The Effects of Women's Bargaining Power on Contraceptive Use: Evidence from Zambia

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Motivation

Unmet need for family planning remains high; excess fertility raises morbidity/mortality risks.

Prior work links empowerment to health/FP use, but evidence on **spousal discordance about power** is scarce.

Question: *How do women's decision power and spousal power discordance relate to adoption of modern contraception?*

Setting & Data

Zambia DHS 2018 couples module; fielded Jul 2018–Jan 2019; response rates 96–99%.

Women 15–49; men 15–59; rich decision-making, FP, and attitudes modules.

Key Measures (examples)

Decision power (woman: healthcare, large/daily purchases, visits, contraception) coded as *sole* or *joint with husband*.
Financial capability (sole/joint).
Discordance categories for major domains:

Wife takes power (she assigns herself more power than he does)

Husband gives power (he assigns her more power than she does)

Agreement (joint or wife main, aligned)

No power (wife reports none)

Stylized Model: Compound–Discordance

Goal. Formalize how internal agency, partner recognition, and resources interact to drive contraceptive adoption; then modulate by *discordance*.
Baseline (compound empowerment).

$$U_c = P_w \cdot P_h \cdot F \cdot B_c - C_c, \qquad U_n = B_n$$

P_w = woman's internal agency ("power within"); P_h = partner's recognition/support; F = resources/financial autonomy; B_c, B_n = baseline benefits of (non)use; $C_c = C_0 + C_D$ = fixed + relational costs. Multiplicative form captures **complementarity**: a deficit in any input sharply reduces realized utility.

Add discordance. Let $D = P_w - P_h$.

$$U_c = P_w \cdot P_h \cdot F \cdot B_c \cdot \underbrace{(1 + \alpha D)}_{f(D)} - C_c, \qquad \alpha > 0$$

$D > 0$ (*taking power*) $\Rightarrow f(D) > 1$ amplifies adoption.

$D < 0$ (*being given power*) $\Rightarrow f(D) < 1$ dampens adoption.

Alignment ($D \approx 0$) maximizes baseline synergy when P_w, P_h, F are high.

Indifference threshold for discordance.

$$U_c = U_n \;\Rightarrow\; D^* = \frac{1}{\alpha}\left(\frac{B_n + C_c}{P_w P_h F B_c} - 1\right)$$

Interpretation: the minimum discordance needed to make adoption weakly optimal. D^* rises when B_n or C_c are high (pressure to not use; relational costs); it falls as P_w, P_h, F strengthen.

What it predicts (maps to results).

Empowerment *closest to fertility* (contraception decision power) shows the clearest link to use.

Joint agreement (P_h high) + agency (P_w high) $\Rightarrow$ largest uptake.

Positive discordance ($D > 0$) can *compensate* when one input is weak, pushing women over the threshold.

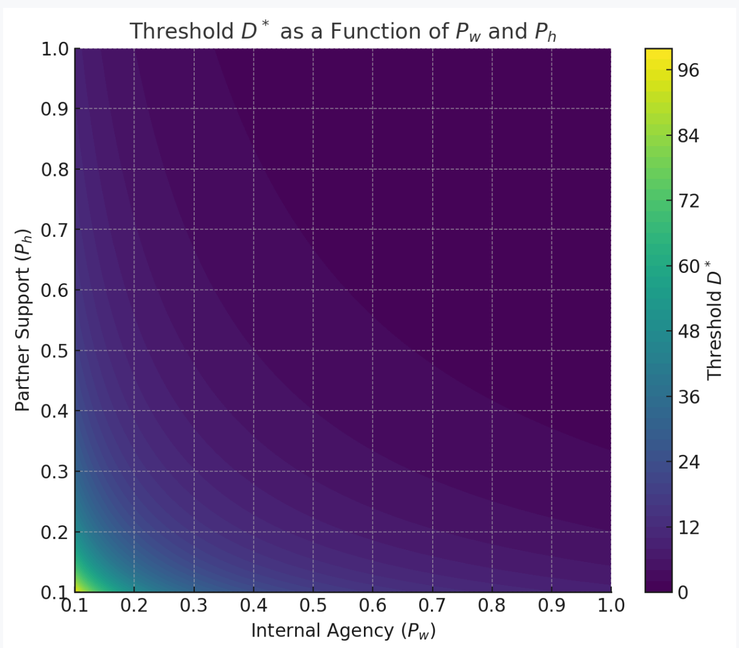

Figure 1. Threshold D^* required for adoption.

Empirical Strategy

Part 1 (Adoption model): Probit for current modern contraception use

$$C_i = \mathbf{1}\{\beta_0 + \beta_1 D_i + \beta_2 I_i + \beta_3 FP_i + \beta_4 Z_i + \varepsilon_i > 0\}$$

Part 2 (Discordance model): Probit with discordance indicators

$$C_i = \mathbf{1}\{\alpha_0 + \alpha_1 \text{W\_takes}_i + \alpha_2 \text{H\_gives}_i + \alpha_3 \text{Agreement}_i + \beta X_i + \varepsilon_i > 0\}$$

Controls: wealth quintiles, region, urban/rural; FP messages; demographics.

Results — Part 1 (Contraception Adoption)

Strong agency on contraception matters: women with **sole control over contraception** show **+56%** higher likelihood of modern method use vs. no control; **joint** decision is even more positively associated.

Family-planning messaging: **radio** exposure associated with **–11%**, but **text-message** exposure with **+18%** adoption.

Education, recent work history, and selected regions significant; land ownership relevant; house ownership not.

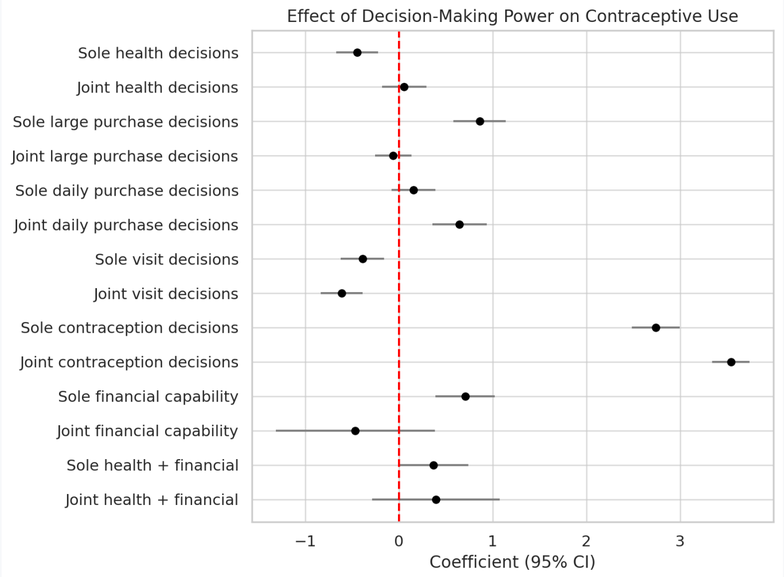

Figure 2. Average marginal effects (95% CI).

Sample & Decision-Making Variables

Couples sample from 2018 Zambia DHS.

Key empowerment domains: healthcare, large and daily purchases, family visits, contraceptive use, financial control.

Patterns:

Joint decision-making dominates (e.g. 43% for large purchases, 42% for family visits).

Sole female autonomy is rare (6% report making contraceptive decisions alone).

Male reports tend to downplay women's autonomy relative to female self-reports.

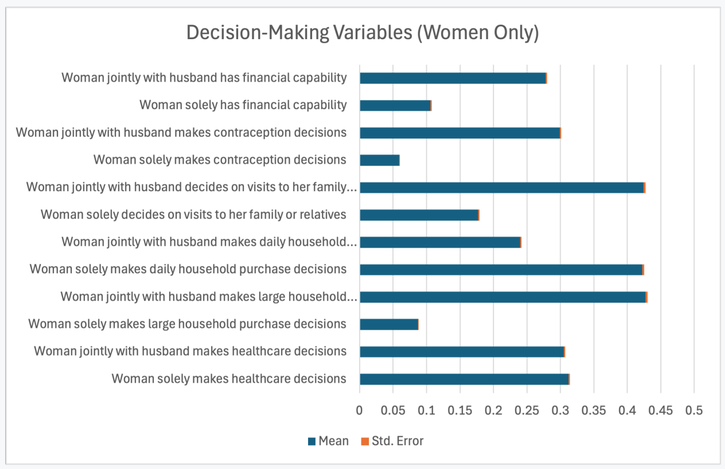

Figure 3. Prevalence of women's decision-making power across domains.

Interpretation — Part 1

Empowerment measure closest to fertility decisions (contraception agency) shows the clearest link to uptake.

However, empowerment alone is not sufficient. **Financial capability interacted with agency** is essential for maximum contraception uptake.

Messaging effects suggest **channel heterogeneity**: mobile messaging may reach/convince marginal users differently than radio.

Spousal Discordance & Power Assignation

Extend beyond "who decides" to ask: **do spouses agree?**

Construct three discordance categories:

Wife takes power — she reports more authority than he credits.

Husband gives power — he credits her with more authority than she claims.

Agreement — both align (joint or wife main).

Residual: "No power" (wife reports none).

60% of couples show discordance over household decision-making.

Most common disagreements:

Wife says "husband decides," husband says "joint" (19% $\rightarrow$ Husband gives power).

Wife says "joint," husband says "husband decides" (13% $\rightarrow$ Wife takes power).

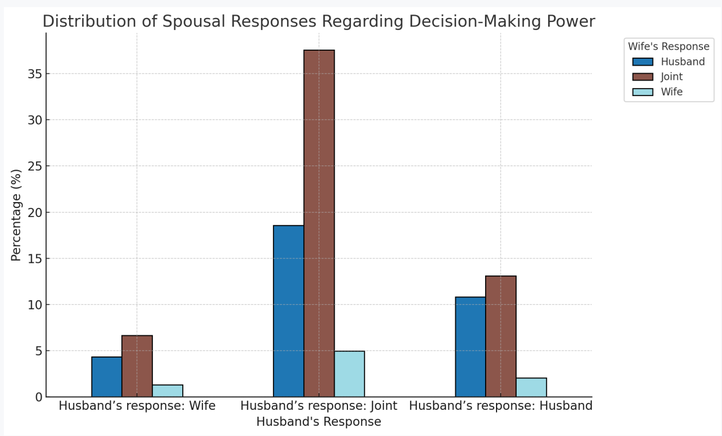

Figure 4. Distribution of spousal responses (major purchases).

Results — Part 2 (Discordance)

Wife takes power $\Rightarrow$ **+14.6 percentage points** in probability of using a modern method.

Agreement (joint or wife main) $\Rightarrow$ **+16.7 pp**.

Mixed signals in husband's own contraceptive use:

"Husband uses *any* method" $\Rightarrow$ women are **60% less likely** to use modern contraception.

"Husband uses *modern* method" $\Rightarrow$ women are **75% more likely** to use modern contraception.

Regional heterogeneity: e.g., Eastern higher, Luapula lower (see paper for magnitudes).

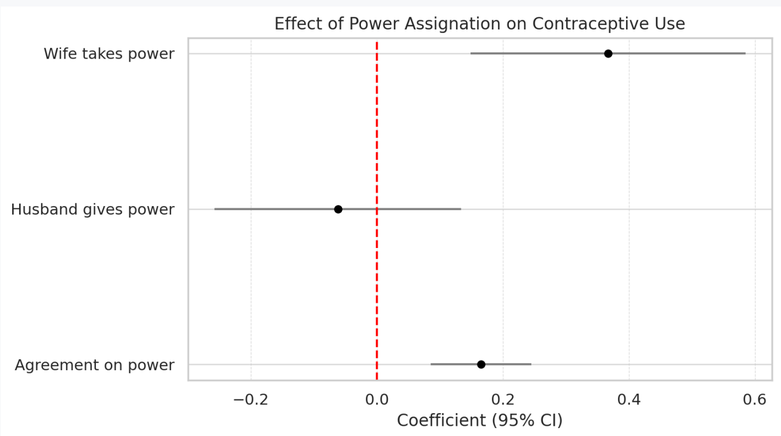

Figure 5. Discordance categories vs. modern contraception use.

Policy Takeaways

Invest in **women's decision power**, especially around fertility choices; pair with **financial capability** supports.

Design FP interventions cognizant of **intra-couple dynamics**; promote joint understanding rather than only individual counseling.

Explore **SMS/mobile outreach** where effective; reassess radio content/targeting.

Limitations & Next Steps

Cross-sectional DHS; selection and reporting concerns remain.

Next: formal model of **discordance under asymmetric information**; testable predictions for interventions that shift perceived power.

Contact & Materials

For full paper: