Relative income on decision power within the household

Evidence from Australia

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Motivation (1/2)

"More Money, More Power? Not Always."

Who decides how money is spent in a household?
In theory, we might expect the higher earner to have more say. But in practice—especially when a woman earns more than her male partner—this assumption often breaks down.

- Traditional gender norms have historically positioned men as the breadwinners and decision-makers.
- Yet, household decision-making patterns are evolving, challenging the assumption that income always drives influence.
- This creates a gap between observed behavior and standard economic predictions.

Motivation (2/2)

- **Bertrand et al. (2015)** showed that when women earn more than their husbands, labor supply and marital satisfaction are adversely affected—suggesting a backlash against norm violations.
- Even in countries like Australia, where we think of gender equality as the norm, old ideas about 'who should decide what at home' still have a strong hold.
- **This study** uses HILDA data from Australia to examine whether women who out-earn their male partners actually gain more decision-making power—or whether social norms remain binding constraints.

Are income dynamics enough to shift power dynamics in Australian households? Or are we still ruled by invisible norms?

Literature Review: Gender Identity and Household Behavior

- **Becker (1965)** emphasizes that the efficiency of non-working time may be more important to economic welfare than working time, due to the historical reduction in work hours.
- **Akerlof Kranton (2000)** define gender identity as a person's sense of self, shaped by social categories and norms.
- Gender identity helps explain persistent inequalities: for instance, wives who earn more than their husbands often still perform more housework—possibly to compensate for the perceived threat to male identity.
- Such norms may also underlie occupational segregation and gender-based labor market discrimination.
- This framework lays the foundation for understanding how gender identity influences household decision-making and labor market behaviors.

Literature Review: Norms, Culture and Relative Income

- **Alesina et al. (2013)** show that agrarian labor divisions contributed to the male breadwinner norm, and that these norms persist across generations—even among descendants of immigrants in the U.S. and Europe.
- Cultural transmission explains modern gender inequality and labor participation differences through the legacy of traditional roles (e.g., plough use).
- **Bertrand et al. (2015)** find that the distribution of the wife's income share drops sharply when she starts earning more than her husband—indicating norm-based discomfort.
- They document that wives who earn more are more likely to reduce their labor supply, report lower marital satisfaction, and face higher divorce risks—especially among highly educated couples.

Literature Review: International Extensions

- A growing body of international literature builds on Bertrand et al.'s findings:
  - **Wieber Holst (2015)** in West Germany;
  - **Hederos Stenberg (2022)** in Sweden;
  - **Zinovyeva et al. (2021)** in Finland.
- **Folke Rickne (2020)** examine Swedish CEOs, finding that female promotions often destabilize marriages. When a woman becomes the primary earner, the household may experience significant strain.
- These studies collectively highlight that gender identity norms exert real constraints on household outcomes—even in egalitarian societies.

Literature Review: The Australian Context

- **Booth Van Ours (2009)** provide early evidence consistent with gender identity theories using Australian data.
- **Foster et al. (2021)** use longer-term data from both Australia and the U.S., showing that the male breadwinner norm has weakened in recent years.
- **Johnston et al. (2023)** revisit and refine evidence on female breadwinners amid growing criticisms of prior assumptions.
- **Zhang et al. (2021)** use data from the ABS's Personal Safety Survey (PSS) to link norm violations—when men are not breadwinners—with higher rates of domestic violence and emotional abuse.
- **Gap in literature:** While most studies focus on labor supply, marriage, or violence, **few investigate how relative income affects intra-household decision-making power in Australia.**

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Data and Method

- This study uses data from the Household, Income and Labour Dynamics in Australia (HILDA) survey.
- waves 5 to 14, wave 16, wave 18 and wave 20 of HILDA.
- 61780 observations on annual salary.

Data and Method:Decision Variables in HILDA

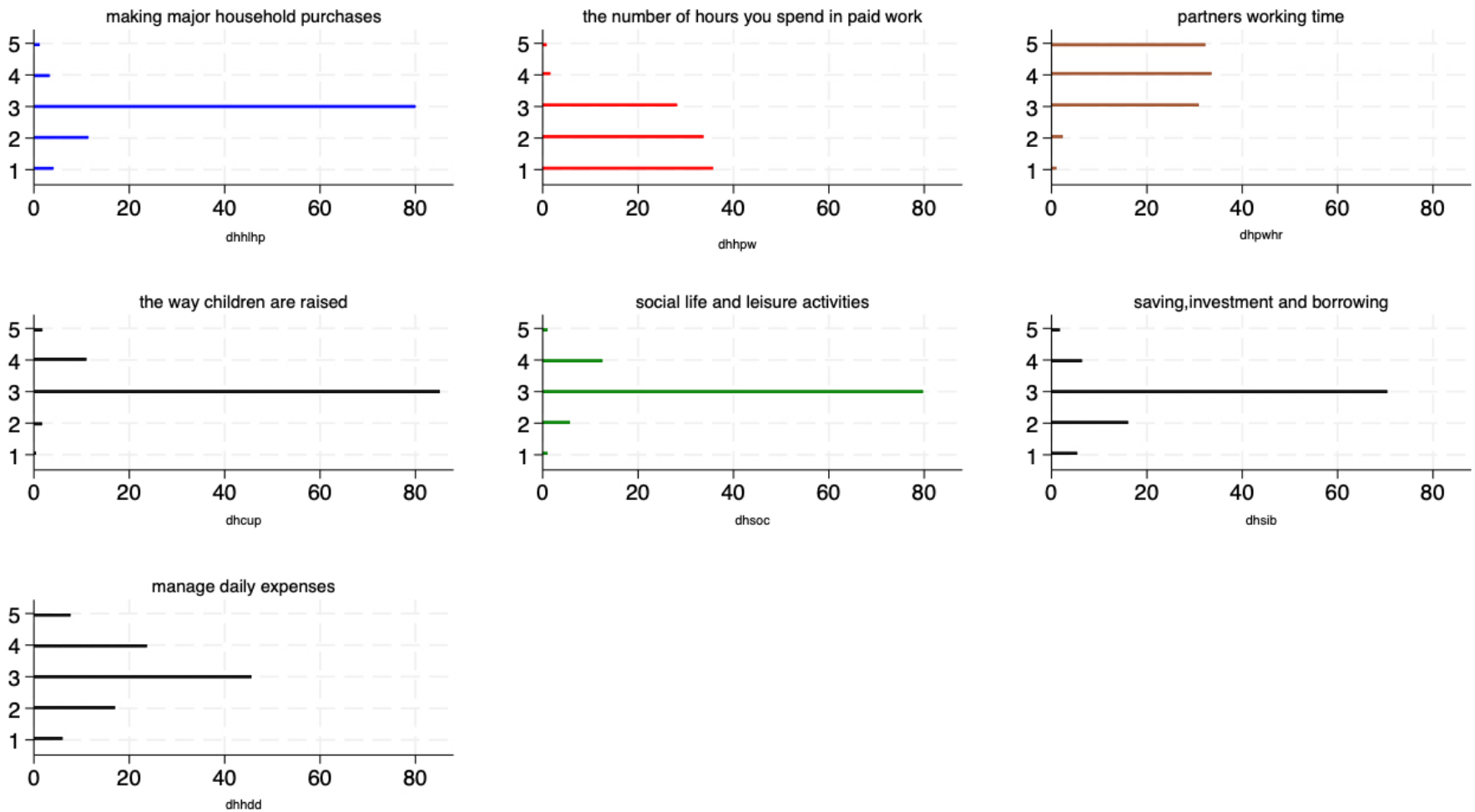
- The household **decision variables** are subjective level responses in the survey.
  - managing daily expenses and paying bills *(dhhdd)*
  - making major household purchases *(dhhlhp)*
  - the number of hours you spend in paid work *(dhhpw)*
  - the number of hours your spouse spends in paid work *(dhpwhr)*
  - the way children are raised *(dhcup)*
  - saving, investment and borrowing *(dhsib)*
  - social life and leisure activities *(dhsoc)*.

Data and Method:Decision Variables in HILDA

C6 Who makes the decisions about the following issues in your household? *(Cross ☒ **ONE** box on **EACH** line)*

		Always me	*Usually me*	*Shared equally between partner & self*	*Usually my partner*	*Always my partner*	*Always / usually other person(s) in house*	*Shared equally among household members*	*Always / usually someone not living in house*	*Does not apply*	
a	Managing day-to-day spending and paying bills	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ 8	☐ 9	tdhhdd
b	Making large household purchases (e.g., cars and major appliances)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ 8	☐ 9	tdhhlhp
c	The number of hours you spend in paid work	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ 8	☐ 9	tdhhpw
d	The number of hours your partner / spouse spends in paid work	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ 8	☐ 9	tdhpwhr
e	The way children are raised	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ 8	☐ 9	tdhcup
f	Social life and leisure activities	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ 8	☐ 9	tdhsoc
g	Savings, investment and borrowing	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6	☐ 7	☐ 8	☐ 9	tdhsib

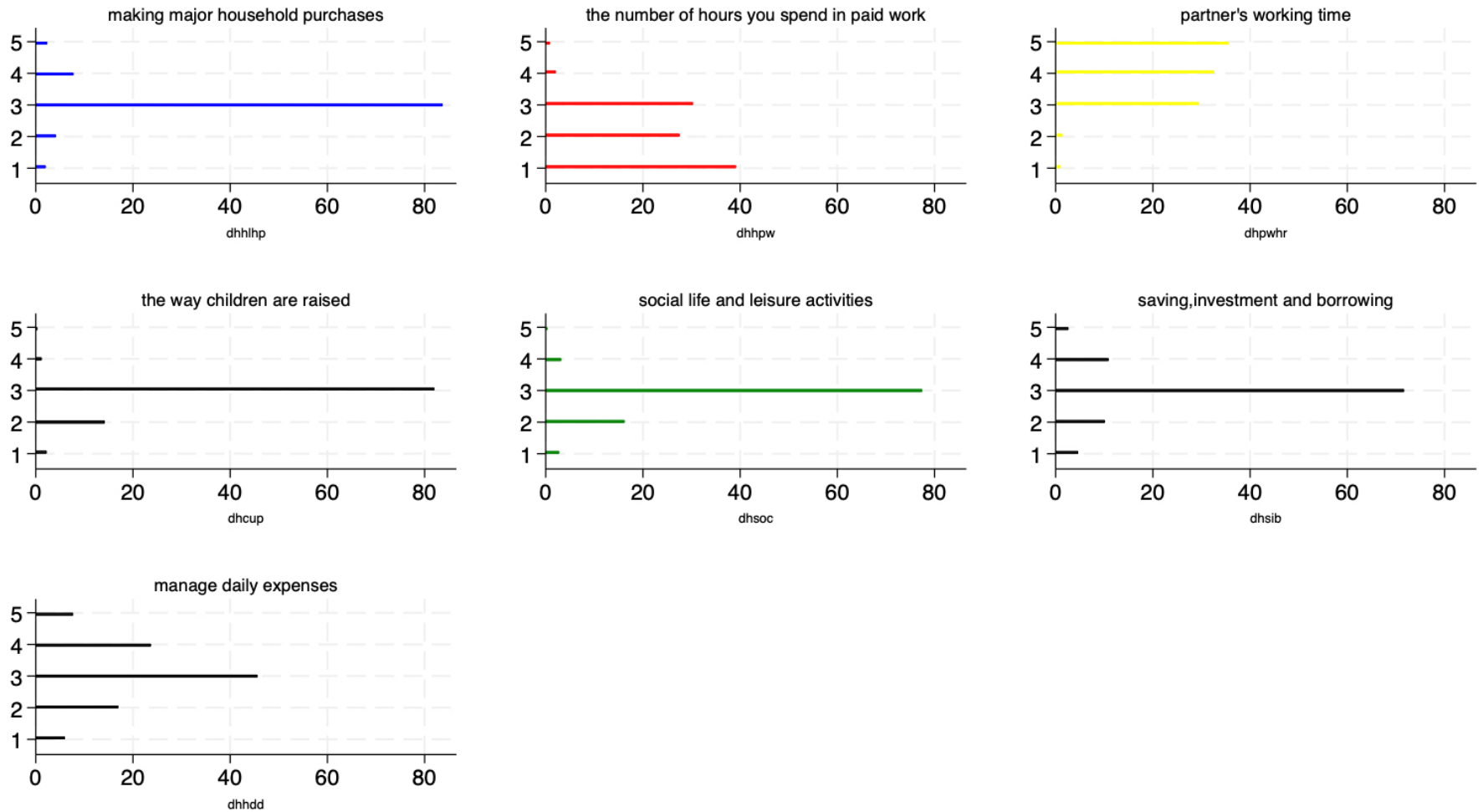
Data and Method:Decision Variables in HILDA



Histogrom of decision variables, Panel A: Male

Figure: Histogram of decision variables, Panel A: Male

Data and Method:Decision Variables in HILDA



Histogram of decision variables, Panel B : Female

Figure: Histogram of decision variables, Panel B: Female

Income variables in HILDA

- The income variables from the HILDA survey are the **self-reported financial year and gross wages and salaries** *(wsfg)* and **the financial year business income**.
- Year and gross wages and salaries *(wsfg)*
  - fiscal year for incorporated enterprises, limited liability Co, the gross fiscal year for wages and salaries, and work for wages and salaries.
- Business income = positive business income *(bifip)* - negative business income *(bifin)*

Descriptive statistics

Table: Descriptive statistics: Income Variables

Variable		Obs	Mean	Std.Dev	Min	Max
Annual wages and salaries	female	63631	28455.30	37364.679	0	1143000
(wsfg)	male	61780	53064.57	62410.316	0	2280000
Negative business income	female	68429	123.844	2781.136	0	2280000
(bifin)	male	68429	381.138	13910.176	0	2500000
Positive business income	female	68429	1923.418	12589.562	0	1000000
(bifip) income	male	68429	5104.456	36294.973	0	2350000
Business income	female	68429	1799.573	12911.553	-350000	1000000
(bifip-bifin)	male	68429	4723.318	38919.264	-2500000	2350000

Descriptive statistics

Table: Descriptive statistics: Decision Variables

Variable		Obs	Mean	Std.Dev	Min	Max
Day-to-day spending and paying bills	female	58452	2.581	1.024	1	5
(dhhdd)	male	55340	3.06	1.003	1	5
large household purchase	female	57481	3.058	.599	1	5
(dhhlhp)	male	54469	2.841	.62	1	5
The number of hours you spend in paid work	female	41438	2.039	1.002	1	5
(dhhpw) income	male	41811	1.914	.874	1	5
The number of hours your partner spends in paid work	female	44291	4.052	.896	1	5
(dhhpwr)	male	38269	3.895	.954	1	5
The way children are raised	female	30982	2.802	.524	1	5
(dhcup)	male	29353	3.131	.481	1	5
Social life and leisure activities	female	56546	2.822	.563	1	5
(dhsoc)	male	53510	3.065	.518	1	5
Savings, investment and borrowing	female	56205	2.966	.748	1	5
(dhsib)	male	57481	3.058	.599	1	5

Relative Income Variables

- Bertrand's (2015)
  - $$\text{female income}_i = \text{female annual wages and salaries}_i + \text{female business income}_i$$
  - $$\text{male income}_i = \text{male annual wages and salaries}_i + \text{male business income}_i$$
  - $$\text{relative income}_i = \frac{\text{female income}_i}{\text{female income}_i + \text{male income}_i}$$

Decision Index

- Decision Index

$$DI_i = \frac{1}{7}(dhhdd_i + dhhlhp_i + dhhpw_i + dhpwhr_i + dhcup_i + dhsoc_i + dhsib_i)$$

- Standardized Decision Index

$$Standardized\_DI_i = \frac{DI_i - Mean(DI)}{S.D.(DI)}$$

For the single decision variables, we use standardized version as well.

- Descriptive Statistics

Table: Descriptive statistics: Decision Variables

Variable	Obs	Mean	Std.Dev	Min	Max
Decision Index (DI)	56485	2.916	.456	1	5
Relative Income	52710	.389	.941	-26.143	195.373
Standardized DI	56485	0	1	-4.196	4.8

Methods

- Run RDD around relative income = 0.5

$$\text{Standardized DI}_i = \beta_0 + \beta_1(\text{Relative Income}_i - \text{Threshold}) + \gamma D_i + \epsilon_i$$

$\text{Standardized MDI}_i$: Standardized MDI for observation i,

Threshold : relative income = 0.5

D_i : Treatment indicator (relative income above 0.5)

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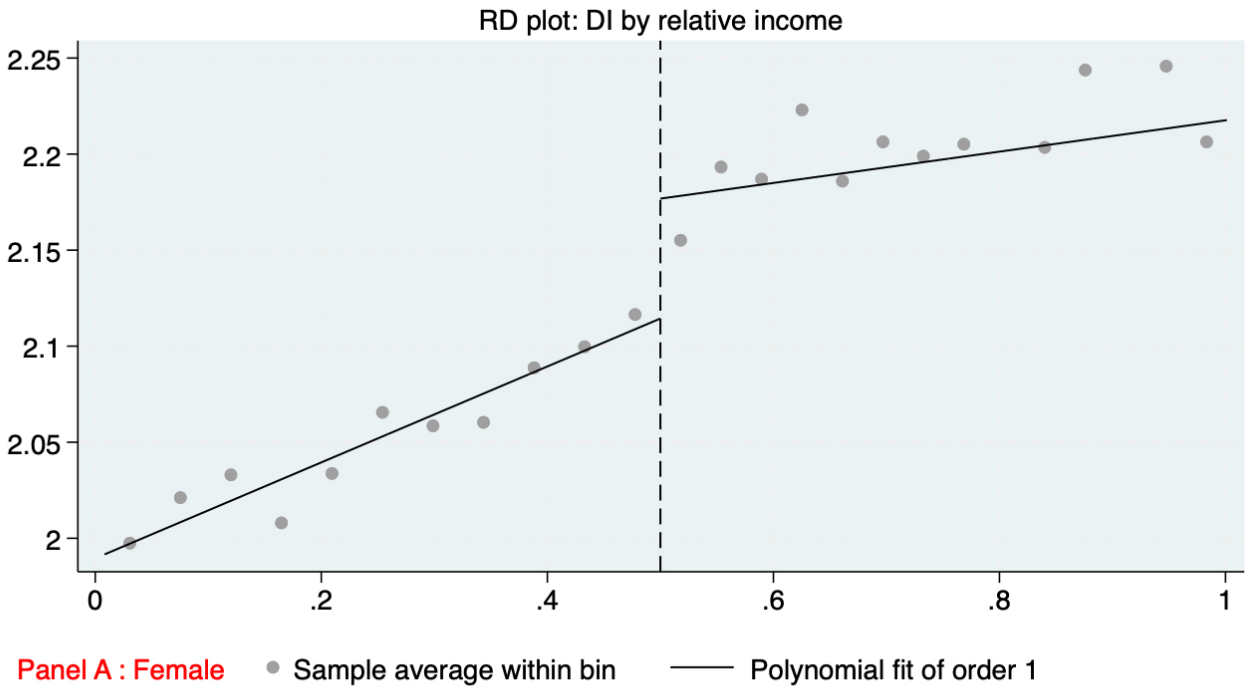
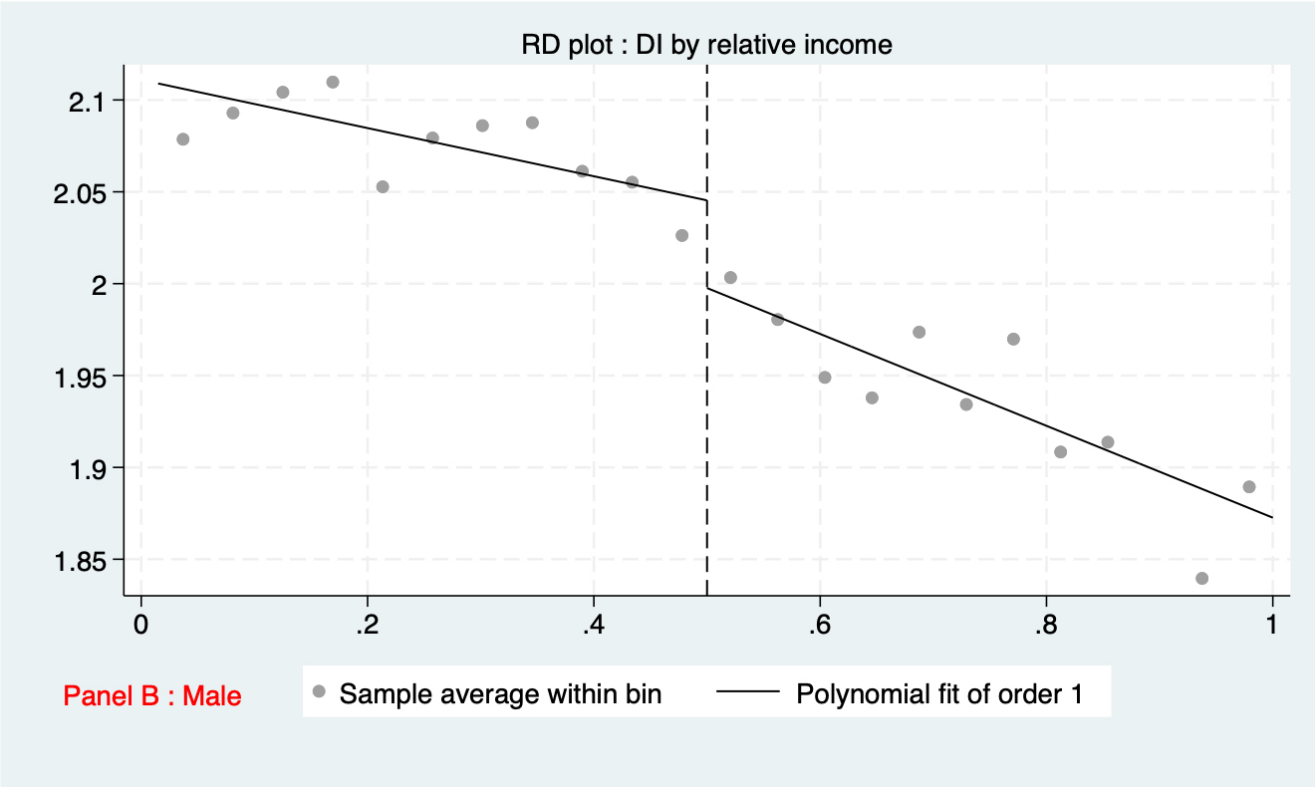
Examining the relationship between DI and Relative Income

- Panel A: Female



Examining the relationship between DI and Relative Income

- Panel B: Male



Regression Table

Table: Regreesion Discontinuity on DI

Decision Index	Coef.	Std.Err	P	Confidence	Interval
Panel A Female	0.0334	.0101	0.001	0.136	0.053
Panel B Male	-0.013	0.013	0.335	-0.383	0.013

Gendered Decision Index

- Female Decision Index (FDI)
  - managing day-to-day expenses *(dhhdd)*
  - the way children are raised *(dhcup)*
  - social life and leisure activities *(dhsoc).*
- Male Decision Index (MDI)
  - making major household purchases *(dhhlhp)*
  - the number of hours you spend in paid work *(dhhpw)*,
  - the number of hours your spouse/partner spends in paid work *(dhpwhr)*
  - Savings, investment and borrowing*(dhsib)*.
- Same way with Decision Index to compound the Female Decision Index and Male Decision Index

Subjective Gendered Decision Index

- Female subjective view of who makes decisions: *DI (female)*
- Female subjective view of who makes "male" decisions: *MDI(female)*
- Female subjective view of who makes "female" decisions: *FDI(female)*
- Male subjective view of who makes decisions: *DI (male)*
- Male subjective view of who makes "male" decisions: *MDI(male)*
- Male subjective view of who makes "female" decisions: *FDI(male)*

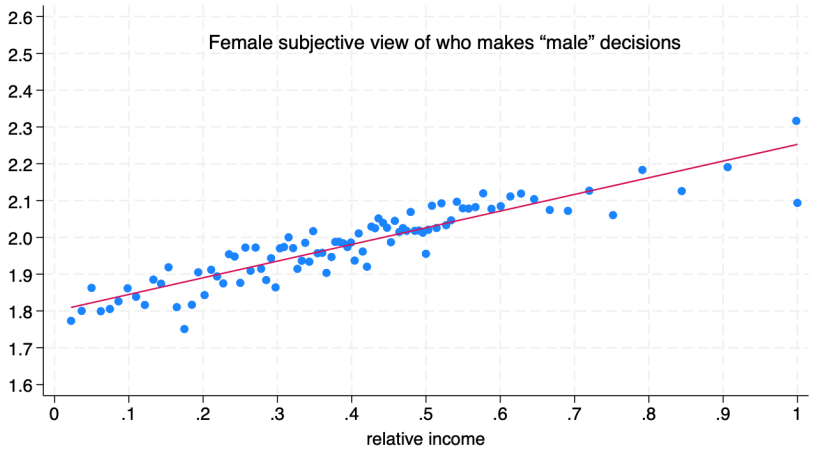
Subjective Gendered Decision Index

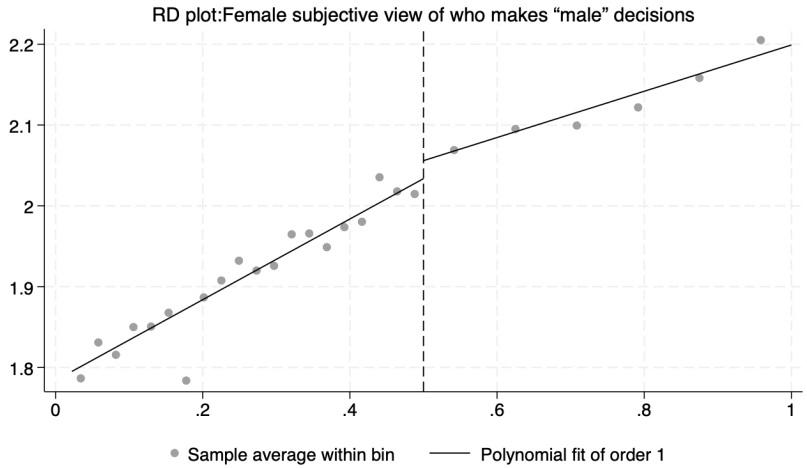
Table: Descriptive statistics: Gendered Decision Index

Variable		Obs	Mean	Std.Dev	Min	Max
Female Decision Index (FDI)	female	59229	2.723	.591	1	5
	male	56092	3.07	.564	1	5
Male Decision Index (MDI)	female	59062	3.056	.550	1	5
	male	55971	2.828	.534	1	5
Standardized Famale Decision Index	female	59229	0	1	-2.912	3.848
	male	56092	0	1	-3.665	3.426
Standardized Male Decision Index	female	59062	0	1	-3.738	3.536
	male	59229	0	1	-3.423	4.067

Subjective Gendered Decision Index : Result

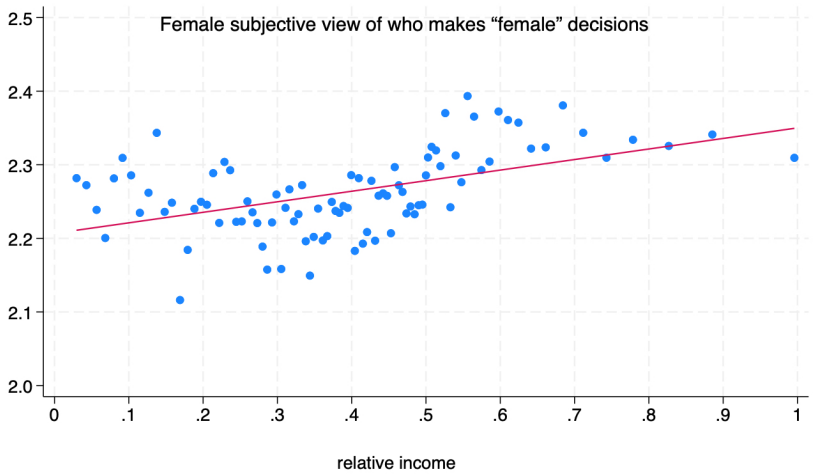
- Female subjective view of who makes "male" decisions

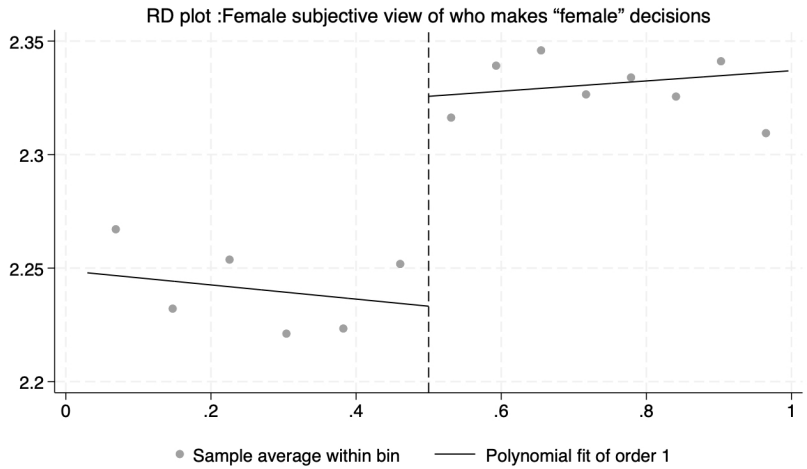




Subjective Gendered Decision Index : Result

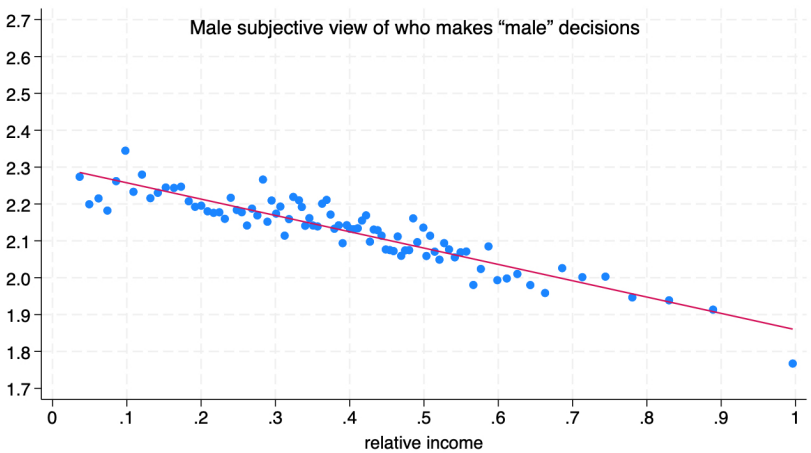
- Female subjective view of who makes "female" decisions

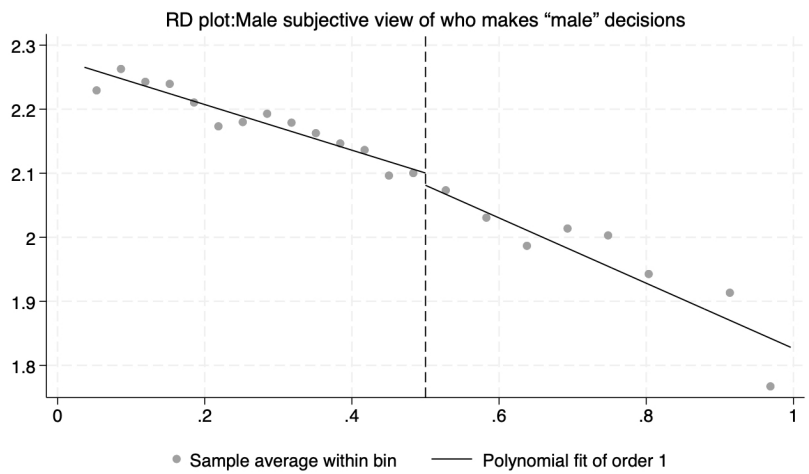




Subjective Gendered Decision Index : Result

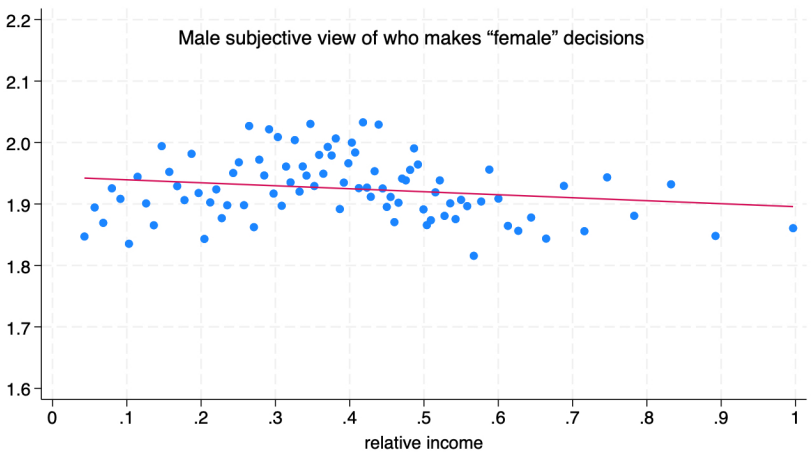
- Male subjective view of who makes "male" decisions

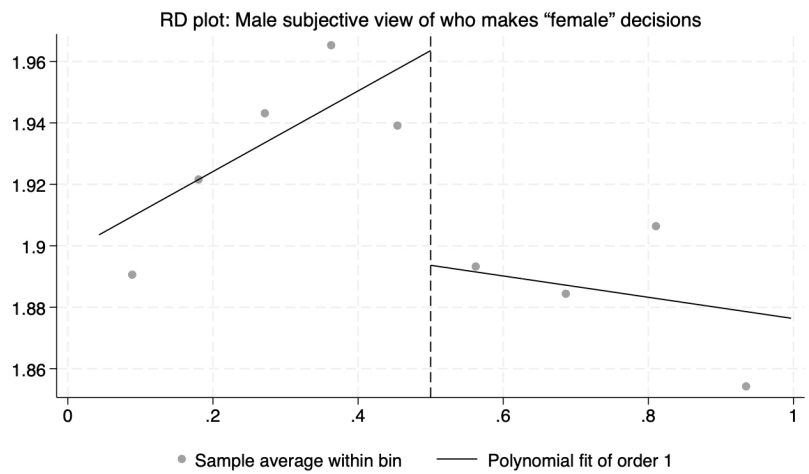




Subjective Gendered Decision Index : Result

- Male subjective view of who makes "female" decisions





Single Decision Variables on Relative Income

- Decisions on partner's working time (Female)
- Mean 1.188 Max 4.466

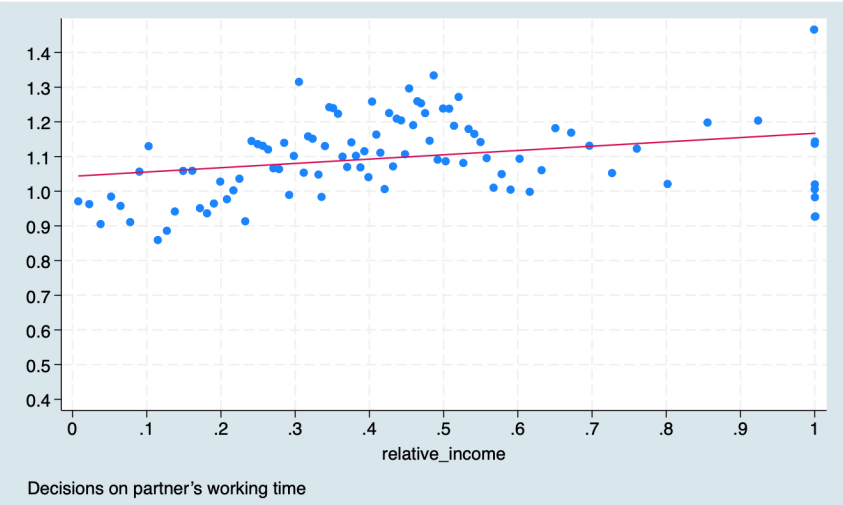


Figure: Scatter Plot

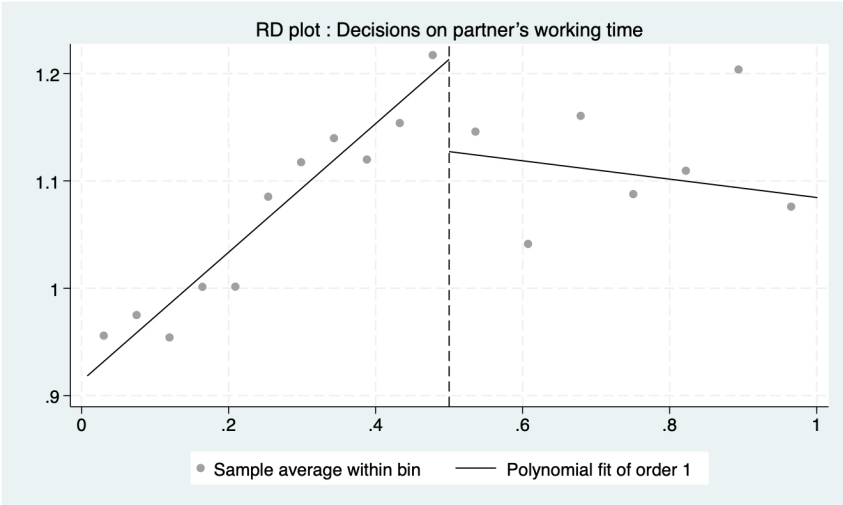


Figure: RD plot

Single Decision Variables on Relative Income

- Decisions on partner's working time (Male)
- Mean 1.21 Max 4.191

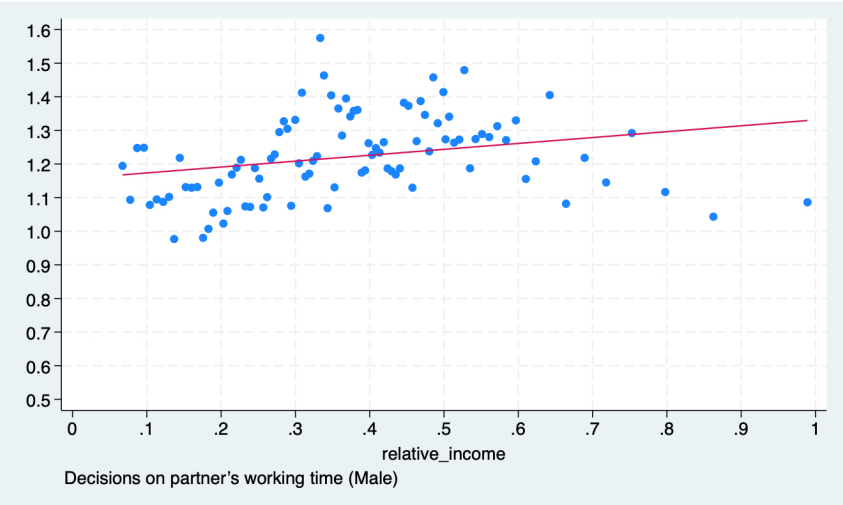


Figure: Scatter Plot

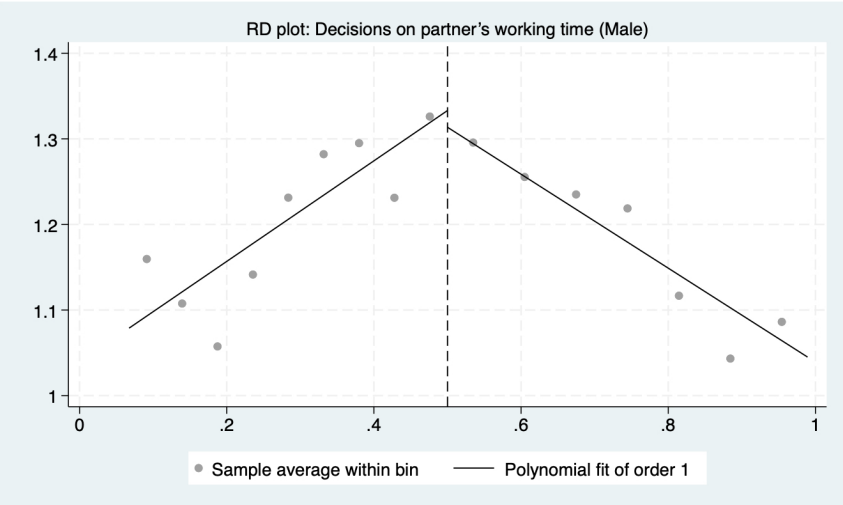


Figure: RD plot

Single Decision Variables on Relative Income

- Decisions on the way raising the children

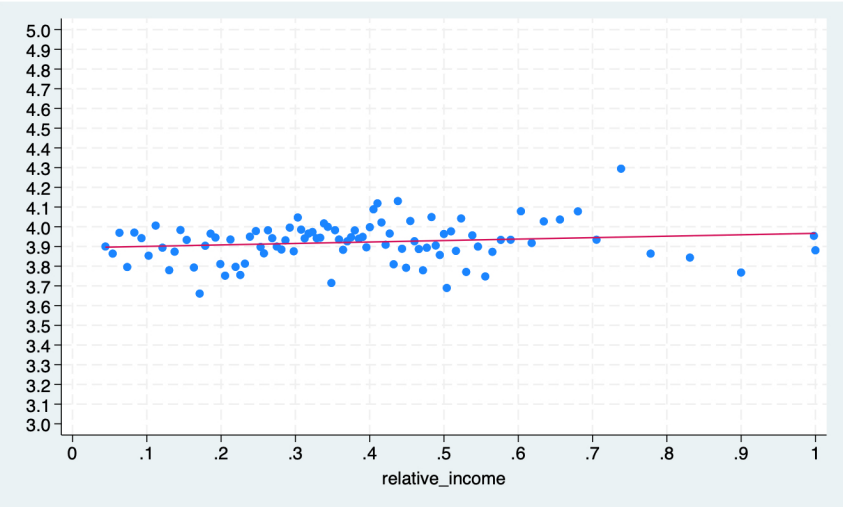


Figure: Male, mean 3.92

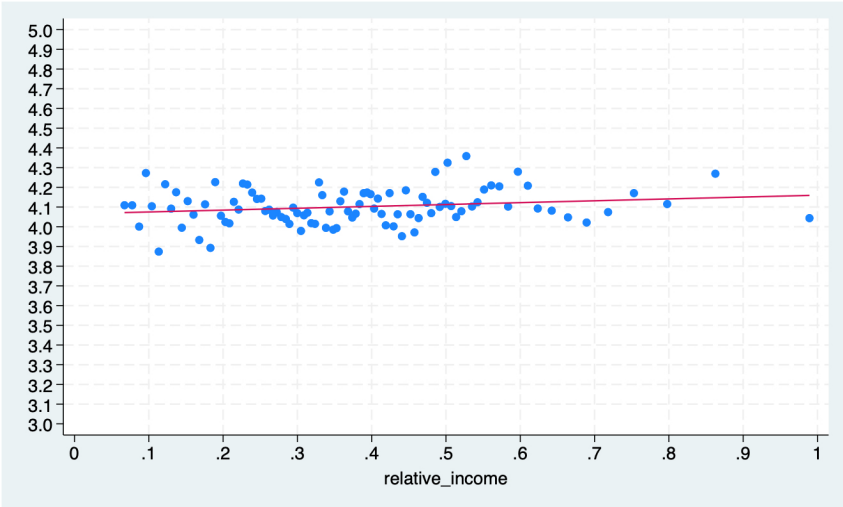


Figure: Female, mean 4.104

Single Decision Variables on Relative Income

- Decisions on Saving,investment and borrowing, RD plot

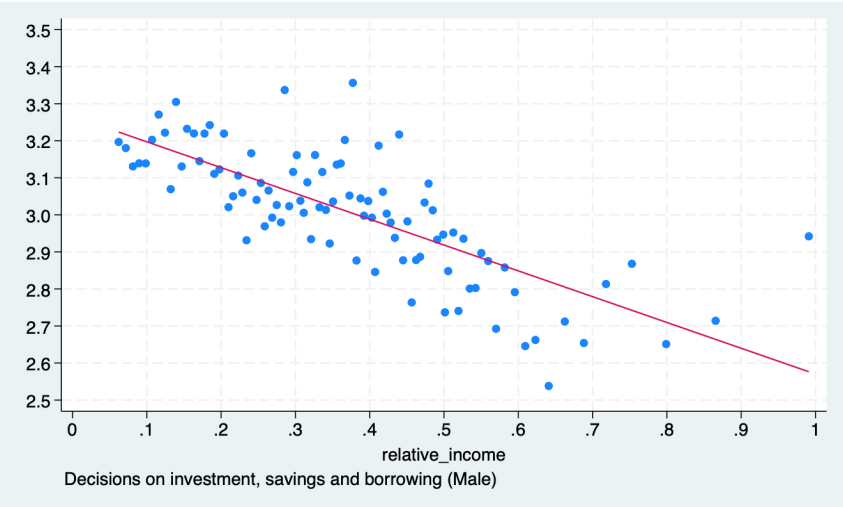


Figure: Male

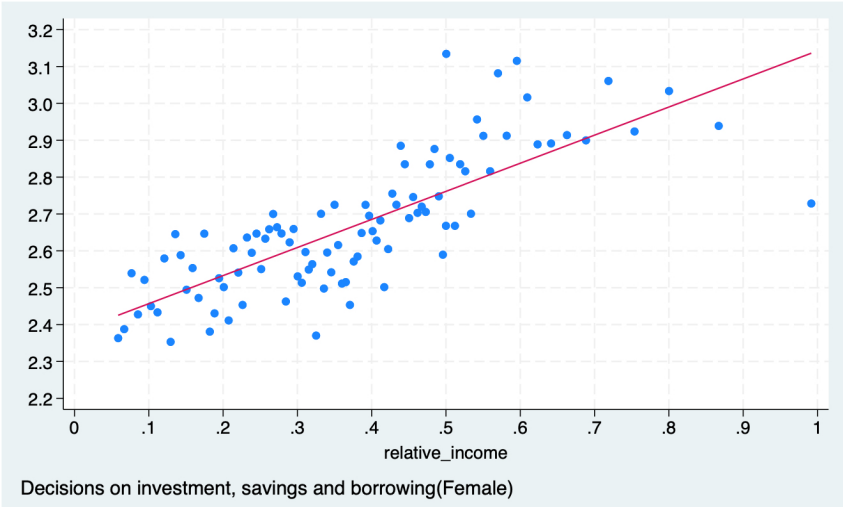


Figure: Female

Single Decision Variables on Relative Income

- Decisions on Saving,investment and borrowing

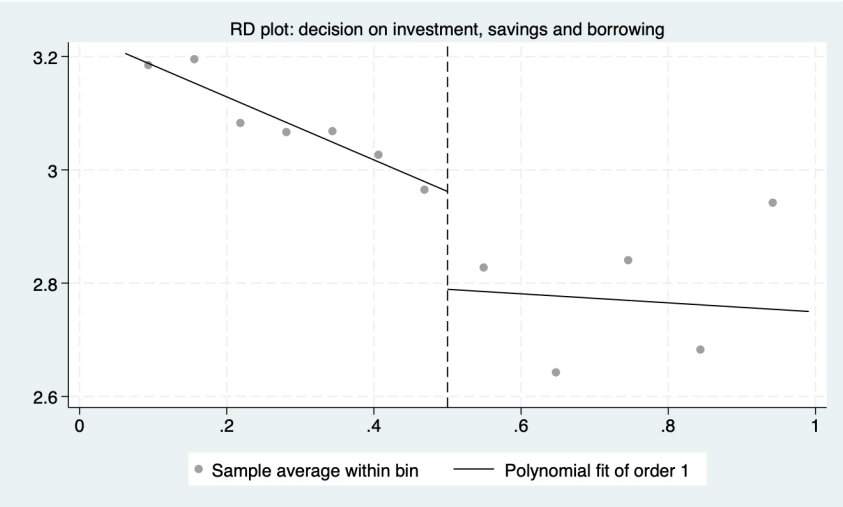


Figure: Male

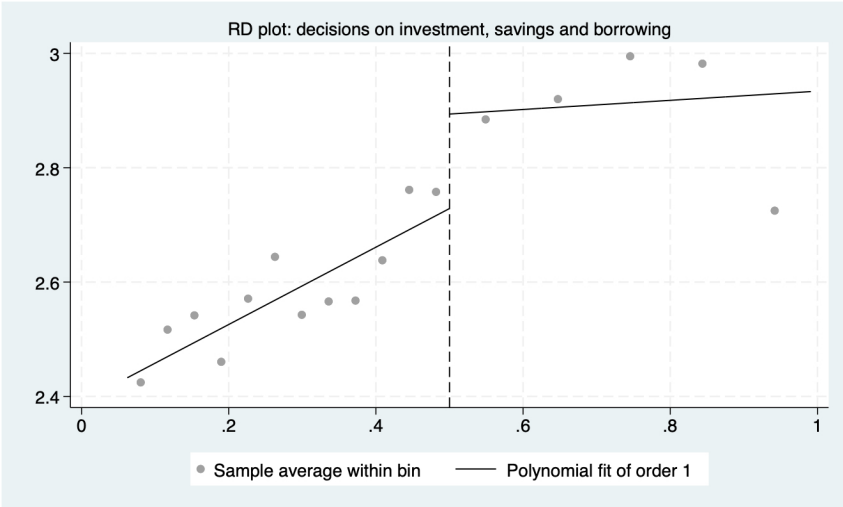


Figure: Female

Key Findings

1. Relative income affects household decision power

When a woman's income surpasses that of her partner (Relative Income ¿ 0.5), her Decision Index (DI) increases modestly — indicating a small gain in decision-making power.

2. Gendered domains show asymmetric shifts

Female-oriented decisions (FDI) become more woman-led, while male-oriented decisions (MDI) show little or no change — suggesting traditional male domains remain resistant to income shifts.

3. Men and women perceive decision power differently

Subjective views diverge: women report increased control in female domains, while men do not perceive equivalent gains or may even perceive losses in male domains.

Comments and Suggestions

- Comments and Suggestions