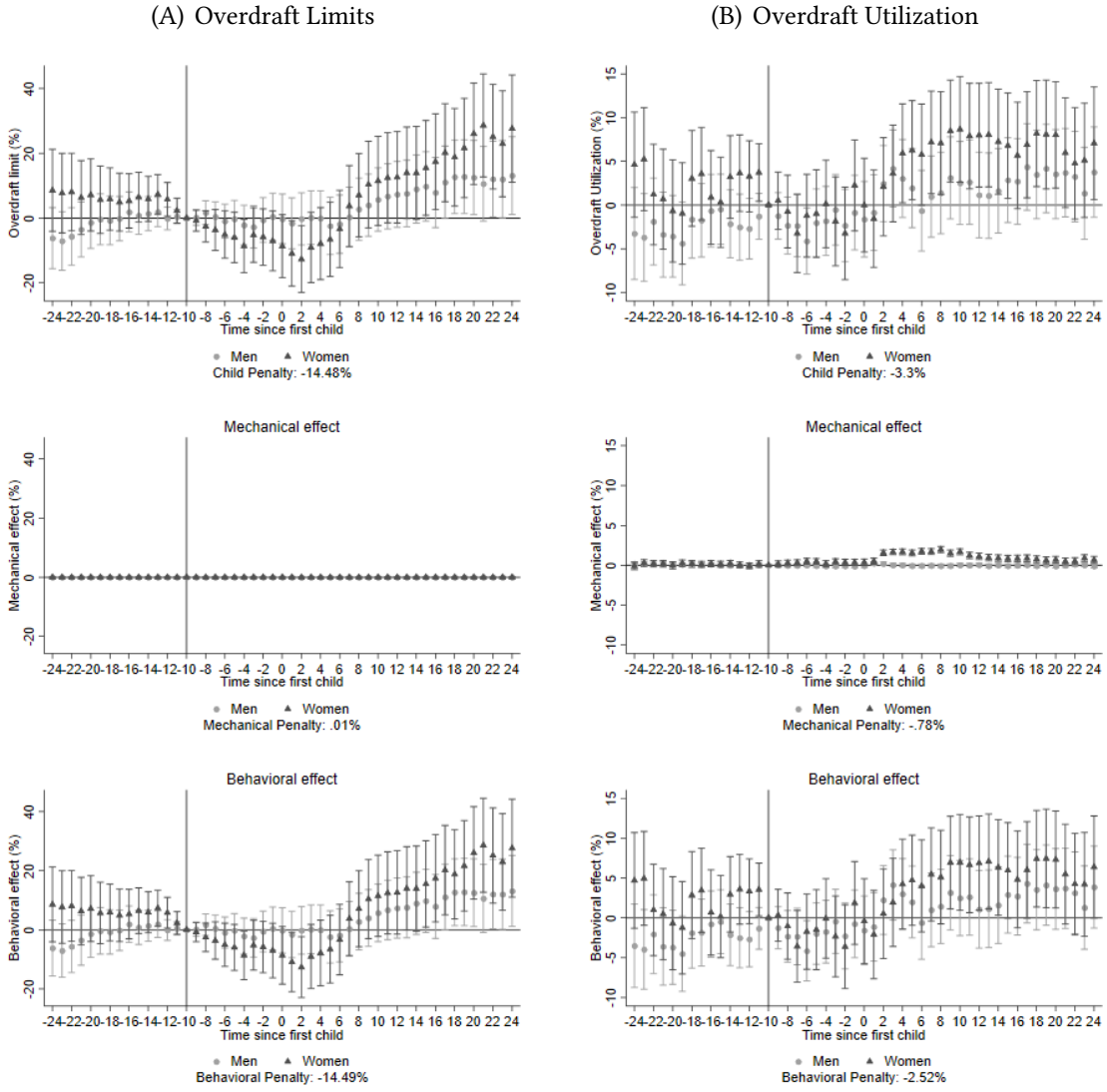


Note: This figure decomposes changes in women's consumer credit use around childbirth into mechanically predicted responses based on income changes and behavioral residuals. Panels report overdraft use and balances. Event-time coefficients are estimated using equation (2), and shaded areas indicate 95 percent confidence intervals.

Appendix C Data Quality Validation

This appendix provides additional evidence on the quality and internal consistency of the transaction-level bank data. We apply the same event-study specification used in the main analysis to expenditure categories for which economic intuition yields clear and testable predictions around childbirth. The purpose of this exercise is not to establish new findings, but to verify that the data capture well-known behavioral responses at the correct timing and magnitude.

Figure B.3: Decomposition of Consumer Credit Limits and Utilization around Childbirth



Note: This figure extends the decomposition of consumer credit outcomes to overdraft limits and utilization rates. Shaded areas indicate 95 percent confidence intervals.

Specifically, we estimate equation (2) separately for men and women, using the birth of the first child as the event and controlling non-parametrically for age and calendar time, exactly as in the main analysis. We apply this specification to selected expenditure categories that are plausibly affected by pregnancy and childbirth.

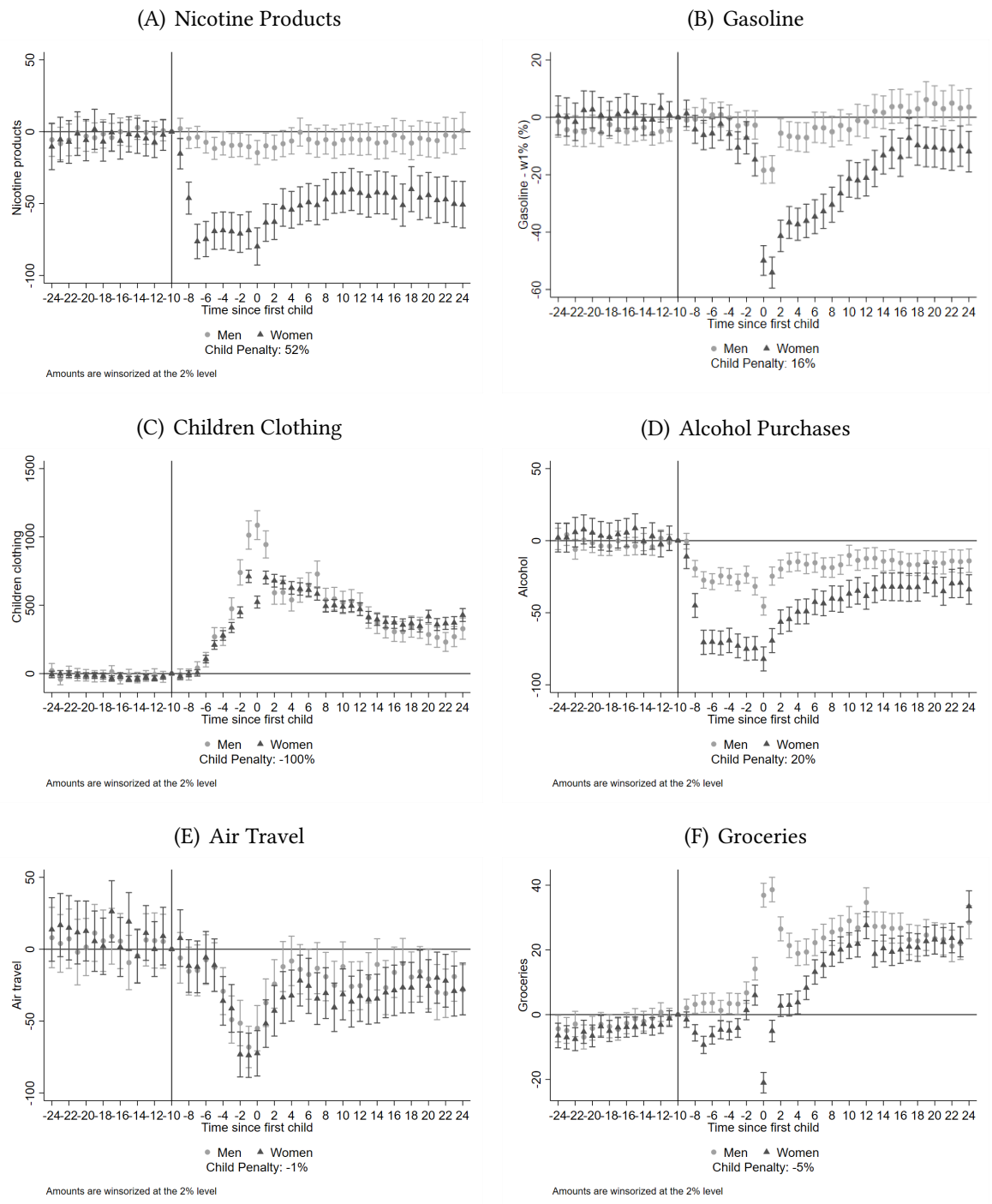
Figure C.1 presents the resulting event-study profiles. Several patterns are noteworthy. First, expenditures on nicotine products decline sharply for women beginning approximately nine months before childbirth, while men's nicotine expenditures remain unchanged. This pattern is consistent with reduced smoking during pregnancy and aligns closely with the

expected timing of behavioral adjustments. Second, expenditures on children's clothing and related products increase during pregnancy for both parents, with a larger increase for women, and remain elevated after childbirth. This pattern is consistent with preparatory spending and persistent responsibility for child-related purchases.

We also observe a decline in alcohol expenditures for both parents during pregnancy, consistent with joint consumption patterns and shared reductions in social drinking. Air travel expenditures decline sharply during pregnancy for both men and women, consistent with reduced mobility late in pregnancy and joint travel behavior. Finally, grocery expenditures increase around childbirth, with a temporary spike for men and a persistent increase for women, consistent with short-run substitution in household tasks around the time of birth and a longer-run increase in household consumption needs.

Taken together, these patterns closely match expected behavioral responses to pregnancy and childbirth and occur precisely at the relevant event times. This provides reassurance that the transaction data accurately capture real economic behavior and that the main event-study specification recovers meaningful responses rather than spurious correlations.

Figure C.1: Expenditures by Category around Childbirth (Data Quality Validation)



Note: This figure shows event-time coefficients estimated from the main event-study specification in equation (2), applied to selected expenditure categories with well-understood responses to pregnancy and childbirth. Estimates are reported separately for men and women and are normalized to event time 10. The patterns align closely with expected behavioral responses, providing validation of the transaction data and the empirical design. Shaded areas indicate 95 percent confidence intervals based on robust standard errors.