The state of female autonomy in India: a stochastic dominance approach

Kausik Chaudhuri    Gastón Yalonetzky

Leeds University Business School

November 2013
Table of contents

Introduction

Methodology

Data and estimation choices

Results

Concluding remarks
Introduction: the importance of female autonomy

- Intrinsic: Autonomy/agency is connected to wellbeing, can remove inequalities that depress wellbeing (Sen 1999).
Introduction: the importance of female autonomy

- Intrinsic: Autonomy/agency is connected to wellbeing, can remove inequalities that depress wellbeing (Sen 1999). Positive agency ("power to") and negative agency ("power over"); passive agency (when there is little choice) and active agency (purposeful behaviour) (Kabeer, 2005).

Higher female autonomy associated with:
1. Ability to benefit from business training for entrepreneurs (Field, et al. 2010; AER).
Introduction: the importance of female autonomy

- Intrinsic: Autonomy/agency is connected to wellbeing, can remove inequalities that depress wellbeing (Sen 1999). Positive agency ("power to") and negative agency ("power over"); passive agency (when there is little choice) and active agency (purposeful behaviour) (Kabeer, 2005).

- Higher female autonomy associated with:
  1. Ability to benefit from business training for entrepreneurs (Field, et al. 2010; AER).
Introduction: the importance of female autonomy

- Intrinsic: Autonomy/agency is connected to wellbeing, can remove inequalities that depress wellbeing (Sen 1999). Positive agency ("power to") and negative agency ("power over"); passive agency (when there is little choice) and active agency (purposeful behaviour) (Kabeer, 2005).

- Higher female autonomy associated with:
  1. Ability to benefit from business training for entrepreneurs (Field, et al. 2010; AER).
Introduction: the importance of female autonomy

▶ Intrinsic: Autonomy/agency is connected to wellbeing, can remove inequalities that depress wellbeing (Sen 1999). Positive agency ("power to") and negative agency ("power over"); passive agency (when there is little choice) and active agency (purposeful behaviour) (Kabeer, 2005).

▶ Higher female autonomy associated with:

1. Ability to benefit from business training for entrepreneurs (Field, et al. 2010; AER).
Introduction: the importance of female autonomy

- **Intrinsic:** Autonomy/agency is connected to wellbeing, can remove inequalities that depress wellbeing (Sen 1999). Positive agency ("power to") and negative agency ("power over"); passive agency (when there is little choice) and active agency (purposeful behaviour) (Kabeer, 2005).

- Higher female autonomy associated with:
  1. Ability to benefit from business training for entrepreneurs (Field, et al. 2010; AER).
Introduction: female autonomy in India

- Long history of many studies on India (also Bangladesh, Pakistan and other major Asian nations), e.g. Dyson and Moore (1983).
Introduction: female autonomy in India

- Long history of many studies on India (also Bangladesh, Pakistan and other major Asian nations), e.g. Dyson and Moore (1983).
- Main themes: Measurement, causes ("determinants") and consequences/impacts; mismatch in perceptions between husband and wife.
Introduction: female autonomy in India

- Long history of many studies on India (also Bangladesh, Pakistan and other major Asian nations), e.g. Dyson and Moore (1983).
- Main themes: Measurement, causes ("determinants") and consequences/impacts; mismatch in perceptions between husband and wife.
- Typical correlates:
  1. Kinship systems (posited by Dyson and Moore).
  2. Woman's earnings, family income (in Bangladesh, Anderson and Eswaran 2008); dowry, goods owned (Jejeeboy and Sathar, 2001).
  5. Religion and region (Jejeeboy and Sathar, 2001).
Introduction: female autonomy in India

- Long history of many studies on India (also Bangladesh, Pakistan and other major Asian nations), e.g. Dyson and Moore (1983).
- Main themes: Measurement, causes ("determinants") and consequences/impacts; mismatch in perceptions between husband and wife.
- Typical correlates:
  1. Kinship systems (posited by Dyson and Moore).
Introduction: female autonomy in India

- Long history of many studies on India (also Bangladesh, Pakistan and other major Asian nations), e.g. Dyson and Moore (1983).

- Main themes: Measurement, causes ("determinants") and consequences/impacts; mismatch in perceptions between husband and wife.

- Typical correlates:
  1. Kinship systems (posited by Dyson and Moore).
  2. Woman’s earnings, family income (in Bangladesh, Anderson and Eswaran 2008); dowry, goods owned (Jejeeboy and Sathar, 2001).
Introduction: female autonomy in India

- Long history of many studies on India (also Bangladesh, Pakistan and other major Asian nations), e.g. Dyson and Moore (1983).

- Main themes: Measurement, causes ("determinants") and consequences/impacts; mismatch in perceptions between husband and wife.

- Typical correlates:
  1. Kinship systems (posited by Dyson and Moore).
  2. Woman’s earnings, family income (in Bangladesh, Anderson and Eswaran 2008); dowry, goods owned (Jejeeboy and Sathar, 2001).
Introduction: female autonomy in India

- Long history of many studies on India (also Bangladesh, Pakistan and other major Asian nations), e.g. Dyson and Moore (1983).
- Main themes: Measurement, causes (“determinants”) and consequences/impacts; mismatch in perceptions between husband and wife.
- Typical correlates:
  1. Kinship systems (posited by Dyson and Moore).
  2. Woman’s earnings, family income (in Bangladesh, Anderson and Eswaran 2008); dowry, goods owned (Jejeeboy and Sathar, 2001).
Introduction: female autonomy in India

- Long history of many studies on India (also Bangladesh, Pakistan and other major Asian nations), e.g. Dyson and Moore (1983).
- Main themes: Measurement, causes ("determinants") and consequences/impacts; mismatch in perceptions between husband and wife.
- Typical correlates:
  1. Kinship systems (posited by Dyson and Moore).
  2. Woman’s earnings, family income (in Bangladesh, Anderson and Eswaran 2008); dowry, goods owned (Jejeeboy and Sathar, 2001).
  5. Religion and region (Jejeeboy and Sathar, 2001).
The challenge of social comparisons based on ordinal variables

- We would like to compare levels of female autonomy across different Indian states, and our autonomy variables are ordinal.
The challenge of social comparisons based on ordinal variables

- We would like to compare levels of female autonomy across different Indian states, and our autonomy variables are ordinal.
- Allison and Foster (2004) noted that comparisons of averages based on ordinal variables are not very reliable since they depend on arbitrary scales.
The challenge of social comparisons based on ordinal variables

- We would like to compare levels of female autonomy across different Indian states, and our autonomy variables are ordinal.
- Allison and Foster (2004) noted that comparisons of averages based on ordinal variables are not very reliable since they depend on arbitrary scales.
- Despite this warning, averages from ordinal variables are still heavily used in many literatures.
The challenge of social comparisons based on ordinal variables

Example: The Easterlin Paradox (or lack thereof)
The challenge of social comparisons based on ordinal variables

Example: The Easterlin Paradox (or lack thereof)
The challenge of social comparisons based on ordinal variables

<table>
<thead>
<tr>
<th>Category</th>
<th>$P^A$</th>
<th>$P^B$</th>
<th>Scale 1</th>
<th>Scale 2</th>
<th>Scale 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very sad</td>
<td>0.25</td>
<td>0.15</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Sad</td>
<td>0.2</td>
<td>0.2</td>
<td>2</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Neutral</td>
<td>0.1</td>
<td>0.3</td>
<td>3</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Happy</td>
<td>0.2</td>
<td>0.2</td>
<td>4</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Very happy</td>
<td>0.25</td>
<td>0.15</td>
<td>5</td>
<td>11</td>
<td>11</td>
</tr>
</tbody>
</table>
The challenge of social comparisons based on ordinal variables

Which country has a higher average happiness? A or B?
The challenge of social comparisons based on ordinal variables

Which country has a higher average happiness? A or B?

<table>
<thead>
<tr>
<th>Scale</th>
<th>$\mu^A$</th>
<th>$\mu^B$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>6.8</td>
<td>7.2</td>
</tr>
<tr>
<td>3</td>
<td>5.2</td>
<td>4.8</td>
</tr>
</tbody>
</table>
The challenge of social comparisons based on ordinal variables

What can be done with ordinal variables?
The challenge of social comparisons based on ordinal variables

What can be done with ordinal variables?

- Report everything using probability distributions (e.g. the Indian Government’s ”Gender equality and women’s empowerment in India” report).
The challenge of social comparisons based on ordinal variables

What can be done with ordinal variables?

- Report everything using probability distributions (e.g. the Indian Government’s "Gender equality and women’s empowerment in India" report).
- Latent variable models (e.g. ordered probit; MIMIC, SEM, etc.).
The challenge of social comparisons based on ordinal variables

What can be done with ordinal variables?

- Report everything using probability distributions (e.g. the Indian Government’s ”Gender equality and women’s empowerment in India” report).
- Latent variable models (e.g. ordered probit; MIMIC, SEM, etc.).
- A counting approach.
The challenge of social comparisons based on ordinal variables

What can be done with ordinal variables?

- Report everything using probability distributions (e.g. the Indian Government’s ”Gender equality and women’s empowerment in India” report).
- Latent variable models (e.g. ordered probit; MIMIC, SEM, etc.).
- A counting approach.
- Stochastic dominance and related non-parametric distributional analysis tools.
Introduction

Introduction: This paper’s contribution

1. Using stochastic dominance for ordinal variables, we document whether autonomy comparisons across Indian states are robust to different (arbitrary) scales.
Introduction: This paper’s contribution

1. Using stochastic dominance for ordinal variables, we document whether autonomy comparisons across Indian states are robust to different (arbitrary) scales.

2. When the dominance conditions hold, the ensuing robust ordering has an interpretation in terms of preferences over lotteries based on individual "utility" functions.
Introduction: This paper’s contribution

1. Using stochastic dominance for ordinal variables, we document whether autonomy comparisons across Indian states are robust to different (arbitrary) scales.

2. When the dominance conditions hold, the ensuing robust ordering has an interpretation in terms of preferences over lotteries based on individual "utility" functions.

3. We also show how to rank the dominance conditions in terms of the differences in social welfare that they entail.
Introduction: This paper’s contribution

1. Using stochastic dominance for ordinal variables, we document whether autonomy comparisons across Indian states are robust to different (arbitrary) scales.

2. When the dominance conditions hold, the ensuing robust ordering has an interpretation in terms of preferences over lotteries based on individual "utility" functions.

3. We also show how to rank the dominance conditions in terms of the differences in social welfare that they entail.

4. We find that Southern and North-Eastern states tend to dominate Northern states.
Introduction: This paper’s contribution

1. Using stochastic dominance for ordinal variables, we document whether autonomy comparisons across Indian states are robust to different (arbitrary) scales.

2. When the dominance conditions hold, the ensuing robust ordering has an interpretation in terms of preferences over lotteries based on individual "utility" functions.

3. We also show how to rank the dominance conditions in terms of the differences in social welfare that they entail.

4. We find that Southern and North-Eastern states tend to dominate Northern states. But there are important exceptions and results depend on the autonomy aspect.
1. Using stochastic dominance for ordinal variables, we document whether autonomy comparisons across Indian states are robust to different (arbitrary) scales.

2. When the dominance conditions hold, the ensuing robust ordering has an interpretation in terms of preferences over lotteries based on individual “utility” functions.

3. We also show how to rank the dominance conditions in terms of the differences in social welfare that they entail.

4. We find that Southern and North-Eastern states tend to dominate Northern states. But there are important exceptions and results depend on the autonomy aspect.

5. The strongest welfare differences usually involve North-Eastern states dominating Northern states.
The organization of the rest of this presentation

- Methodology.
The organization of the rest of this presentation

- Methodology.
- Data.
The organization of the rest of this presentation

- Methodology.
- Data.
- Results.
The organization of the rest of this presentation

- Methodology.
- Data.
- Results.
- Concluding remarks.
Notation and preliminaries

Let $X$ be an ordinal variable with $S$ categories, such that:

$x_1 \leq x_2 \leq \ldots \leq x_S$. 

The distribution of $X$ in a society is given by:

$P: [p(1), p(2), \ldots, p(S)]$, where:

$p(i) \equiv \Pr[X = x_i]$. 

Likewise the cumulative distribution is:

$F: [F(1), F(2), \ldots, F(S)]$, where:

$F(i) = \sum_{j=1}^{i} p(j)$. 

A person with $X = x_i$ enjoys utility $U(i)$. Society's expected or average welfare is:

$W = \sum_{i=1}^{S} p(i) U(i)$. 

For society $A$ we add subscripts to the formulas.
Notation and preliminaries

Let $X$ be an ordinal variable with $S$ categories, such that:
$$x_1 \leq x_2 \leq \ldots \leq x_S.$$

The distribution of $X$ in a society is given by:
$$P : [p(1), p(2), \ldots, p(S)],$$
where: $p(i) \equiv \Pr[X = x_i].$
Let $X$ be an ordinal variable with $S$ categories, such that:

$x_1 \leq x_2 \leq \ldots \leq x_S$.

The distribution of $X$ in a society is given by:

$P : [p(1), p(2), \ldots, p(S)]$, where: $p(i) \equiv \Pr[X = x_i]$. Likewise the cumulative distribution is:

$F : [F(1), F(2), \ldots, F(S)]$, where:

$F(i) = \sum_{j=1}^{i} p(j)$.
Notation and preliminaries

Let $X$ be an ordinal variable with $S$ categories, such that:
\[ x_1 \leq x_2 \leq \ldots \leq x_S. \]

The distribution of $X$ in a society is given by:
\[ P : [p(1), p(2), \ldots, p(S)], \]
where: $p(i) \equiv \Pr[X = x_i]$. Likewise the cumulative distribution is:
\[ F : [F(1), F(2), \ldots, F(S)], \]
where:
\[ F(i) = \sum_{j=1}^{i} p(j). \]

A person with $X = x_i$ enjoys utility $U(i)$. Society’s expected or average welfare is:
\[ W = \sum_{i=1}^{S} p(i) U(i). \]
Methodology

Notation and preliminaries

Let $X$ be an ordinal variable with $S$ categories, such that:

$x_1 \leq x_2 \leq \ldots \leq x_S$.

The distribution of $X$ in a society is given by:

$P : [p(1), p(2), \ldots, p(S)]$, where: $p(i) \equiv \Pr[X = x_i]$. Likewise the cumulative distribution is:

$F : [F(1), F(2), \ldots, F(S)]$, where:

$F(i) = \sum_{j=1}^{i} p(j)$.

A person with $X = x_i$ enjoys utility $U(i)$. Society’s expected or average welfare is:

$W = \sum_{i=1}^{S} p(i)U(i)$.

For society $A$ we add subscripts to the formulas.
Robust comparisons with ordinal variables

Let $\Delta W \equiv W_A - W_B$, and the same for $\Delta p$ or $\Delta F$. 
Robust comparisons with ordinal variables

Let $\Delta W \equiv W_A - W_B$, and the same for $\Delta p$ or $\Delta F$.

We know that:

$$\Delta W = \sum_{i=1}^{S} U(i) \Delta p(i)$$  \hspace{1cm} (1)
Robust comparisons with ordinal variables

Let $\Delta W \equiv W_A - W_B$, and the same for $\Delta p$ or $\Delta F$.

We know that:

$$\Delta W = \sum_{i=1}^{S} U(i) \Delta p(i) \quad (1)$$

If we sum by parts ("Abel's formula") we get:

$$\Delta W = - \sum_{i=1}^{S} U_X(i) \Delta F(i) \quad (2)$$

where: $U_X(i) \equiv U(i) - U(i - 1)$.
Robust comparisons with ordinal variables

Now with equation 2 \((\Delta W = - \sum_{i=1}^{S} U_X(i) \Delta F(i))\) we derive the following first-order dominance condition:

**First-order dominance condition**

\[
\Delta W > 0 \quad \forall U_X > 0 \iff \Delta F(i) \leq 0 \quad \forall i \in [1, S] \land \exists j | \Delta F(j) < 0
\]
Robust comparisons with ordinal variables

Summing equation 2 by parts yields also a second-order dominance condition which is relevant for concave utility functions and/or concave (arbitrary) scales:

**Second-order dominance condition**

\[ \Delta W \geq 0 \quad \forall U_X > 0 \land U_{XX} \leq 0 \iff \Delta G(i) \leq 0 \quad \forall i \in [1, S] \land \exists j | \Delta G(j) < 0 \]

where: \( U_{XX}(i) = U_X(i) - U_X(i - 1) \) and \( G(i) = \sum_{j=1}^{i} F(j) \).
Further tools for distributional dissimilarity analysis

Dominance tests are performed using the procedure proposed by Yalonetzky (2013).
Further tools for distributional dissimilarity analysis

Dominance tests are performed using the procedure proposed by Yalonetzky (2013).

Stochastic dominance conditions ensure the robustness of an ordinal comparison, i.e. whether $\Delta W > 0$ or not.
Dominance tests are performed using the procedure proposed by Yalonetzky (2013).

Stochastic dominance conditions ensure the robustness of an ordinal comparison, ie. whether $\Delta W > 0$ or not. However they are silent as to the magnitude of the difference.
Further tools for distributional dissimilarity analysis

Dominance tests are performed using the procedure proposed by Yalonetzky (2013).

Stochastic dominance conditions ensure the robustness of an ordinal comparison, i.e. whether $\Delta W > 0$ or not. However they are silent as to the magnitude of the difference.

Can we do better than this?
Further tools for distributional dissimilarity analysis

Dominance tests are performed using the procedure proposed by Yalonetzky (2013).

Stochastic dominance conditions ensure the robustness of an ordinal comparison, ie. whether $\Delta W > 0$ or not. However they are silent as to the magnitude of the difference.

Can we do better than this? Yes: Two additional distributional conditions are informative of the quantitative differences between two (or more) comparison pairs.
Intensity of the first-order dominance condition: the strong case

Let $\Delta W_{A-B} = W_A - W_B$ and $\Delta W_{C-D} = W_C - W_D$ and assume that $A$ and $C$ dominate $B$ and $D$ respectively.
Intensity of the first-order dominance condition: the strong case

Let $\Delta W_{A-B} = W_A - W_B$ and $\Delta W_{C-D} = W_C - W_D$ and assume that $A$ and $C$ dominate $B$ and $D$ respectively. Using equation 2 it is easy to prove the following:

**Strong dominance intensity**

$$\Delta W_{A-B} > \Delta W_{C-D} \quad \forall U_X > 0 \iff \Delta F_{A-B}(i) \leq \Delta F_{C-D}(i) \quad \forall i \in [1, S] \wedge \exists j | \Delta F_{A-B}(j) < \Delta F_{C-D}(j)$$
Intensity of the first-order dominance condition: the strong case

Let $\Delta W_{A-B} = W_A - W_B$ and $\Delta W_{C-D} = W_C - W_D$ and assume that $A$ and $C$ dominate $B$ and $D$ respectively. Using equation 2 it is easy to prove the following:

**Strong dominance intensity**

$$\Delta W_{A-B} > \Delta W_{C-D} \quad \forall u_x > 0 \iff \Delta F_{A-B}(i) \leq \Delta F_{C-D}(i) \quad \forall i \in [1, S] \land \exists j | \Delta F_{A-B}(j) < \Delta F_{C-D}(j)$$

This condition requires comparing pairs of pairs, i.e. pairs of $\Delta F$ for each category and each comparison pair (e.g. A-B versus C-D).
Methodology

Intensity of the first-order dominance condition: the strong case

Let $\Delta W_{A-B} = W_A - W_B$ and $\Delta W_{C-D} = W_C - W_D$ and assume that $A$ and $C$ dominate $B$ and $D$ respectively. Using equation 2 it is easy to prove the following:

**Strong dominance intensity**

$$
\Delta W_{A-B} > \Delta W_{C-D} \quad \forall U_X > 0 \iff \Delta F_{A-B}(i) \leq \Delta F_{C-D}(i) \quad \forall i \in [1, S] \land \exists j | \Delta F_{A-B}(j) < \Delta F_{C-D}(j)
$$

This condition requires comparing pairs of pairs, i.e. pairs of $\Delta F$ for each category and each comparison pair (e.g. A-B versus C-D). Since it is too cumbersome for our purposes, we do not use it in the paper (as we have hundreds of comparisons), but it is used in Chaudhuri, Gradin and Yalonetzky (2012).
Intensity of the first-order dominance condition: the weak case

Under the more restrictive assumption that $U_X(i) = \overline{U_X} \ \forall i$ (therefore $U_{XX} = 0$), we can derive the following:

**Weak dominance intensity**

$$\Delta W_{A-B} > \Delta W_{C-D} \ \forall U_X > 0 \land U_X(i) = \overline{U_X} \iff \sum_{i=1}^{S} \Delta F_{A-B}(i) < \sum_{i=1}^{S} \Delta F_{C-D}(i)$$
Intensity of the first-order dominance condition: the weak case

Under the more restrictive assumption that $U_X(i) = \overline{U_X} \ \forall i$ (therefore $U_{XX} = 0$), we can derive the following:

Weak dominance intensity

$$\Delta W_{A-B} > \Delta W_{C-D} \ \forall U_X > 0 \land U_X(i) = \overline{U_X} \iff \sum_{i=1}^{S} \Delta F_{A-B}(i) < \sum_{i=1}^{S} \Delta F_{C-D}(i)$$

This condition only requires comparing the sums of $\Delta F(i)$ across categories for each comparison pair.
Methodology

Intensity of the first-order dominance condition: the weak case

Under the more restrictive assumption that $U_X(i) = \overline{U_X} \ \forall i$ (therefore $U_{XX} = 0$), we can derive the following:

**Weak dominance intensity**

$$\Delta W_{A-B} > \Delta W_{C-D} \ \forall U_X > 0 \land U_X(i) = \overline{U_X} \iff \sum_{i=1}^{S} \Delta F_{A-B}(i) < \sum_{i=1}^{S} \Delta F_{C-D}(i)$$

This condition only requires comparing the sums of $\Delta F(i)$ across categories for each comparison pair. In this paper we use this condition in order to rank the dominance relationships in terms of their degree of weak intensity.
Intensity of the first-order dominance condition: the weak case

To compute the sum of $\Delta F(i)$ we use one of the indices by Silber and Yalonetzky (2011): $I = \frac{1}{S-1} \sum_{i=1}^{S} |\Delta F(i)|$. So whenever $I_{A-B} > I_{C-D}$ then $\Delta W_{A-B} > \Delta W_{C-D}$ according to the weak dominance intensity condition.
Intensity of the first-order dominance condition

The strong case provides a quasi-ordering within an existing quasi-ordering.
Intensity of the first-order dominance condition

The strong case provides a quasi-ordering within an existing quasi-ordering. But it is fully robust.
Intensity of the first-order dominance condition

The strong case provides a quasi-ordering within an existing quasi-ordering. But it is fully robust.

The weak case provides an ordering within an existing quasi-ordering.
Methodology

Intensity of the first-order dominance condition

The strong case provides a quasi-ordering within an existing quasi-ordering. But it is fully robust.

The weak case provides an ordering within an existing quasi-ordering. However it applies to a limited range of welfare functions.
Data and estimation choices

Data details

Dataset: India’s National Family Health Survey 2005-6.
Data and estimation choices

Data details

- Dataset: India’s National Family Health Survey 2005-6.
- 87588 women aged 15 to 49.
Data details

- Dataset: India’s National Family Health Survey 2005-6.
- 87,588 women aged 15 to 49.
- Every Indian state has at least 1,000 observations.
Data details

- Dataset: India’s National Family Health Survey 2005-6.
- 87588 women aged 15 to 49.
- Every Indian state has at least 1,000 observations.
- More than 90% of households headed by men.
Data details

- Dataset: India’s National Family Health Survey 2005-6.
- 87,588 women aged 15 to 49.
- Every Indian state has at least 1,000 observations.
- More than 90% of households headed by men.
- 29 Indian states, therefore 406 comparisons!
Autonomy questions

In all cases three answer categories: decision made by husband; decision made jointly; decision made alone.
Autonomy questions

In all cases three answer categories: decision made by husband; decision made jointly; decision made alone.

- Final say over day-to-day household purchase decisions.
Autonomy questions

In all cases three answer categories: decision made by husband; decision made jointly; decision made alone.

- Final say over day-to-day household purchase decisions.
- Final say over own health care decisions.
Autonomy questions

In all cases three answer categories: decision made by husband; decision made jointly; decision made alone.

- Final say over day-to-day household purchase decisions.
- Final say over own health care decisions.
- Final say over large household purchase decisions.
Autonomy questions

In all cases three answer categories: decision made by husband; decision made jointly; decision made alone.

- Final say over day-to-day household purchase decisions.
- Final say over own health care decisions.
- Final say over large household purchase decisions.
- Final say over visits to family or relatives decisions.
Autonomy questions

In all cases three answer categories: decision made by husband; decision made jointly; decision made alone.

- Final say over day-to-day household purchase decisions.
- Final say over own health care decisions.
- Final say over large household purchase decisions.
- Final say over visits to family or relatives decisions.
- Final say over spending husband’s money decisions.
Conditioning variables

- Woman’s age (alone or interacted with partner’s age).

Overall we tried 11 conditioning specifications. But I will show you only young women (31-); urban women; wealthiest women (in addition to unconditioned results).
Data and estimation choices

Conditioning variables

- Woman’s age (alone or interacted with partner’s age).
- Religion: Hindu; Muslim.
Data and estimation choices

Conditioning variables

- Woman’s age (alone or interacted with partner’s age).
- Religion: Hindu; Muslim.
- Caste of household head.
Conditioning variables

- Woman’s age (alone or interacted with partner’s age).
- Religion: Hindu; Muslim.
- Caste of household head.
- Woman’s education (if less than 3 years) interacted with partner’s education (if more than two years).
Data and estimation choices

Conditioning variables

- Woman’s age (alone or interacted with partner’s age).
- Religion: Hindu; Muslim.
- Caste of household head.
- Woman’s education (if less than 3 years) interacted with partner’s education (if more than two years).
- Urban.
Data and estimation choices

Conditioning variables

- Woman’s age (alone or interacted with partner’s age).
- Religion: Hindu; Muslim.
- Caste of household head.
- Woman’s education (if less than 3 years) interacted with partner’s education (if more than two years).
- Urban.
- Wealth quartiles.
Data and estimation choices

Conditioning variables

- Woman’s age (alone or interacted with partner’s age).
- Religion: Hindu; Muslim.
- Caste of household head.
- Woman’s education (if less than 3 years) interacted with partner’s education (if more than two years).
- Urban.
- Wealth quartiles.

Overall we tried 11 conditioning specifications.
Data and estimation choices

Conditioning variables

- Woman’s age (alone or interacted with partner’s age).
- Religion: Hindu; Muslim.
- Caste of household head.
- Woman’s education (if less than 3 years) interacted with partner’s education (if more than two years).
- Urban.
- Wealth quartiles.

Overall we tried 11 conditioning specifications. But I will show you only the following: young women (31-); urban women; wealthiest women (in addition to unconditioned results).
Indian states
Unconditioned results: Day-to-day household purchases

- 317 Dominance relationships out of 406 comparisons (78.1%).

Main "dominators": Arunachal Pradesh (8.8%), Nagaland (8.2%), Mizoram (7.8%), Manipur (7.6%), Tamil Nadu (7.3%).

Main "dominated": Jammu and Kashmir (8.5%), West Bengal (7.6%), Rajasthan (6.9%), Uttaranchal (6.3%), Punjab (5.4%).

"Top five" relationships: AruP > JK (0.3877), Nagaland > JK (0.3805), Mizoram > JK (0.3628), Manipur > JK (0.3546), Tamil Nadu > JK (0.3514).
Unconditioned results: Day-to-day household purchases

- 317 Dominance relationships out of 406 comparisons (78.1%).
- Main "dominators": Arunachal Pradesh (8.8%), Nagaland (8.2%), Mizoram (7.8%), Manipur (7.6%), Tamil Nadu (7.3%).
Unconditioned results: Day-to-day household purchases

- 317 Dominance relationships out of 406 comparisons (78.1%).
- Main “dominators”: Arunachal Pradesh (8.8%), Nagaland (8.2%), Mizoram (7.8%), Manipur (7.6%), Tamil Nadu (7.3%).
- Main “dominated”: Jammu and Kashmir (8.5%), West Bengal (7.6%), Rajasthan (6.9%), Uttaranchal (6.3%), Punjab (5.4%).
Unconditioned results: Day-to-day household purchases

- 317 Dominance relationships out of 406 comparisons (78.1%).
- Main ”dominators”: Arunachal Pradesh (8.8%), Nagaland (8.2%), Mizoram (7.8%), Manipur (7.6%), Tamil Nadu (7.3%).
- Main ”dominated”: Jammu and Kashmir (8.5%), West Bengal (7.6%), Rajasthan (6.9%), Uttarakhand (6.3%), Punjab (5.4%).
- ”Top five” relationships: AruP>JK (0.3877), Nagaland>JK (0.3805), Mizoram>JK (0.3628), Manipur>JK (0.3546), Tamil Nadu>JK (0.3514).
Unconditioned results: Health care

- 265 Dominance relationships out of 406 comparisons (65.3%).
Unconditioned results: Health care

- 265 Dominance relationships out of 406 comparisons (65.3%).
- Main "dominators": Sikkim (8.7%), Punjab (8.3%), Mizoram (8.3%), Haryana (6.4%), Andhra Pradesh (6.0%).

- Main "dominated": Jammu and Kashmir (10.2%), Chattisgarh (8.7%), Karnataka (8.3%), Bihar (7.5%), Jharkand (7.2%).
- "Top five" relationships: Mizoram > JK (0.3253), Sikkim > JK (0.3251), Punjab > JK (0.3145), Mizoram > Chatisgarh (0.2836), Sikkim > Chatisgarh (0.2834).
Results

Unconditioned results: Health care

- 265 Dominance relationships out of 406 comparisons (65.3%).
- Main "dominators": Sikkim (8.7%), Punjab (8.3%), Mizoram (8.3%), Haryana (6.4%), Andhra Pradesh (6.0%).
- Main "dominated": Jammu and Kashmir (10.2%), Chattisgarh (8.7%), Karnataka (8.3%), Bihar (7.5%), Jharkand (7.2%).
Unconditioned results: Health care

- 265 Dominance relationships out of 406 comparisons (65.3%).
- Main "dominators": Sikkim (8.7%), Punjab (8.3%), Mizoram (8.3%), Haryana (6.4%), Andhra Pradesh (6.0%).
- Main "dominated": Jammu and Kashmir (10.2%), Chattisgarh (8.7%), Karnataka (8.3%), Bihar (7.5%), Jharkand (7.2%).
- "Top five” relationships: Mizoram>JK (0.3253), Sikkim>JK (0.3251), Punjab>JK (0.3145), Mizoram>Chattisgarh (0.2836), Sikkim>Chattisgarh (0.2834).
Unconditioned results: Large purchases

- 230 Dominance relationships out of 406 comparisons (56.7%).
Unconditioned results: Large purchases

- 230 Dominance relationships out of 406 comparisons (56.7%).
- Main "dominators": Meghalaya (11%), Mizoram (9.6%), Nagaland (8.3%), Tamil Nadu (8.3%), Goa (8.3%).
Unconditioned results: Large purchases

- 230 Dominance relationships out of 406 comparisons (56.7%).
- Main “dominators”: Meghalaya (11%), Mizoram (9.6%), Nagaland (8.3%), Tamil Nadu (8.3%), Goa (8.3%).
- Main “dominated”: Rajasthan (9.6%), Chattisgarh (8.7%), Haryana (7.4%), Punjab (6.5%), Jammu and Kashmir (6.5%).
Unconditioned results: Large purchases

- 230 Dominance relationships out of 406 comparisons (56.7%).
- Main ”dominators”: Meghalaya (11%), Mizoram (9.6%), Nagaland (8.3%), Tamil Nadu (8.3%), Goa (8.3%).
- Main ”dominated”: Rajasthan (9.6%), Chattisgarh (8.7%), Haryana (7.4%), Punjab (6.5%), Jammu and Kashmir (6.5%).
- ”Top five” relationships: Meghalaya＞Rajasthan (0.2541), Mizoram＞Rajasthan (0.2333), Meghalaya＞JK (0.2318), AruP＞Rajasthan (0.2317), Nagaland＞Rajasthan (0.2236).
Unconditioned results: Family visits

- 256 Dominance relationships out of 406 comparisons (63.1%).
Unconditioned results: Family visits

- 256 Dominance relationships out of 406 comparisons (63.1%).
- Main "dominators": Arunachal Pradesh (10.5%), Goa (9.0%), Mizoram (8.2%), Sikkim (7.8%), Manipur (7.0%).
Unconditioned results: Family visits

- 256 Dominance relationships out of 406 comparisons (63.1%).
- Main "dominators": Arunachal Pradesh (10.5%), Goa (9.0%), Mizoram (8.2%), Sikkim (7.8%), Manipur (7.0%).
- Main "dominated": Jammu and Kashmir (10.2%), Madhya Pradesh (8.2%), Rajasthan (8.2%), Uttar Pradesh (7.8%), Chattisgarh (7.0%).
Unconditioned results: Family visits

► 256 Dominance relationships out of 406 comparisons (63.1%).
► Main "dominators": Arunachal Pradesh (10.5%), Goa (9.0%), Mizoram (8.2%), Sikkim (7.8%), Manipur (7.0%).
► Main "dominated": Jammu and Kashmir (10.2%), Madhya Pradesh (8.2%), Rajasthan (8.2%), Uttar Pradesh (7.8%), Chattisgarh (7.0%).
► "Top five" relationships: AruP > JK (0.3542), AruP > Rajasthan (0.3378), Goa > JK (0.3148), Goa > Rajasthan (0.2984), AruP > MP (0.2906).
Unconditioned results: Husband’s money

- 180 Dominance relationships out of 406 comparisons (44.3%).
Unconditioned results: Husband’s money

- 180 Dominance relationships out of 406 comparisons (44.3%).
- Main “dominators”: Sikkim (13.3%), Tamil Nadu (12.2%), Arunachal Pradesh (12.2%), Nagaland (8.9%), Goa (7.8%).
Results

Unconditioned results: Husband’s money

- 180 Dominance relationships out of 406 comparisons (44.3%).
- Main ”dominators”: Sikkim (13.3%), Tamil Nadu (12.2%), Arunachal Pradesh (12.2%), Nagaland (8.9%), Goa (7.8%).
- Main ”dominated”: Kerala (9.4%), Rajasthan (8.9%), Haryana (8.3%), Tripura (7.2%), Orissa (6.7%).
Unconditioned results: Husband’s money

- 180 Dominance relationships out of 406 comparisons (44.3%).
- Main ”dominators”: Sikkim (13.3%), Tamil Nadu (12.2%), Arunachal Pradesh (12.2%), Nagaland (8.9%), Goa (7.8%).
- Main ”dominated”: Kerala (9.4%), Rajasthan (8.9%), Haryana (8.3%), Tripura (7.2%), Orissa (6.7%).
- ”Top five” relationships: Nagaland＞Tripura (0.2117), AruP＞Tripura (0.1989), Sikkim＞Tripura (0.1955), Tamil Nadu＞Tripura (0.1847), Nagaland＞Rajasthan (0.1690).
Conditioned results: Young wives 31- and minor purchases

- 309 Dominance relationships out of 406 comparisons (76.1%).
Conditioned results: Young wives 31- and minor purchases

- 309 Dominance relationships out of 406 comparisons (76.1%).
- Main "dominators": Arunachal Pradesh (9.1%), Nagaland (8.4%), Tamil Nadu (7.8%), Mizoram (7.8%), Manipur (7.1%).
Conditioned results: Young wives 31- and minor purchases

- 309 Dominance relationships out of 406 comparisons (76.1%).
- Main "dominators": Arunachal Pradesh (9.1%), Nagaland (8.4%), Tamil Nadu (7.8%), Mizoram (7.8%), Manipur (7.1%).
- Main "dominated": Jammu and Kashmir (8.7%), Rajasthan (7.1%), Punjab (6.8%), Uttarakhand (5.8%), West Bengal (5.8%).
Conditioned results: Young wives 31- and minor purchases

- 309 Dominance relationships out of 406 comparisons (76.1%).
- Main "dominators": Arunachal Pradesh (9.1%), Nagaland (8.4%), Tamil Nadu (7.8%), Mizoram (7.8%), Manipur (7.1%).
- Main "dominated": Jammu and Kashmir (8.7%), Rajasthan (7.1%), Punjab (6.8%), Uttaranchal (5.8%), West Bengal (5.8%).
- "Top five" relationships: AruP>JK (0.4665), AruP>Rajasthan (0.4299), Nagaland>JK (0.4189), AruP>Punjab (0.4018), AruP>WB (0.3991).
Conditioned results: Young wives 31- and health care

- 261 Dominance relationships out of 406 comparisons (64.3%).
Conditioned results: Young wives 31- and health care

- 261 Dominance relationships out of 406 comparisons (64.3%).
- Main "dominators": Mizoram (9.6%), Sikkim (9.2%), Punjab (7.7%), Andhra Pradesh (6.1%), Tamil Nadu (5.7%), Haryana (5.7%).
Conditioned results: Young wives 31- and health care

- 261 Dominance relationships out of 406 comparisons (64.3%).
- Main "dominators": Mizoram (9.6%), Sikkim (9.2%), Punjab (7.7%), Andhra Pradesh (6.1%), Tamil Nadu (5.7%), Haryana (5.7%).
- Main "dominated": Jammu and Kashmir (10.0%), Chattisgarh (8.8%), Karnataka (8.4%), Bihar (7.7%), Madhya Pradesh (7.3%).
Conditioned results: Young wives 31- and health care

- 261 Dominance relationships out of 406 comparisons (64.3%).
- Main "dominators": Mizoram (9.6%), Sikkim (9.2%), Punjab (7.7%), Andhra Pradesh (6.1%), Tamil Nadu (5.7%), Haryana (5.7%).
- Main "dominated": Jammu and Kashmir (10.0%), Chattisgarh (8.8%), Karnataka (8.4%), Bihar (7.7%), Madhya Pradesh (7.3%).
- "Top five" relationships: Mizoram > JK (0.3562), Sikkim > JK (0.3255), Mizoram > Karnataka (0.3213), Mizoram > Chattisgarh (0.3213), Mizoram > Bihar (0.3003).
Conditioned results: Young wives 31- and large purchases

- 253 Dominance relationships out of 406 comparisons (62.3%).
Conditioned results: Young wives 31- and large purchases

- 253 Dominance relationships out of 406 comparisons (62.3%).
- Main "dominators": Meghalaya (10.0%), Arunachal Pradesh (9.6%), Mizoram (8.8%), Nagaland (8.8%), Tamil Nadu (8.4%).
Conditioned results: Young wives 31- and large purchases

- 253 Dominance relationships out of 406 comparisons (62.3%).
- Main "dominators": Meghalaya (10.0%), Arunachal Pradesh (9.6%), Mizoram (8.8%), Nagaland (8.8%), Tamil Nadu (8.4%).
- Main "dominated": Rajasthan (9.2%), Chattisgarh (8.4%), Haryana (6.8%), Punjab (6.4%), Madhya Pradesh (6.0%).
Conditioned results: Young wives 31- and large purchases

- 253 Dominance relationships out of 406 comparisons (62.3%).
- Main "dominators": Meghalaya (10.0%), Arunachal Pradesh (9.6%), Mizoram (8.8%), Nagaland (8.8%), Tamil Nadu (8.4%).
- Main "dominated": Rajasthan (9.2%), Chattisgarh (8.4%), Haryana (6.8%), Punjab (6.4%), Madhya Pradesh (6.0%).
- "Top five" relationships: AruP>Rajasthan (0.3020), Meghalaya>Rajasthan (0.2970), Nagaland>Rajasthan (0.2709), AruP>JK (0.2619), AruP>Punjab (0.2619).
Conditioned results: Young wives 31- and family visits

- 253 Dominance relationships out of 406 comparisons (62.3%).

Main "dominators": Arunachal Pradesh (10.8%), Goa (9.2%), Mizoram (9.2%), Sikkim (8.8%), Tamil Nadu (7.6%).

Main "dominated": Rajasthan (9.2%), Uttar Pradesh (8.4%), Madhya Pradesh (7.6%), Chattisgarh (7.2%), Jammu and Kashmir (6.8%).

"Top five" relationships: AruP > Rajasthan (0.4077), AruP > JK (0.3957), AruP > UP (0.3627), AruP > Bihar (0.3560), AruP > Madhya Pradesh (0.3522).
Conditioned results: Young wives 31- and family visits

- 253 Dominance relationships out of 406 comparisons (62.3%).
- Main "dominators": Arunachal Pradesh (10.8%), Goa (9.2%), Mizoram (9.2%), Sikkim (8.8%), Tamil Nadu (7.6%).
Conditioned results: Young wives 31- and family visits

- 253 Dominance relationships out of 406 comparisons (62.3%).
- Main "dominators": Arunachal Pradesh (10.8%), Goa (9.2%), Mizoram (9.2%), Sikkim (8.8%), Tamil Nadu (7.6%).
- Main "dominated": Rajasthan (9.2%), Uttar Pradesh (8.4%), Madhya Pradesh (7.6%), Chattisgarh (7.2%), Jammu and Kashmir (6.8%).
Conditioned results: Young wives 31- and family visits

- 253 Dominance relationships out of 406 comparisons (62.3%).
- Main "dominators": Arunachal Pradesh (10.8%), Goa (9.2%), Mizoram (9.2%), Sikkim (8.8%), Tamil Nadu (7.6%).
- Main "dominated": Rajasthan (9.2%), Uttar Pradesh (8.4%), Madhya Pradesh (7.6%), Chattisgarh (7.2%), Jammu and Kashmir (6.8%).
- "Top five" relationships: AruP>Rajasthan (0.4077), AruP>JK (0.3957), AruP>UP (0.3627), AruP>Bihar (0.3560), AruP>Madhya Pradesh (0.3522).
Conditioned results: Young wives 31- and husband’s money

- 193 Dominance relationships out of 406 comparisons (47.5%).
Conditioned results: Young wives 31- and husband’s money

- 193 Dominance relationships out of 406 comparisons (47.5%).
- Main "dominators": Arunachal Pradesh (12.4%), Sikkim (12.4%), Tamil Nadu (11.4%), Nagaland (9.3%), Goa (8.3%).
Conditioned results: Young wives 31- and husband’s money

- 193 Dominance relationships out of 406 comparisons (47.5%).
- Main ”dominators”: Arunachal Pradesh (12.4%), Sikkim (12.4%), Tamil Nadu (11.4%), Nagaland (9.3%), Goa (8.3%).
- Main ”dominated”: Rajasthan (8.8%), Kerala (7.8%), Haryana (7.3%), Tripura (6.7%), Orissa (6.2%).
Conditioned results: Young wives 31- and husband’s money

- 193 Dominance relationships out of 406 comparisons (47.5%).
- Main ”dominators”: Arunachal Pradesh (12.4%), Sikkim (12.4%), Tamil Nadu (11.4%), Nagaland (9.3%), Goa (8.3%).
- Main ”dominated”: Rajasthan (8.8%), Kerala (7.8%), Haryana (7.3%), Tripura (6.7%), Orissa (6.2%).
- ”Top five” relationships: Nagaland > Tripura (0.2240), Sikkim > Tripura (0.2175), AruP > Tripura (0.2136), Nagaland > Rajasthan (0.2092), Manipur > Rajasthan (0.2037).
Conditioned results: Urban and minor purchases

- 328 Dominance relationships out of 406 comparisons (80.7%).
Conditioned results: Urban and minor purchases

- 328 Dominance relationships out of 406 comparisons (80.7%).
- Main "dominators": Mizoram (7.9%), Nagaland (7.6%), Tamil Nadu (7.3%), Arunachal Pradesh (7.3%), Manipur (6.7%).
Conditioned results: Urban and minor purchases

- 328 Dominance relationships out of 406 comparisons (80.7%).
- Main "dominators": Mizoram (7.9%), Nagaland (7.6%), Tamil Nadu (7.3%), Arunachal Pradesh (7.3%), Manipur (6.7%).
- Main "dominated": Jammu and Kashmir (8.2%), West Bengal (7.3%), Orissa (6.7%), Bihar (6.4%), Punjab (6.1%).
Results

Conditioned results: Urban and minor purchases

- 328 Dominance relationships out of 406 comparisons (80.7%).
- Main “dominators”: Mizoram (7.9%), Nagaland (7.6%), Tamil Nadu (7.3%), Arunachal Pradesh (7.3%), Manipur (6.7%).
- Main “dominated”: Jammu and Kashmir (8.2%), West Bengal (7.3%), Orissa (6.7%), Bihar (6.4%), Punjab (6.1%).
- ”Top five” relationships: TN>JK (0.3601), Mizoram>JK (0.3507), Nagaland>JK (0.3505), AruP>JK (0.3171), TN>Orissa (0.3142).
Conditioned results: Urban and health care

- 243 Dominance relationships out of 406 comparisons (59.9%).
Conditioned results: Urban and health care

- 243 Dominance relationships out of 406 comparisons (59.9%).
- Main "dominators": Sikkim (9.5%), Punjab (9.1%), Haryana (8.6%), Mizoram (8.2%), Meghalaya (7.0%).
Results

Conditioned results: Urban and health care

- 243 Dominance relationships out of 406 comparisons (59.9%).
- Main "dominators": Sikkim (9.5%), Punjab (9.1%), Haryana (8.6%), Mizoram (8.2%), Meghalaya (7.0%).
- Main "dominated": Jammu and Kashmir (8.6%), Karnataka (8.6%), Bihar (8.6%), Chattisgarh (7.8%), Arunachal Pradesh (7.0%).
Conditioned results: Urban and health care

- 243 Dominance relationships out of 406 comparisons (59.9%).
- Main “dominators”: Sikkim (9.5%), Punjab (9.1%), Haryana (8.6%), Mizoram (8.2%), Meghalaya (7.0%).
- Main “dominated”: Jammu and Kashmir (8.6%), Karnataka (8.6%), Bihar (8.6%), Chattisgarh (7.8%), Arunachal Pradesh (7.0%).
- ”Top five” relationships: Sikkim > JK (0.2852), Sikkim > Bihar (0.2726), Punjab > JK (0.2570), Sikkim > Karnataka (0.2508), Mizoram > JK (0.2480).
Conditioned results: Urban and large purchases

- 208 Dominance relationships out of 406 comparisons (51.2%).
Conditioned results: Urban and large purchases

- 208 Dominance relationships out of 406 comparisons (51.2%).
- Main "dominators": Meghalaya (10.1%), Mizoram (10.1%), Arunachal Pradesh (10.1%), Tamil Nadu (9.6%), Kerala (7.7%).
- Main "dominated": Jammu and Kashmir (10.1%), Punjab (9.6%), Chattisgarh (9.6%), Bihar (8.7%), Rajasthan (6.7%).
- "Top five" relationships: TN > JK (0.2118), Mizoram > JK (0.2055), Meghalaya > JK (0.1939), TN > Punjab (0.1924), Mizoram > Punjab (0.1861).
Conditioned results: Urban and large purchases

- 208 Dominance relationships out of 406 comparisons (51.2%).
- Main "dominators": Meghalaya (10.1%), Mizoram (10.1%), Arunachal Pradesh (10.1%), Tamil Nadu (9.6%), Kerala (7.7%).
- Main "dominated": Jammu and Kashmir (10.1%), Punjab (9.6%), Chattisgarh (9.6%), Bihar (8.7%), Rajasthan (6.7%).
Results

Conditioned results: Urban and large purchases

- 208 Dominance relationships out of 406 comparisons (51.2%).
- Main "dominators": Meghalaya (10.1%), Mizoram (10.1%), Arunachal Pradesh (10.1%), Tamil Nadu (9.6%), Kerala (7.7%).
- Main "dominated": Jammu and Kashmir (10.1%), Punjab (9.6%), Chattisgarh (9.6%), Bihar (8.7%), Rajasthan (6.7%).
- "Top five" relationships: TN>JK (0.2118), Mizoram>JK (0.2055), Meghalaya>JK (0.1939), TN>Punjab (0.1924), Mizoram>Punjab (0.1861).
Conditioned results: Urban and family visits

- 233 Dominance relationships out of 406 comparisons (57.4%).
Conditioned results: Urban and family visits

- 233 Dominance relationships out of 406 comparisons (57.4%).
- Main "dominators": Arunachal Pradesh (10.3%), Sikkim (9.0%), Goa (8.6%), Tamil Nadu (7.3%), Manipur (6.9%).
Conditioned results: Urban and family visits

- 233 Dominance relationships out of 406 comparisons (57.4%).
- Main "dominators": Arunachal Pradesh (10.3%), Sikkim (9.0%), Goa (8.6%), Tamil Nadu (7.3%), Manipur (6.9%).
- Main "dominated": Jammu and Kashmir (11.2%), Bihar (9.9%), Chattisgarh (8.2%), Jharkand (7.7%), Madhya Pradesh (7.7%).
Conditioned results: Urban and family visits

- 233 Dominance relationships out of 406 comparisons (57.4%).
- Main "dominators": Arunachal Pradesh (10.3%), Sikkim (9.0%), Goa (8.6%), Tamil Nadu (7.3%), Manipur (6.9%).
- Main "dominated": Jammu and Kashmir (11.2%), Bihar (9.9%), Chattisgarh (8.2%), Jharkand (7.7%), Madhya Pradesh (7.7%).
- "Top five" relationships: AruP > JK (0.3343), Sikkim > JK (0.2976), Goa > JK (0.2905), Mizoram > JK (0.2691), Nagaland > JK (0.2658).
Conditioned results: Urban and husband’s money

- Dominance relationships out of 406 comparisons (39.7%).
Conditioned results: Urban and husband’s money

- Dominance relationships out of 406 comparisons (39.7%).
- Main “dominators”: Sikkim (14.9%), Tamil Nadu (13.0%), Arunachal Pradesh (12.4%), Nagaland (10.6%), Andhra Pradesh (8.1%).
Conditioned results: Urban and husband’s money

- Dominance relationships out of 406 comparisons (39.7%).
- Main ”dominators”: Sikkim (14.9%), Tamil Nadu (13.0%), Arunachal Pradesh (12.4%), Nagaland (10.6%), Andhra Pradesh (8.1%).
- Main ”dominated”: Kerala (11.2%), Assam (8.7%), Rajasthan (7.5%), Haryana (6.8%), Tripura (6.8%).
Conditioned results: Urban and husband’s money

- Dominance relationships out of 406 comparisons (39.7%).
- Main "dominators": Sikkim (14.9%), Tamil Nadu (13.0%), Arunachal Pradesh (12.4%), Nagaland (10.6%), Andhra Pradesh (8.1%).
- Main "dominated": Kerala (11.2%), Assam (8.7%), Rajasthan (7.5%), Haryana (6.8%), Tripura (6.8%).
- "Top five" relationships: Nagaland > Tripura (0.1733), Sikkim > Tripura (0.1679), TN > Tripura (0.1589), AruP > Tripura (0.1494), Sikkim > Maharashtra (0.1466).
Results

Conditioned results: Top wealth quintile and minor purchases

- 319 Dominance relationships out of 406 comparisons (78.6%).
Conditioned results: Top wealth quintile and minor purchases

- 319 Dominance relationships out of 406 comparisons (78.6%).
- Main "dominators": Nagaland (8.5%), Mizoram (7.5%), Arunachal Pradesh (7.2%), Meghalaya (6.9%), Sikkim (6.9%).
Conditioned results: Top wealth quintile and minor purchases

- 319 Dominance relationships out of 406 comparisons (78.6%).
- Main "dominators": Nagaland (8.5%), Mizoram (7.5%), Arunachal Pradesh (7.2%), Meghalaya (6.9%), Sikkim (6.9%).
- Main "dominated": West Bengal (7.2%), Haryana (7.2%), Jammu and Kashmir (6.9%), Orissa (6.6%), Punjab (6.3%).
Conditioned results: Top wealth quintile and minor purchases

- 319 Dominance relationships out of 406 comparisons (78.6%).
- Main "dominators": Nagaland (8.5%), Mizoram (7.5%), Arunachal Pradesh (7.2%), Meghalaya (6.9%), Sikkim (6.9%).
- Main "dominated": West Bengal (7.2%), Haryana (7.2%), Jammu and Kashmir (6.9%), Orissa (6.6%), Punjab (6.3%).
- "Top five" relationships: Nagaland > JK (0.3603), Nagaland > West Bengal (0.3555), Nagaland > Haryana (0.3462), Nagaland > Punjab (0.3447), Nagaland > Orissa (0.3438).
Conditioned results: Top wealth quintile and health care

- 256 Dominance relationships out of 406 comparisons (63.1%).
  - Main "dominators": Mizoram (9.0%), Sikkim (9.0%), Punjab (8.6%), Haryana (8.2%), Meghalaya (7.4%).
  - Main "dominated": Bihar (9.0%), Jharkand (8.2%), Karnataka (8.2%), Jammu and Kashmir (7.8%), Arunachal Pradesh (7.0%).
  - "Top five" relationships: Sikkim > Bihar (0.2989), Sikkim > JK (0.2686), Mizoram > Bihar (0.2676), Sikkim > Jharkand (0.2607), Sikkim > Karnataka (0.2470).
Conditioned results: Top wealth quintile and health care

- 256 Dominance relationships out of 406 comparisons (63.1%).
- Main "dominators": Mizoram (9.0%), Sikkim (9.0%), Punjab (8.6%), Haryana (8.2%), Meghalaya (7.4%).
Conditioned results: Top wealth quintile and health care

- 256 Dominance relationships out of 406 comparisons (63.1%).
- Main "dominators": Mizoram (9.0%), Sikkim (9.0%), Punjab (8.6%), Haryana (8.2%), Meghalaya (7.4%).
- Main "dominated": Bihar (9.0%), Jharkand (8.2%), Karnataka (8.2%), Jammu and Kashmir (7.8%), Arunachal Pradesh (7.0%).
Results

Conditioned results: Top wealth quintile and health care

- 256 Dominance relationships out of 406 comparisons (63.1%).
- Main "dominators": Mizoram (9.0%), Sikkim (9.0%), Punjab (8.6%), Haryana (8.2%), Meghalaya (7.4%).
- Main "dominated": Bihar (9.0%), Jharkand (8.2%), Karnataka (8.2%), Jammu and Kashmir (7.8%), Arunachal Pradesh (7.0%).
- "Top five" relationships: Sikkim>Bihar (0.2989), Sikkim>JK (0.2686), Mizoram>Bihar (0.2676), Sikkim>Jharkand (0.2607), Sikkim>Karnataka (0.2470).
Conditioned results: Top wealth quintile and large purchases

- 234 Dominance relationships out of 406 comparisons (57.6%).
Conditioned results: Top wealth quintile and large purchases

- 234 Dominance relationships out of 406 comparisons (57.6%).
- Main "dominators": Meghalaya (10.7%), Mizoram (10.3%), Nagaland (8.1%), Arunachal Pradesh (8.1%), Goa (7.7%).
Results

Conditioned results: Top wealth quintile and large purchases

- 234 Dominance relationships out of 406 comparisons (57.6%).
- Main "dominators": Meghalaya (10.7%), Mizoram (10.3%), Nagaland (8.1%), Arunachal Pradesh (8.1%), Goa (7.7%).
- Main "dominated": Bihar (9.4%), Chattisgarh (7.3%), Punjab (7.3%), Haryana (6.8%), Jharkand (6.4%).
Conditioned results: Top wealth quintile and large purchases

- 234 Dominance relationships out of 406 comparisons (57.6%).
- Main ”dominators”: Meghalaya (10.7%), Mizoram (10.3%), Nagaland (8.1%), Arunachal Pradesh (8.1%), Goa (7.7%).
- Main ”dominated”: Bihar (9.4%), Chattisgarh (7.3%), Punjab (7.3%), Haryana (6.8%), Jharkand (6.4%).
- ”Top five” relationships: Meghalaya＞Punjab (0.1992), Meghalaya＞JK (0.1937), Mizoram＞Punjab (0.1936), Mizoram＞JK (0.1881), Meghalaya＞Bihar (0.1831).
Conditioned results: Top wealth quintile and family visits

- 228 Dominance relationships out of 406 comparisons (56.2%).
Conditioned results: Top wealth quintile and family visits

- 228 Dominance relationships out of 406 comparisons (56.2%).
- Main "dominators": Sikkim (9.6%), Goa (9.6%), Arunachal Pradesh (8.8%), Mizoram (7.5%), Tripura (7.5%).
Conditioned results: Top wealth quintile and family visits

- 228 Dominance relationships out of 406 comparisons (56.2%).
- Main "dominators": Sikkim (9.6%), Goa (9.6%), Arunachal Pradesh (8.8%), Mizoram (7.5%), Tripura (7.5%).
- Main "dominated": Bihar (9.6%), Chattisgarh (9.6%), Jammu and Kashmir (9.2%), Orissa (8.3%), Jharkand (7.5%).
Conditioned results: Top wealth quintile and family visits

- 228 Dominance relationships out of 406 comparisons (56.2%).
- Main "dominators": Sikkim (9.6%), Goa (9.6%), Arunachal Pradesh (8.8%), Mizoram (7.5%), Tripura (7.5%).
- Main "dominated": Bihar (9.6%), Chattisgarh (9.6%), Jammu and Kashmir (9.2%), Orissa (8.3%), Jharkand (7.5%).
- "Top five" relationships: Goa > JK (0.2856), Sikkim > JK (0.2758), Tripura > JK (0.2610), AruP > JK (0.2390), Goa > Bihar (0.2318).
Conditioned results: Top wealth quintile and husband’s money

- 181 Dominance relationships out of 406 comparisons (44.6%).
Conditioned results: Top wealth quintile and husband’s money

- 181 Dominance relationships out of 406 comparisons (44.6%).
- Main "dominators": Sikkim (13.3%), Arunachal Pradesh (12.2%), Nagaland (9.9%), Mizoram (8.3%), Goa (7.7%).
Conditioned results: Top wealth quintile and husband’s money

- 181 Dominance relationships out of 406 comparisons (44.6%).
- Main “dominators”: Sikkim (13.3%), Arunachal Pradesh (12.2%), Nagaland (9.9%), Mizoram (8.3%), Goa (7.7%).
- Main “dominated”: Kerala (11.6%), Orissa (10.5%), Haryana (8.8%), Karnataka (7.7%), Punjab (7.7%).
Conditioned results: Top wealth quintile and husband’s money

- 181 Dominance relationships out of 406 comparisons (44.6%).
- Main ”dominators”: Sikkim (13.3%), Arunachal Pradesh (12.2%), Nagaland (9.9%), Mizoram (8.3%), Goa (7.7%).
- Main ”dominated”: Kerala (11.6%), Orissa (10.5%), Haryana (8.8%), Karnataka (7.7%), Punjab (7.7%).
- ”Top five” relationships: Sikkim>Maharashtra (0.1604), AruP>Maharashtra (0.1423), Sikkim>Bihar (0.1301), Nagaland>Kerala (0.1262), Sikkim>Kerala (0.1248).
Concluding remarks

- Autonomy is a multifaceted phenomenon.
Autonomy is a multifaceted phenomenon.

The regional divides, and the pairwise state comparisons, really depend on the autonomy aspect/question.
Concluding remarks

- Autonomy is a multifaceted phenomenon.
- The regional divides, and the pairwise state comparisons, really depend on the autonomy aspect/question.
- Most of the "dominators" are from Northeaster India, most of the time.
- But there are often important exceptions (e.g. Punjab is a main dominator on health autonomy).
- Most of the "dominated" are from Northern India, most of the time. But there are often important exceptions (e.g. Kerala is a main dominated state on husband's money).
- Conditioning does not change the picture much (although we have only started exploring).
Concluding remarks

- Autonomy is a multifaceted phenomenon.
- The regional divides, and the pairwise state comparisons, really depend on the autonomy aspect/question.
- Most of the "dominators" are from Northeaster India, most of the time. But there are often important exceptions (e.g. Punjab is a main dominator on health autonomy).
Concluding remarks

- Autonomy is a multifaceted phenomenon.
- The regional divides, and the pairwise state comparisons, really depend on the autonomy aspect/question.
- Most of the "dominators" are from Northeaster India, most of the time. But there are often important exceptions (e.g. Punjab is a main dominator on health autonomy).
- Most of the "dominated" are from Northern India, most of the time.
Concluding remarks

- Autonomy is a multifaceted phenomenon.
- The regional divides, and the pairwise state comparisons, really depend on the autonomy aspect/question.
- Most of the "dominators" are from Northeaster India, most of the time. But there are often important exceptions (e.g. Punjab is a main dominator on health autonomy).
- Most of the "dominated" are from Northern India, most of the time. But there are often important exceptions (e.g. Kerala is a main dominated state on husband’s money).
Concluding remarks

- Autonomy is a multifaceted phenomenon.
- The regional divides, and the pairwise state comparisons, really depend on the autonomy aspect/question.
- Most of the ”dominators” are from Northeaster India, most of the time. But there are often important exceptions (e.g. Punjab is a main dominator on health autonomy).
- Most of the ”dominated” are from Northern India, most of the time. But there are often important exceptions (e.g. Kerala is a main dominated state on husband’s money).
- Conditioning does not change the picture much (although we have only started exploring).
Concluding remarks

To do list

- Regional analysis North versus South, North-East versus each.

- Show results in maps?

- A dominance “tree”.

- Look at joint “autonomy deficiencies”: Through a latent variable model (e.g. MIMIC, SEM)? Through a counting approach?

Other researchers have pursued, or are pursuing, similar paths.
To do list

- Regional analysis North versus South, North-East versus each.
- Show results in maps?
To do list

- Regional analysis North versus South, North-East versus each.
- Show results in maps?
- A dominance "tree".
To do list

- Regional analysis North versus South, North-East versus each.
- Show results in maps?
- A dominance "tree".
- Look at joint "autonomy deficiencies": Through a latent variable model (e.g. MIMIC, SEM)? Through a counting approach?
Concluding remarks

To do list

- Regional analysis North versus South, North-East versus each.
- Show results in maps?
- A dominance "tree".
- Look at joint "autonomy deficiencies": Through a latent variable model (e.g. MIMIC, SEM)? Through a counting approach? Other researchers have pursued, or are pursuing, similar paths.