ECON 340: Economics of the Family
TA Session 3

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Today

- ▶ Efficiency in Household Decision-Making
  - ▷ Setting and Data
  - ▷ Test and Measurement
  - ▷ Mechanisms
  - ▷ Implications and Discussion
- ▶ Gender Identity & Relative Income (Bertrand–Kamenica–Pan)
- ▶ Credit, Household Bargaining, and Access (Kim, SSRN 3962414)
- ▶ Wrapping Up

Today's Paper

Choukhmane, Goodman, & O'Dea (NBER WP 31195).
Efficiency in Household Decision Making: Evidence from the Retirement Savings of U.S. Couples.

- **Question:** Do married couples allocate retirement contributions across spouses' accounts to maximize the employer match at the *household* level?
- **Idea:** If one spouse has a higher marginal employer match rate, efficient (static) coordination puts the next dollar in that spouse's account until their match cap is hit.
- **Why it matters:** The unitary/collective models typically assume within-period (ex-post) efficiency. Testing that assumption in a high-stakes setting informs both theory and policy.
- **Link:** nber.org/papers/w31195

Preview of Findings

- Around **19%** of couples leave employer match dollars on the table (*"foregone match"*).
- For couples with foregone match, the **mean** missed match is about **$750** per year.
- Inefficiency is **persistent**: over half of couples with foregone match in a given year still have it **four years later**.
- Simple explanations (default inertia, auto-enrollment, equal-contribution heuristic, "stakes too small") **do not** explain the patterns.
- **Mechanisms:** Both mistakes (inattention/low financial literacy) and deliberate choices (low trust/commitment; misperceptions about divorce rules).
- **Lifetime cost:** back-of-the-envelope simulation ≈**$14k** lower retirement wealth from non-coordination.

Institutional Setting

- Employer-sponsored **defined contribution (DC)** plans often feature employer **matching contributions** that vary across firms.
- Heterogeneity in **match schedules**: e.g., dollar-for-dollar up to a cap; two-tier matches (like the federal Thrift Savings Plan).
- Assets in DC accounts are **marital property** in divorce (division does not depend on who contributed).

Data Construction

- New plan-level dataset: hand-coded **Form 5500** filings (2003–2018) $\Rightarrow$ plan match and vesting schedules for $6{,}000+$ plans (covering $\sim$40M employees).
- Linked to **IRS administrative data**: individual tax returns and W-2s $\Rightarrow$ observed annual employee contributions by spouse; couples linked via joint tax returns.
- **Study population (2015 example):** married filers where both spouses are employed, age $\geq$21, and each has access to a DC plan (roughly one-third of married filers; median HH income $\sim \$101$k).

A Transparent Test of Static Efficiency

Let $S = s_A + s_B$ be total employee contributions and $M_i(s)$ the employer match schedule for spouse $i \in \{A, B\}$. Define

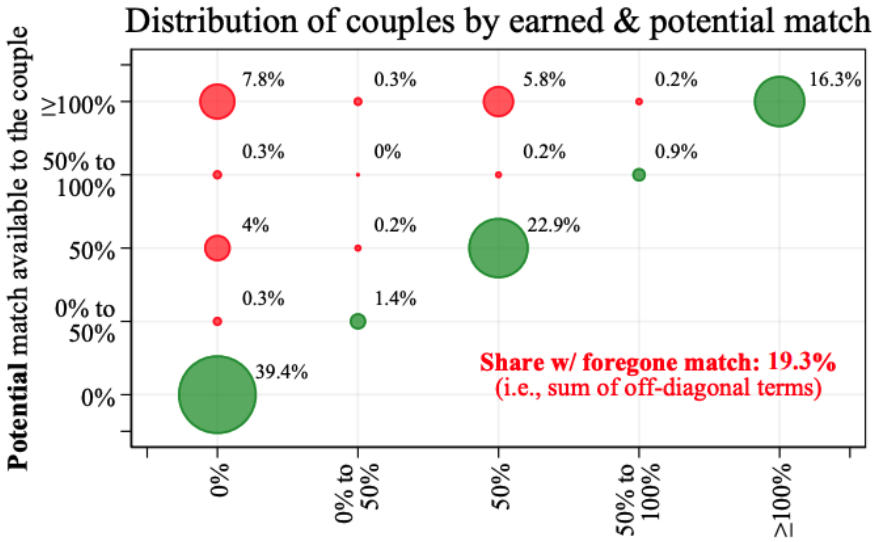
$$\mathrm{FM} \;=\; \underbrace{\max_{s_A^* + s_B^* = S} \{M_A(s_A^*) + M_B(s_B^*)\}}_{\text{maximum match feasible given } S} \;-\; \underbrace{\big(M_A(\hat{s}_A) + M_B(\hat{s}_B)\big)}_{\text{match earned}} .$$

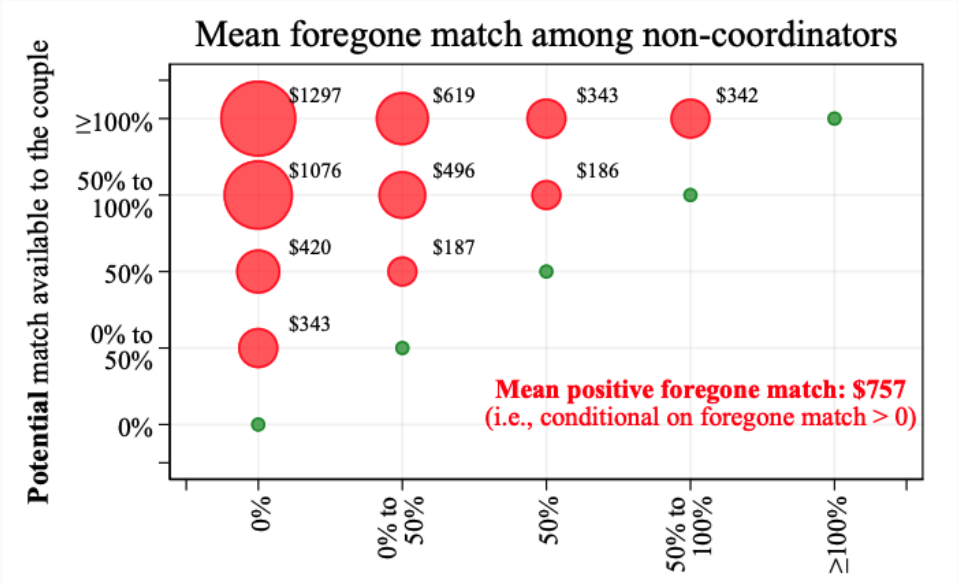
- $\mathrm{FM} > 0 \Rightarrow$ **intra-household arbitrage** is unexploited $\Rightarrow$ static inefficiency.
- Intuition: allocate the next dollar to the spouse with the higher **marginal match rate** until caps equalize; only then contribute to the other account.

Incidence and Magnitudes

- **Incidence: 19.3%** of couples have $\mathrm{FM} > 0$ in the baseline sample.
- **Amounts:** Among those, mean foregone match ≈**$757** (median ≈$383)
- **Most common failure mode (7.8% of all couples):** one spouse contributes *above* their match cap while the other still faces a $\geq 100\%$ marginal match.
- **Persistence:** more than half with $\mathrm{FM} > 0$ in year t also have $\mathrm{FM} > 0$ four years later.

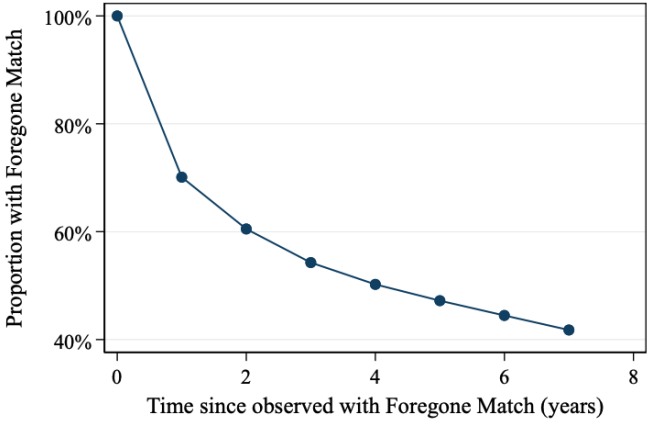
Incidence and Magnitudes




Mean foregone match among non-coordinators
Potential match available to the couple
≥100%
50% to 100%
50%
0% to 50%
0%
$1297
$619
$343
$342
$1076
$496
$186
$420
$187
$343
Mean positive foregone match: $757
(i.e., conditional on foregone match > 0)
0%
0% to 50%
50%
50% to 100%
≥100%

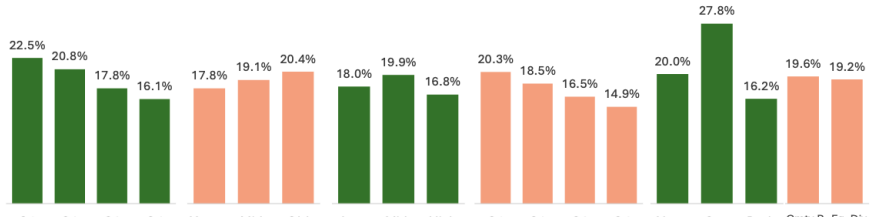
Persistence

Figure 3: Persistence of having a foregone match



Across Demographic Groups

Figure 4: Foregone Match and Demographic Characteristics

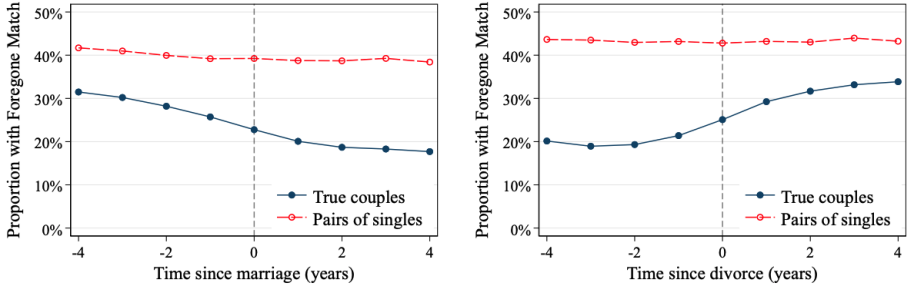


Are Couples Actively Coordinating?

- Many couples with $\mathrm{FM} = 0$ might simply *happen* to be efficient (e.g., both fully max the match) without active coordination.
- Benchmark using two placebo samples with *no coordination by construction*:
  - **Reshuffled couples:** re-pair spouses across real couples with similar observables.
  - **Pairs of singles:** randomly pair singles matched on observables.
- In placebo samples, **33–34%** fail the arbitrage test. Comparing to the 19.3% in the data implies about **57–58%** of couples are *not actively coordinating*.

Are Couples Actively Coordinating?

Figure 5: Probability of non-coordination around marriage and divorce



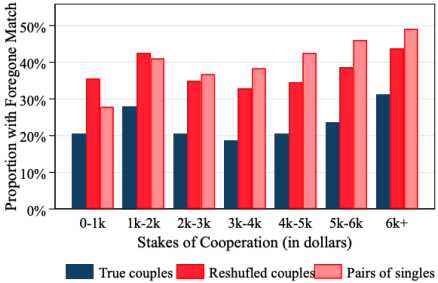
(a) Marriage (b) Divorce

Stakes and Lifecycle Costs

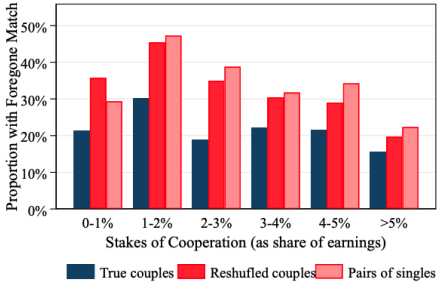
- **High stakes:** Non-coordination persists even when $> \$6{,}000$ (about 5% of joint earnings) is at stake.
- **Lifecycle:** Simulation calibrated to transitions in $\mathrm{FM} > 0$ and match amounts implies $\approx \$13{,}800$–**$14,000** lower wealth at retirement (age 65) absent coordination.

Stakes are not high enough?

Figure 7: Share with foregone match as a Function of the "Stakes" of the Decision



(a) Share w/foregone match, by stakes (dollars)



(b) Share w/foregone match, by stakes (earnings pp)

Not (Just) Inertia or Simple Heuristics

- Couples do **not** become more efficient in years when they make active saving decisions $\Rightarrow$ weak role for default inertia.
- A common heuristic—**equalizing contributions across spouses**—actually *facilitates* efficiency rather than drives inefficiency.
- Non-coordination persists even with **large stakes** $\Rightarrow$ not (rational) inattention to tiny amounts.
- Foregone match is **less common** when both spouses work for the **same employer** (household dimension more salient).

Survey Evidence: Design

- Online survey of **1,000** working, married respondents with DC plans (Prolific).
- Core vignette: allocate $3,000 between own vs spouse's account given two match schedules.
- Three randomized versions: *Max via spouse*, *Max via own*, *Max via split*.
- Follow-ups elicit whether foregone match was **accidental** vs **deliberate**; measure **financial literacy** and beliefs about **asset division at divorce**.

Survey Evidence: Results

- **40%** choose allocations with foregone match in the vignette.
- Roughly **half** of foregone match is **deliberate**, half **accidental**.
- Deliberate foregone match is **much higher** when maximizing requires putting *all funds in the spouse's account*.
- **Financial literacy gradient:** foregone match falls sharply with correct answers on 5 literacy questions.
- **Awareness:** many couples had *not considered* that coordination could increase the match.
- **Divorce beliefs:** over a third think they would keep their own accounts on divorce; those respondents are **more likely** to forego match.

Financial literacy matters

Table 6: Financial Literacy

	(1) Prop. of sample	(2) Prop. w/ any foregone match	(3) Prop. w/ deliberate foregone match	(4) Prop. w/ accidental foregone match	(5) Prop. w/ other foregone match
≤ 2	17.4	64.0	29.1	29.1	5.8
3	22.1	49.1	27.1	18.8	3.2
4	36.9	32.1	14.6	15.9	1.6
5	23.6	25.3	10.7	12.0	2.6

Administrative Proxies for Commitment

- Foregone match is **higher** among couples who later **divorce**.
- Foregone match is **lower** among couples who used a **joint bank account before marriage**.
- Other proxies: longer marriage, presence of children, and having a mortgage are associated with **more coordination**.

Commitment seems to be an issue

Table 7: Foregone Match and Commitment

	a) Prop. with foregone match		b) Foregone match as prop. of emp'ee contribution	
	(1)	(2)	(3)	(4)
Length of marriage	-0.0010	-0.0019	-0.0141	-0.0292
	(0.0002)	(0.0006)	(0.0039)	(0.0117)
Kids	-0.0057	-0.0110	-0.1975	-0.1764
	(0.0020)	(0.0039)	(0.0401)	(0.0740)
Future divorce	0.0181	0.0108	0.2416	0.1192
	(0.0031)	(0.0054)	(0.0679)	(0.1058)
Mortgage	-0.0244	-0.0321	-0.3487	-0.4088
	(0.0025)	(0.0055)	(0.0541)	(0.1097)
Joint account prior to marriage		-0.0151		-0.2849
		(0.0053)		(0.0990)

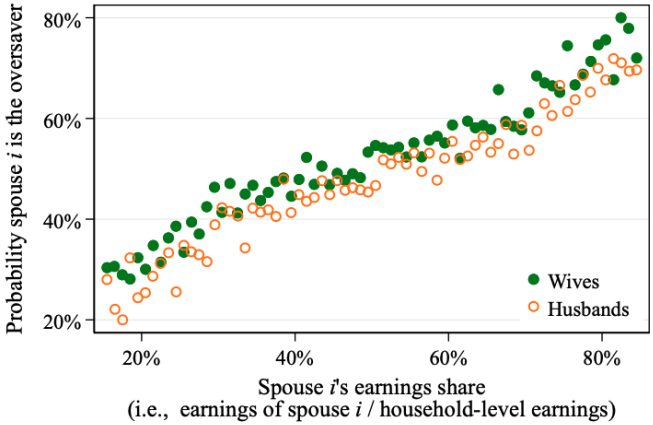
As well as knowledge about divorce laws

Table 8: Knowledge of Divorce Law and Association with Forgone March

	(1) Prop. of sample	(2) Prop. w/ any foregone match	(3) Prop. w/ deliberate foregone match	(4) Prop. w/ accidental foregone match	(5) Prop. w/ other foregone match
Keep own	34.2%	51.2%	27.8%	19.2%	4.1%
Split/Other	46.9%	36.9%	15.3%	19.0%	2.6%
Don't know	18.8%	26.3%	11.8%	12.9%	1.6%

Gender dynamics

Figure 8: Differences by Relative Earnings and Gender



Discussion

- What does this evidence imply for **unitary** and **collective** models of the household?
- How might **commitment frictions** or **limited attention** generate the patterns observed?
- Which **policy lever** would you implement, and why?

Implications for Policy and Plan Design

- **Default design:** auto-allocate the first dollars to the higher marginal match account (with easy opt-out).
- **Information:** nudge emails and on-portal alerts when one spouse is above cap while the other has match available.
- **Legal literacy:** improve communication about division of retirement assets upon divorce.

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Today's Paper

Bertrand, Kamenica, & Pan (QJE 2015; NBER WP 19023).

Gender Identity and Relative Income within Households.

- **Question:** Do gender norms against wives outearning husbands shape marriage, labor supply, and allocations?
- **Key norm:** "A man should earn more than his wife."
- **Design:** Descriptive & quasi-experimental evidence using Census/ACS, SIPP, Canadian tax data, ATUS, NSFH.
- **Links:** QJE 2015

Stylized Fact: Sharp Drop at 50%

Distribution of the wife's share of household labor income shows a **sharp drop just to the right of 0.5** (wife earns more than husband).

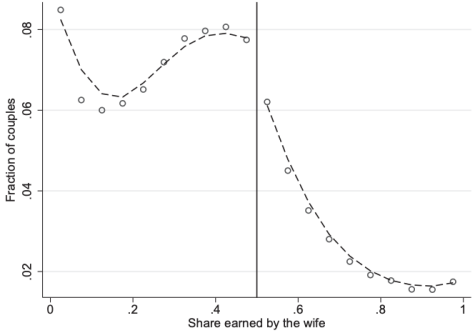

FIGURE I
Distribution of Relative Income (SIPP Administrative Data)

Marriage-Market Evidence

- Construct **marriage markets** by age $\times$ race $\times$ education $\times$ state; compute $Pr(\text{Woman earns more than Man})$.
- **Result:** Marriage rates decline as this probability rises; authors attribute about **23%** of the 1970–2010 decline in marriage to this channel.
- Intuition: identity-based preferences lower match surplus when wife would outearn husband.

Within-Couple Labor Supply Distortions

- For each married woman, estimate distribution of **potential income** from demographics; compute $Pr(\text{Wife potential} > \text{Husband actual})$.
- **Participation:** Higher probability $\Rightarrow$ lower labor-force participation (large negative coefficients).
- **Conditional earnings:** If she works, the gap between realized and potential income is larger $\Rightarrow$ *under-earning*.
- Controls: husband income (flexibly), wife potential-income vigintiles, demographics, year & state FE; robustness to alternative constructions.

Marital Satisfaction, Divorce, and Time Use

- **NSFH:** Couples with wife>husband income report **lower marital satisfaction** and **more marital trouble**; higher **divorce** likelihood.
- **ATUS:** When wife earns more, the **gender gap in home production widens**—wives do even *more* housework ("compensatory" behavior).
- Effects concentrate in **chores** rather than childcare.

Interpretation & Alternative Explanations

- Paper's view: **gender-identity** norm ("a man should earn more...") fits the facts across data sources.
- **Misreporting?** Unlikely — administrative data (US SIPP; Canada LAD) show the same drop at 0.5.
- Cross-country evidence is mixed; some replications find attenuated discontinuities.

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Today's Paper

Kim (2021, rev. 2023). *Credit and the Family: The Economic Consequences of Closing the Credit Gap of U.S. Couples (SSRN 3962414).*

- **Question:** Does expanding credit access for *secondary earners* shift within-household allocation and bargaining?
- **Policy shock:** The **2013 TILA reversal** let card issuers consider *household* income (not only the applicant's independent income) for 21+.
- **Design:** Treatment $\equiv$ *equitable-distribution* (ED) states; Control $\equiv$ *community-property* (CP) states that already granted access via marital property rules.
- **Outcomes:** Spouse-level credit limits and consumption.

Institutional Background

- **TILA (Reg Z) 2013 change:** removes independent ability-to-pay requirement for 21+; issuers may use income/assets the consumer can reasonably access $\Rightarrow$ *household* income counts.
- **Exposure:** In **ED** states, the change *raised* secondary earners' borrowing capacity. In **CP** states, division-of-property rules already implied shared access $\Rightarrow$ *minimal* effect.
- **Intuition:** More own credit $\Rightarrow$ better outside option and greater control over spending $\Rightarrow$ potential shift in *bargaining power*.

Identification (Matched DiD)

Compare ED vs CP states around the November 2013 reform:

$$Y_{ist} = \alpha_i + \delta_t + \beta \cdot (\text{ED}_s \times \text{Post}_t) + X'_{it}\gamma + \varepsilon_{ist},$$

- Y_{ist}: spouse-level outcomes (credit limits; consumption).
- β: impact on secondary earners in ED states after reform (vs CP).
- **Assumptions:** common trends across ED/CP (supported by event study); matched-DiD to improve balance.
- **Heterogeneity:** single- vs dual-income households; baseline credit access.

Data and Measurement

- De-identified **JPMorgan Chase** admin data: checking, debit, credit accounts for ∼**66,200** opposite-sex couples, **2012 –2015**.
- **Primary vs secondary earner:** by pre-reform monthly labor income; single- vs dual-income classified from payroll deposits.
- **Credit access:** (i) *Independent* credit = sum of limits on *sole* cards; (ii) *Total* credit = limits on any cards each spouse can use (primary or authorized).
- **Consumption:** spouse-level spending from debit/credit + checking outflows; ambiguous joint transactions split equally.

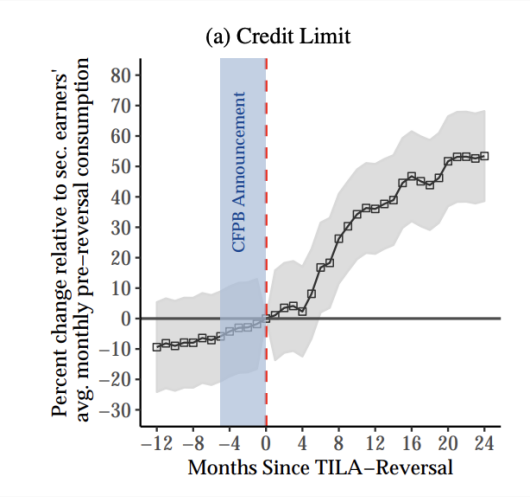
Pre-Reform Facts: Intra-Household Gaps

- **Credit access:** before 2013, primary earners had $\sim$ **97%** of *accessible* credit $\Rightarrow$ large gap.
- **Consumption:** primary consumed $\sim$**59%**, secondary $\sim$**41%** of household spending $\Rightarrow$ **18 p.p.** gap.
- **Interpretation:** secondary earners had limited *independent* borrowing capacity and consumed less within the household.

Main Effect I: Credit Access for Secondary Earners

- **Credit limits** for secondary earners ↑ by about **$1,500** after the reform in ED vs CP states (≈**60%** of monthly pre-reform consumption).
- **No crowd-out:** total household credit ↑ ∼**$1,532**⇒ secondary earners' gains did not reduce primary earners' limits.

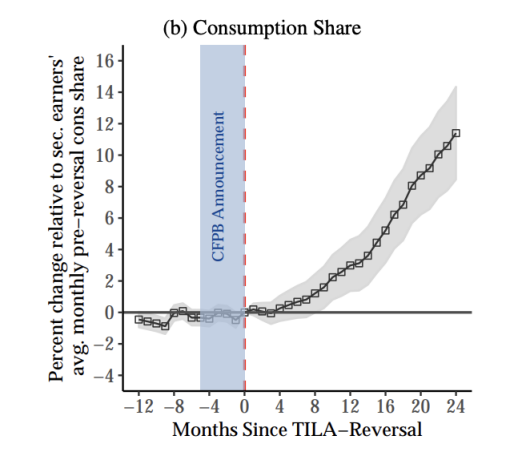
Main Effect I: Credit Access for Secondary Earners



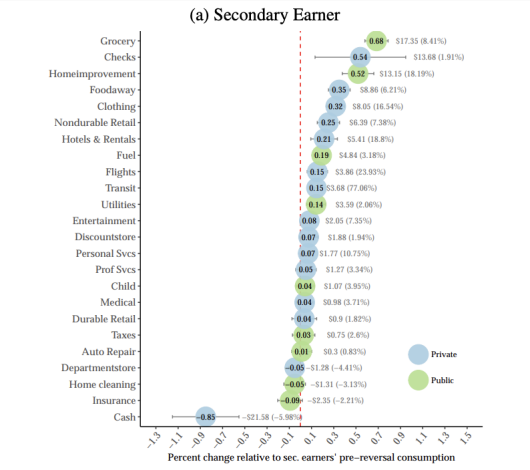
Main Effect II: Consumption and Reallocation

- **Consumption equalization:** spouses share consumption more equally; the pre-reform gap **closes by roughly half**.
- **Levels:** secondary earners' monthly consumption ↑ (e.g., ∼**14%** or ∼**$340**); household consumption ↑ modestly (∼**3%** or ∼**$170**).
- **Composition:** spending shifts toward goods that *benefit both spouses* (shared categories).

Main Effect II: Consumption



Main Effect II: Reallocation



Mechanisms & Heterogeneity

- **Bargaining channel:** access to one's own credit relaxes liquidity constraints for the secondary earner $\Rightarrow$ greater say in allocations.
- **Stronger effects** in **single-income** couples and for stay-at-home partners (lowest baseline independent income).
- **Financial health:** no measurable increase in delinquencies/overdrafts $\Rightarrow$ improved intra-household equity without distress.

Policy Implications

- **Underwriting at the household margin** can reduce intra-household inequality when legal rights allow access.
- **Equity + prudence:** expanded access for secondary earners did *not* worsen solvency—useful for regulators and issuers.

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Conclusion: Three Views of Intra-Household (In)Efficiency

- **Institutions ⇒ bargaining (Kim 2024):** Expanding *secondary earners'* credit access shifts consumption toward equity without hurting solvency.
- **Norms ⇒ choices (BKP 2015):** Identity costs around "who earns more" shape marriage, labor supply, and time use (even with similar aggregates).
- **Friction ⇒ missed arbitrage (CGO 2023):** Many couples fail a simple *static efficiency* test (employer match arbitrage), costing lifetime wealth.
- **Synthesis for policy:** Design *for households*, not just individuals—combine *rights* (credit access), *information/defaults* (retirement match prompts), and *norm-aware* messaging to reduce inefficiency and inequity.

See you next time!