# What Do Workers Value About Formal Employment?

## Preliminary Results from a Worker Survey in Bangladesh



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# Research Questions

- What is the nature of the relationship between formal and informal sector employment?
- What role does the informal sector play in generating value added and employment growth in Bangladesh?
- Are workers “locked” into informal employment?

# Survey of Workers

- Do individual workers transition between formal and informal work?
- What value do workers place on formal employment?
- 1,968 workers in Dhaka, Chittagong and surrounding urban areas
- Survey done April-June 2016

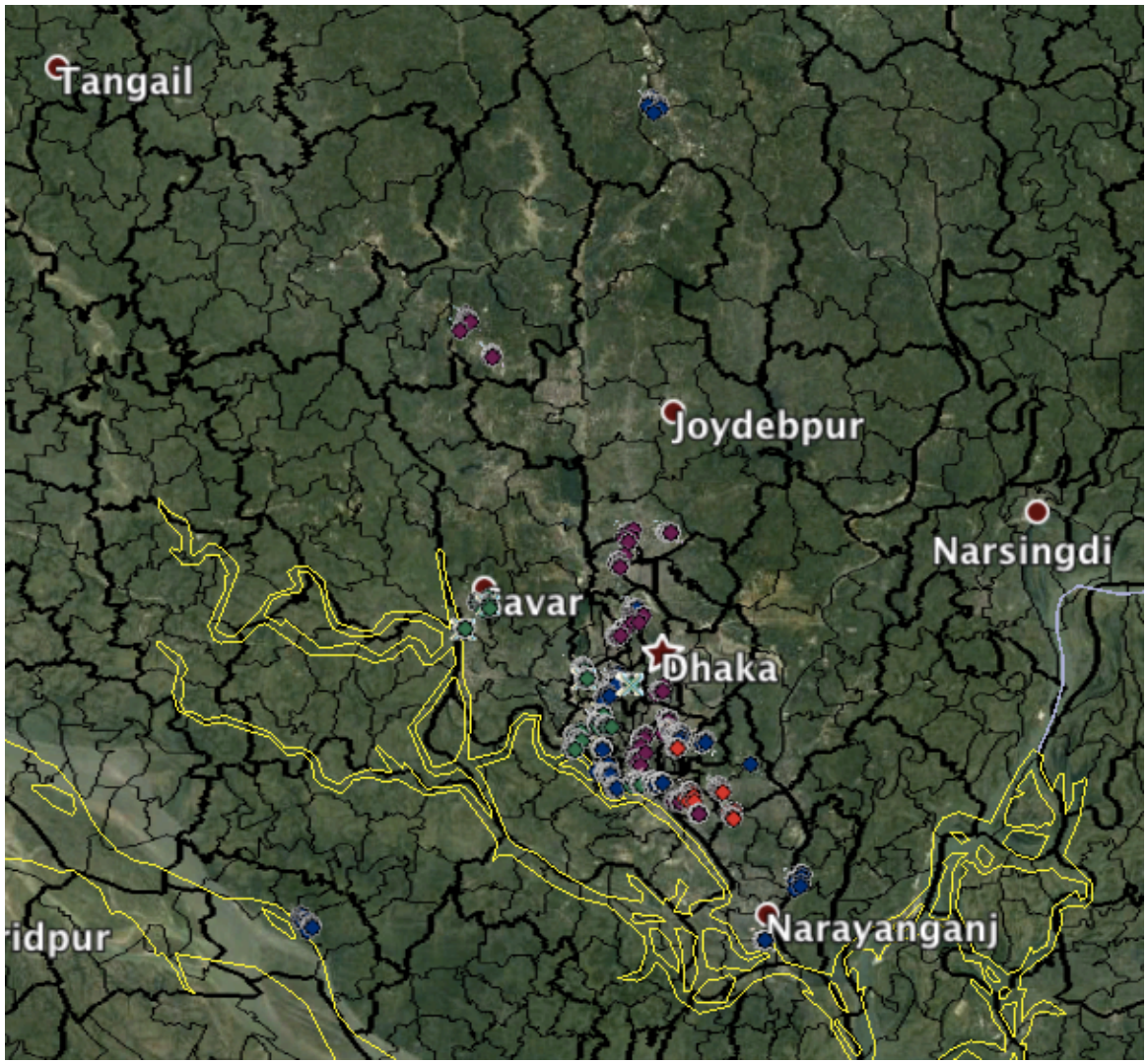
# Main Survey Modules

- Basic demographics
- Job history (current, 2 previous jobs)
- Benefits (for wage workers)
- Business characteristics (for self-employed and family members)
- Working conditions
- Choice experiment to elicit valuation of different aspects of formality

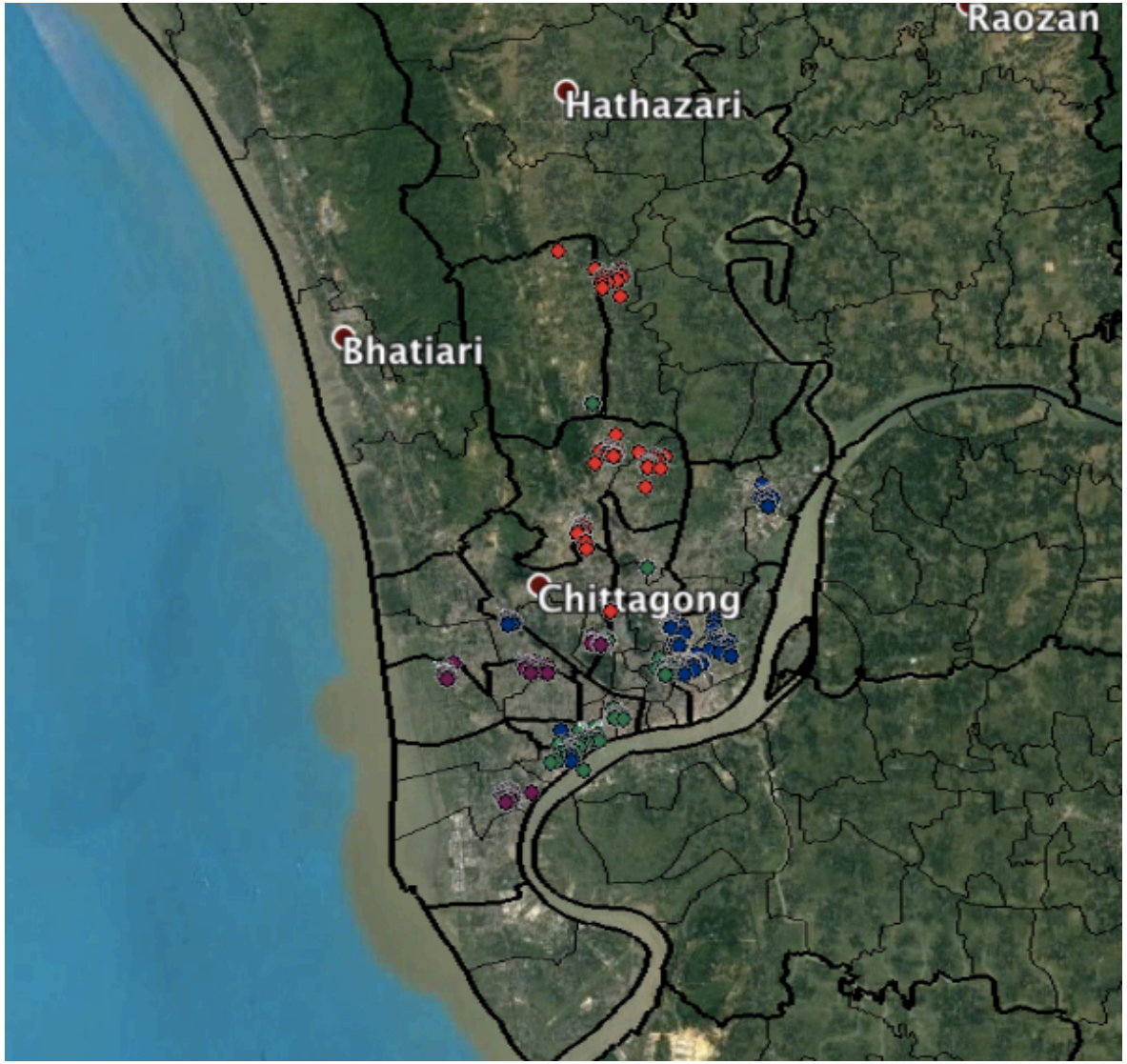
# Sampling Methodology

- PPS draw of 80 “mouzas” in Dhaka, Narayanganj, Gazipur, Chittagong
- Random walk method to find households
- First stage enumeration of *all* HH members
- Second stage SRS of working adults by gender, type of worker

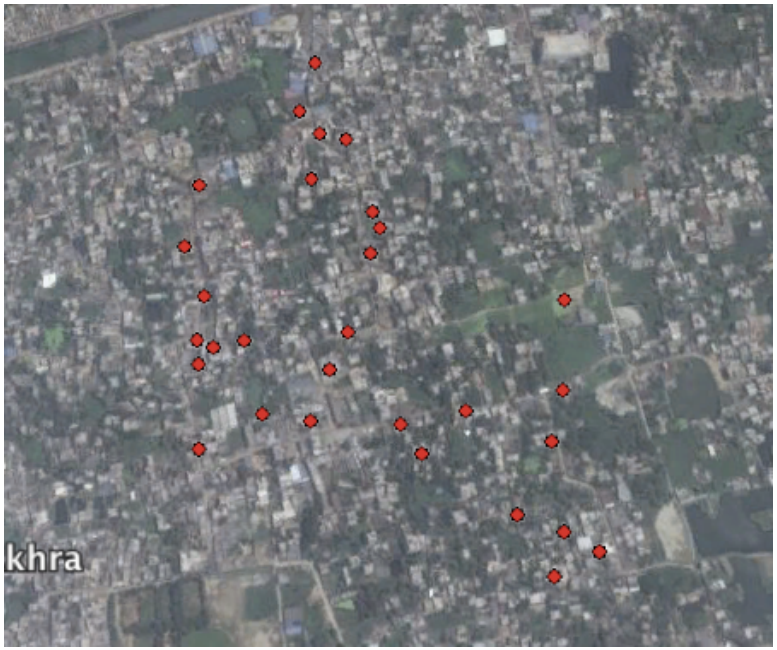
# PSU in Dhaka, Gazipur, Narayanganj



# PSU in Dhaka, Chittagong

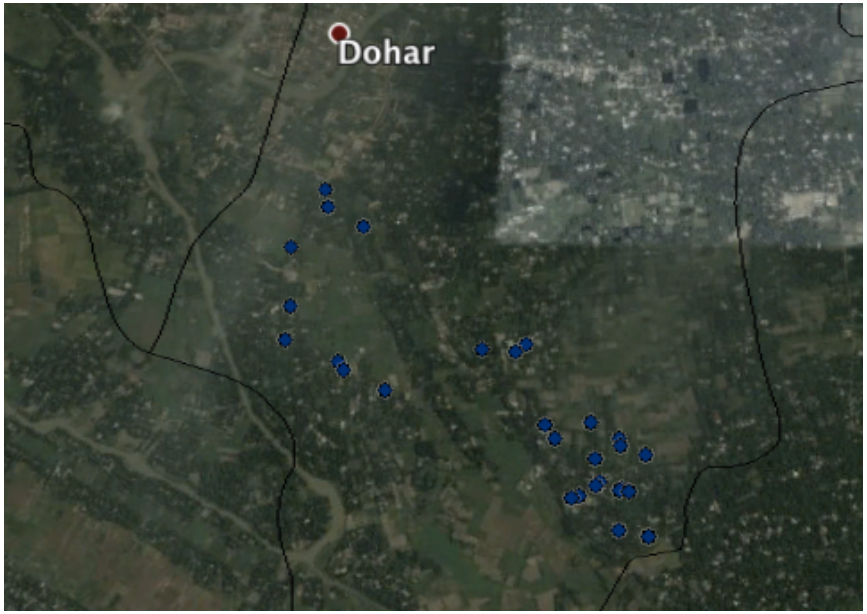


# First Stage Households: Examples

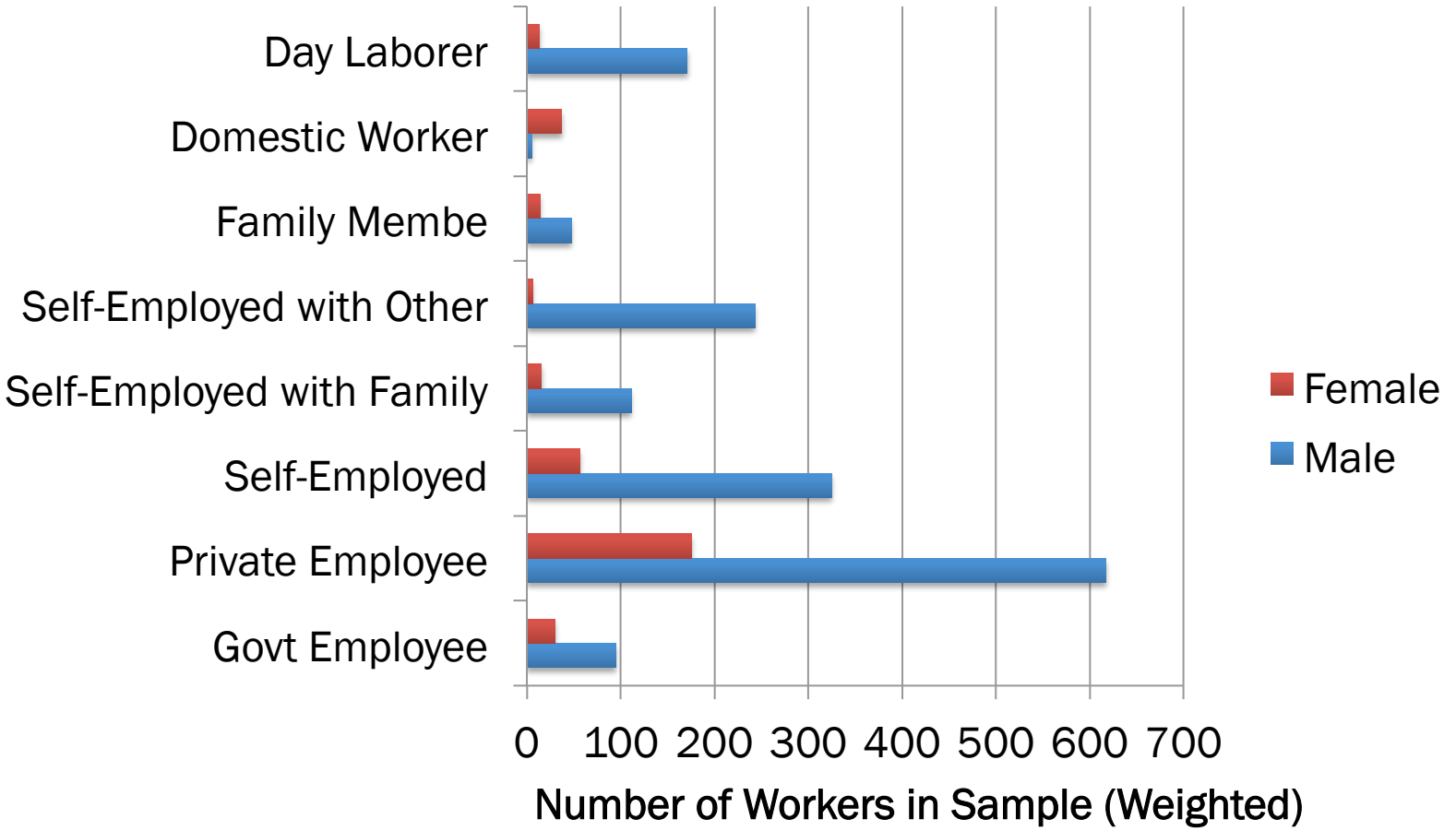



Matuail, Jatrabari Thana

Nurpur, Dohar Upazila

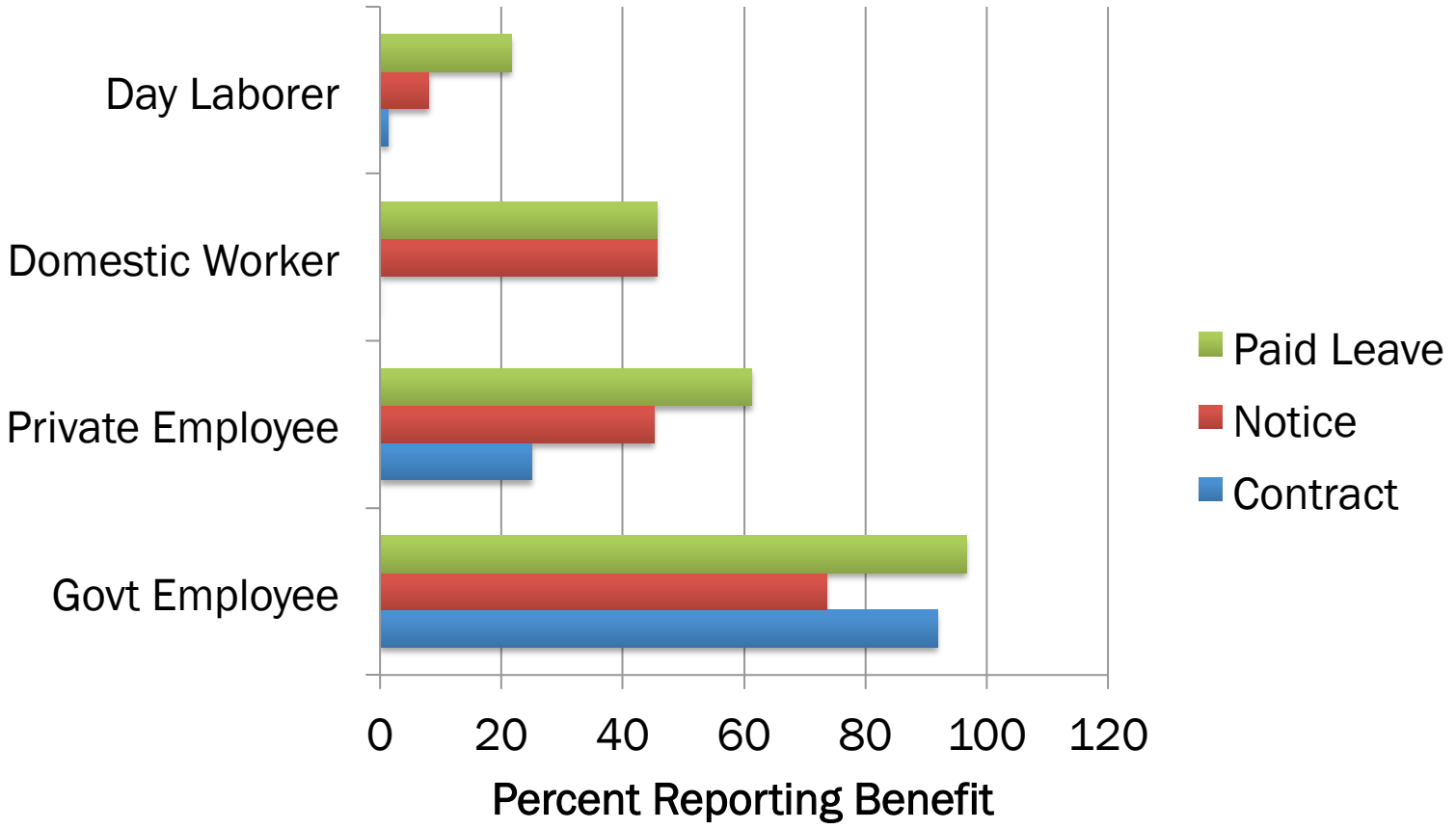


# We Surveyed 691 Women and 1,277 Men



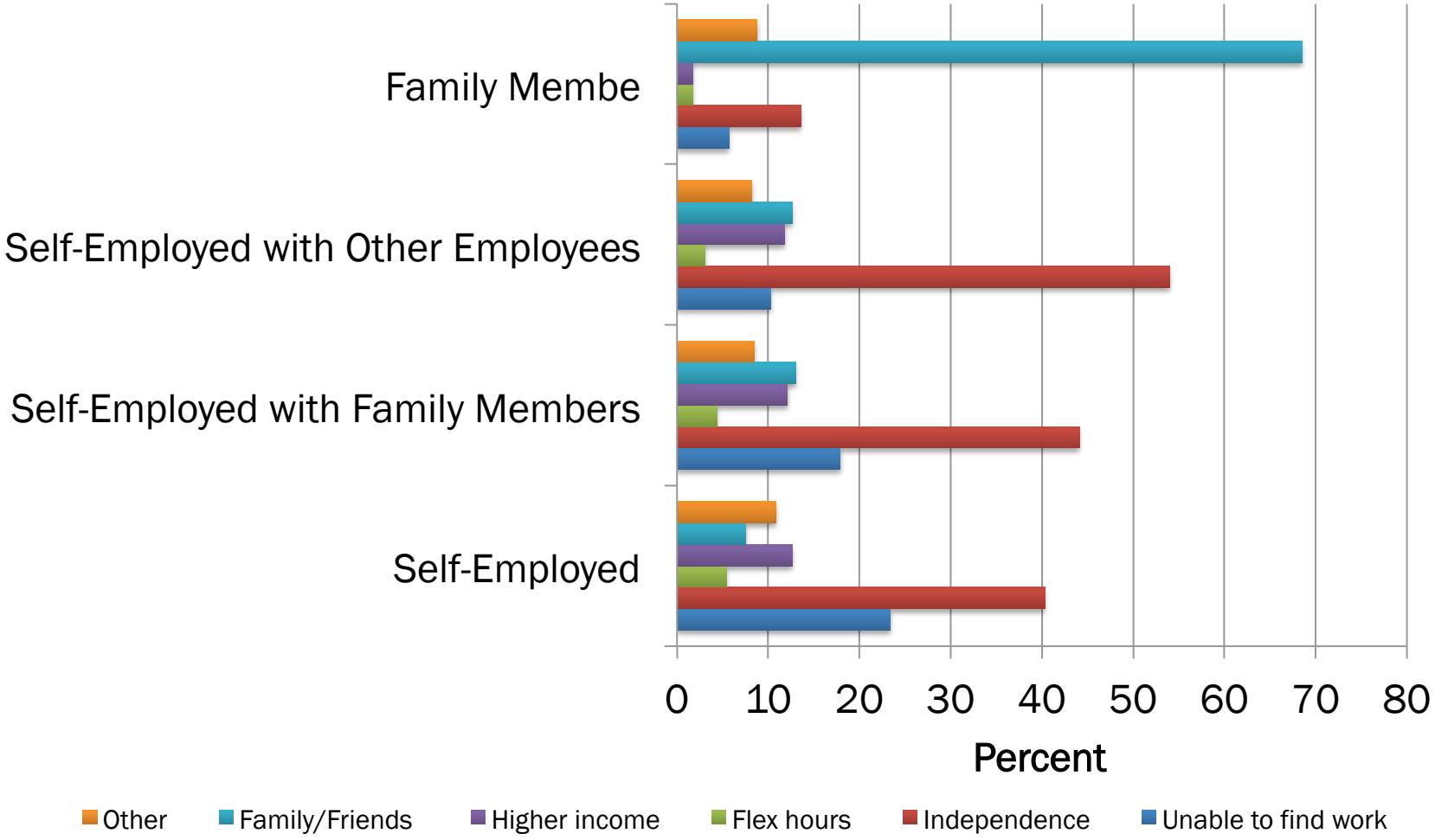

Note: Sampling weights are applied.

# Workers Vary Across Various Dimensions of Formality



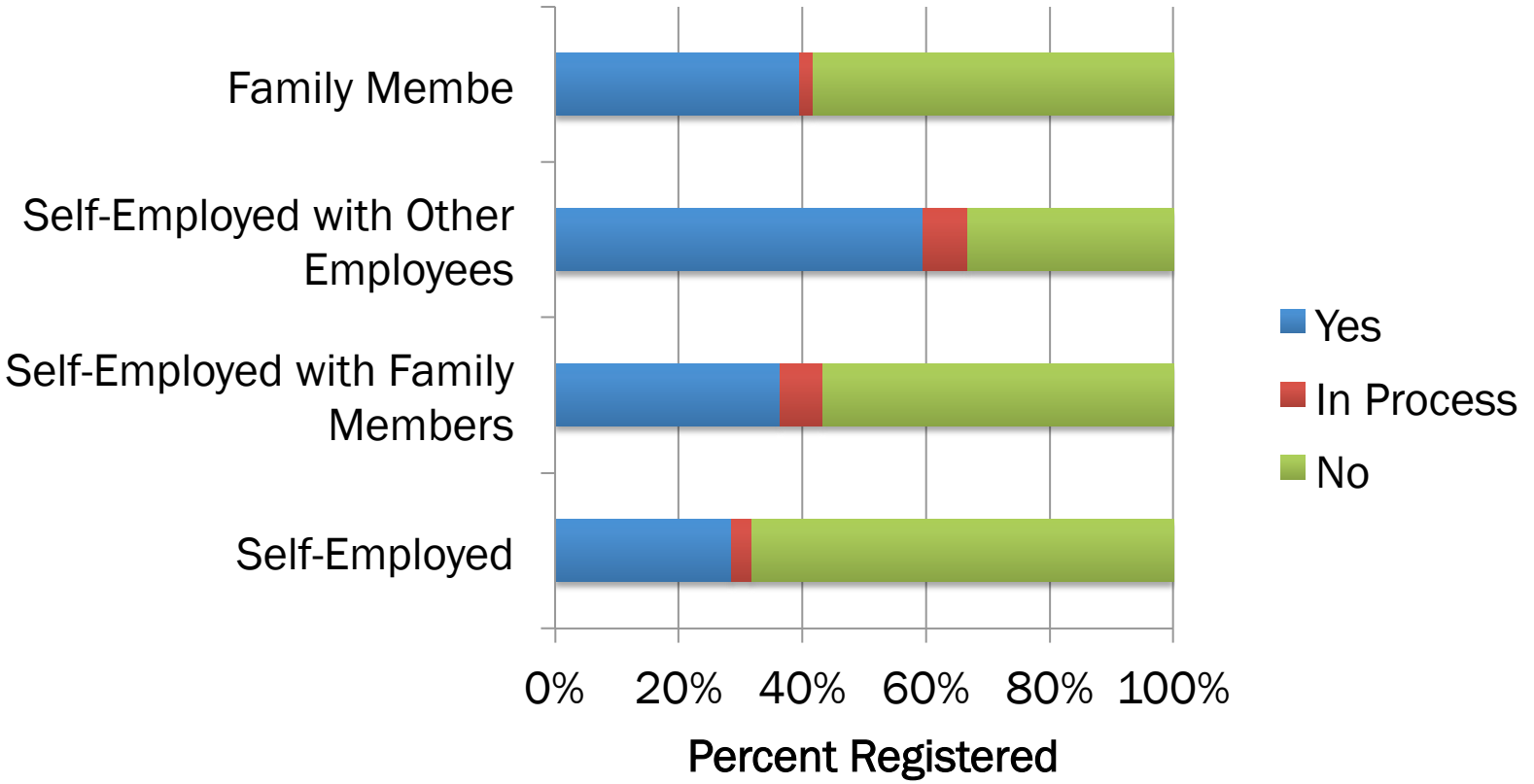

Note: Sampling weights are applied.

# Self-Employed Include those Seeking Independence and Those Unable to Find a Job




Note: Sampling weights are applied.

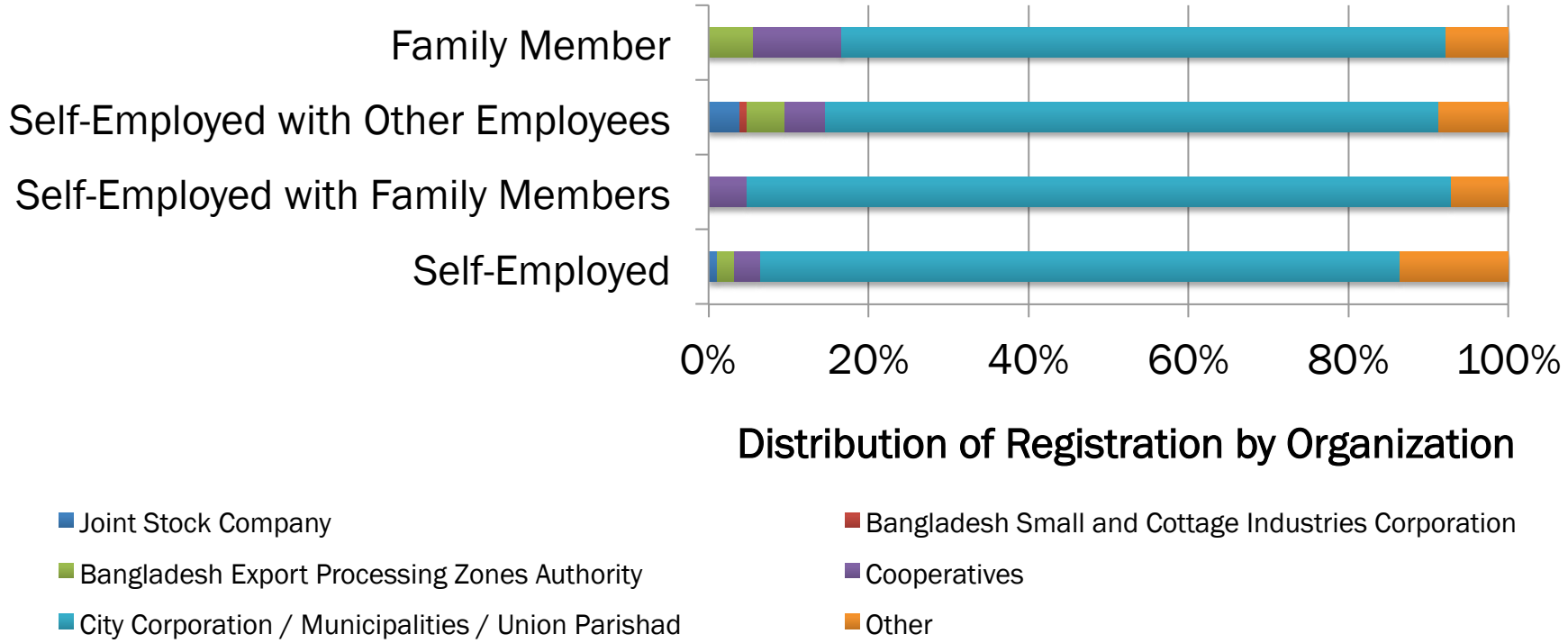
# Over 40% of Self-Employed, Family Members Report that Firm is Registered




Note: Sampling weights are applied.

# But There are Multiple Levels of Registration in Bangladesh

- Most registered with municipality (i.e. have a trade license)
- Few registered as Joint Stock Company




Note: Sampling weights are applied.

# Probability of Registration Correlated with Demographics, Education and Employee Type

| | | |
|---|---|---|
| Wanted independence | 0.0544 | (0.051) |
| Flex hours | 0.0776 | (0.093) |
| Higher income | 0.0222 | (0.061) |
| Family and friends | 0.0731 | (0.066) |
| Other | 0.0644 | (0.069) |
| Self-employed with family members | 0.1512 | (0.050)*** |
| Self-employed with others | 0.2572 | (0.047)*** |
| Family member | 0.1701 | (0.078)** |
| Male | 0.1779 | (0.052)*** |
| Age | -0.0018 | (0.002) |
| Some primary | 0.1055 | (0.051)** |
| Some secondary | 0.1345 | (0.056)** |
| Some high school | 0.3388 | (0.058)*** |
| High school | 0.3138 | (0.072)*** |
| Bachelors and more | 0.4456 | (0.065)*** |
| Experience | 0.0081 | (0.003)*** |
| Observations | 718 | |

se in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

# Employees Choosing Self-Employment for Higher Income Exhibit Greater Change in Wages

| | | |
|---|---|---|
| Wanted independence | 635 | (2400) |
| Flex hours | -7623 | (5332) |
| Higher income | 4940 | (2371)** |
| Family and friends | 1171 | (3623) |
| Other | -2647 | (2825) |
| Self-employed with family members | 3020 | (2066) |
| Self-employed with others | 4166 | (2224)* |
| Family member | 3663 | (2797) |
| Male | 1109 | (2304) |
| Age | -98 | (67) |
| Some primary | 2066 | (2406) |
| Some secondary | 2421 | (2797) |
| Some high school | 804 | (3026) |
| High school | 2257 | (3474) |
| Bachelors and more | 1930 | (3824) |
| Experience | 153 | (112) |
| Observations | 295 | |

se in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

# Probability of Having Formal Job Strongly Correlated with Education

| | (1) Contract | | (2) Notice | | (3) Contract Ever | | (4) Notice Ever | |
|---|---|---|---|---|---|---|---|---|
| Male | -0.012 | (0.028) | -0.038 | (0.035) | -0.020 | (0.026) | -0.046 | (0.033) |
| Age | -0.000 | (0.002) | -0.003 | (0.002)* | 0.002 | (0.001) | -0.002 | (0.002) |
| Some primary | 0.044 | (0.030) | 0.109 | (0.045)** | 0.076 | (0.025)*** | 0.147 | (0.040)*** |
| Some secondary | 0.102 | (0.033)*** | 0.105 | (0.048)** | 0.150 | (0.030)*** | 0.159 | (0.043)*** |
| Some high school | 0.250 | (0.045)*** | 0.323 | (0.056)*** | 0.289 | (0.039)*** | 0.381 | (0.050)*** |
| High school | 0.405 | (0.058)*** | 0.379 | (0.066)*** | 0.452 | (0.051)*** | 0.401 | (0.059)*** |
| Bachelors and more | 0.521 | (0.054)*** | 0.451 | (0.060)*** | 0.546 | (0.047)*** | 0.521 | (0.052)*** |
| Experience | 0.007 | (0.002)*** | 0.009 | (0.003)*** | 0.005 | (0.002)*** | 0.006 | (0.002)*** |
| Observations | 1155 | | 1061 | | 1366 | | 1255 | |

se in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

# Active Transition Across Different Types of Jobs

| | | Current Job | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Govt employee | Private employee | Self-employed | Self-employed with family members | Self-employed with others | Family member | Domestic worker | Day laborer | Total |
| **Previous job #1** | Govt employee | **45** | 36 | 6 | | 6 | | | 6 | 100 |
| | Private employee | 4 | **57** | 17 | 4 | 10 | 1 | 2 | 6 | 100 |
| | Self-employed | 0.5 | 31 | **32** | 10 | 15 | | 1 | 11 | 100 |
| | Self-employed with family members | | 12 | 27 | **25** | 22 | | 2 | 12 | 100 |
| | Self-employed with others | | 24 | 29 | 7 | **31** | 2 | | 7 | 100 |
| | Family member | | 27 | 17 | 8 | 23 | **2** | | 23 | 100 |
| | Domestic worker | | 25 | 12 | 9 | | 11 | **28** | 16 | 100 |
| | Day laborer | | 23 | 22 | 6 | 9 | 0.4 | 2 | **38** | **100** |

# From Govt. & Private Employment to Self-Employment

| | | Current Job | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Govt employee | Private employee | Self-employed | Self-employed with family members | Self-employed with others | Family member | Domestic worker | Day laborer | Total |
| Previous job #1 | Govt employee | **45** | 36 | **6** | | **6** | | | 6 | 100 |
| | Private employee | 4 | **57** | **17** | **4** | **10** | **1** | 2 | 6 | 100 |
| | Self-employed | 0.5 | 31 | **32** | 10 | 15 | | 1 | 11 | 100 |
| | Self-employed with family members | | 12 | 27 | **25** | 22 | | 2 | 12 | 100 |
| | Self-employed with others | | 24 | 29 | 7 | **31** | 2 | | 7 | 100 |
| | Family member | | 27 | 17 | 8 | 23 | **2** | | 23 | 100 |
| | Domestic worker | | 25 | 12 | 9 | | 11 | **28** | 16 | 100 |
| | Day laborer | | 23 | 22 | 6 | 9 | 0.4 | 2 | **38** | **100** |

# From Self-Employment to Govt. & Private Employment

| | | Current Job | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Govt employee | Private employee | Self-employed | Self-employed with family members | Self-employed with others | Family member | Domestic worker | Day laborer | Total |
| Previous job #1 | Govt employee | **45** | 36 | 6 | | 6 | | | 6 | 100 |
| | Private employee | 4 | **57** | 17 | 4 | 10 | 1 | 2 | 6 | 100 |
| | Self-employed | **0.5** | **31** | **32** | 10 | 15 | | 1 | 11 | 100 |
| | Self-employed with family members | | **12** | 27 | **25** | 22 | | 2 | 12 | 100 |
| | Self-employed with others | | **24** | 29 | 7 | **31** | 2 | | 7 | 100 |
| | Family member | | **27** | 17 | 8 | 23 | **2** | | 23 | 100 |
| | Domestic worker | | 25 | 12 | 9 | | 11 | **28** | 16 | 100 |
| | Day laborer | | 23 | 22 | 6 | 9 | 0.4 | 2 | **38** | **100** |

# Between Domestic & Casual Labor and Private Employment

| | | Current Job | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Govt employee | Private employee | Self-employed | Self-employed with family members | Self-employed with others | Family member | Domestic worker | Day laborer | Total |
| Previous job #1 | Govt employee | **45** | 36 | 6 | | 6 | | | **6** | 100 |
| | Private employee | 4 | **57** | 17 | 4 | 10 | 1 | 2 | **6** | 100 |
| | Self-employed | 0.5 | 31 | **32** | 10 | 15 | | 1 | 11 | 100 |
| | Self-employed with family members | | 12 | 27 | **25** | 22 | | 2 | 12 | 100 |
| | Self-employed with others | | 24 | 29 | 7 | **31** | 2 | | 7 | 100 |
| | Family member | | 27 | 17 | 8 | 23 | **2** | | 23 | 100 |
| | Domestic worker | | **25** | 12 | 9 | | 11 | **28** | 16 | 100 |
| | Day laborer | | **23** | 22 | 6 | 9 | 0.4 | 2 | **38** | **100** |

# A Number of Workers Move Between Jobs With and Without Written Contracts

| | | Current Employment | | | | |
|---|---|---|---|---|---|---|
| | **Written contract** | Has the benefit | Does not have the benefit | Self employed | Don't know | Total |
| **Previous Job #1** | Has the benefit | **49** | **13** | **37** | 1 | 100 |
| | Does not have the benefit | **9** | **62** | 29 | - | 100 |
| | Self employed | **8** | 32 | **60** | - | 100 |
| | Don't know | 20 | 60 | 20 | - | 100 |

# Between Jobs With and Without Termination Notice

| | | Current Employment | | | | |
|---|---|---|---|---|---|---|
| | **Termination Notice** | Has the benefit | Does not have the benefit | Self employed | Don't know | Total |
| **Previous Job #1** | Has the benefit | **45** | **16** | **33** | 6 | 100 |
| | Does not have the benefit | **13** | **54** | 30 | 4 | 100 |
| | Self employed | **16** | 21 | **61** | 2 | 100 |
| | Don't know | 20 | 26 | 31 | 23 | 100 |

# Between Jobs With and Without Paid Casual Leave

| | | Current Employment | | | | |
|---|---|---|---|---|---|---|
| | **Termination Notice** | Has the benefit | Does not have the benefit | Self employed | Don't know | Total |
| **Previous Job #1** | Has the benefit | **56** | **13** | **28** | 3 | 100 |
| | Does not have the benefit | **15** | **47** | 35 | 3 | 100 |
| | Self employed | **19** | 20 | **60** | 1 | 100 |
| | Don't know | 40 | 21 | 21 | 19 | 100 |

# Probability of Moving from Informal to Formal Job Correlated with Gender, Education, Reason for Leaving Job

| | (1) Contract | | (2) Notice | |
|---|---|---|---|---|
| Male | 0.105 | (0.052)** | -0.069 | (0.056) |
| Age | -0.003 | (0.003) | -0.001 | (0.002) |
| Some primary | -0.051 | (0.063) | 0.036 | (0.041) |
| Some secondary | -0.053 | (0.062) | 0.069 | (0.060) |
| Some high school | 0.070 | (0.095) | 0.227 | (0.096)** |
| High school | 0.083 | (0.104) | 0.030 | (0.072) |
| Bachelors and more | 0.096 | (0.100) | 0.247 | (0.114)** |
| Experience | 0.003 | (0.005) | 0.003 | (0.004) |
| Found Preferred Job | 0.079 | (0.036)** | 0.019 | (0.044) |
| Formal Job Search | 0.072 | (0.048) | -0.033 | (0.067) |
| Observations | 381 | | 288 | |

se in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

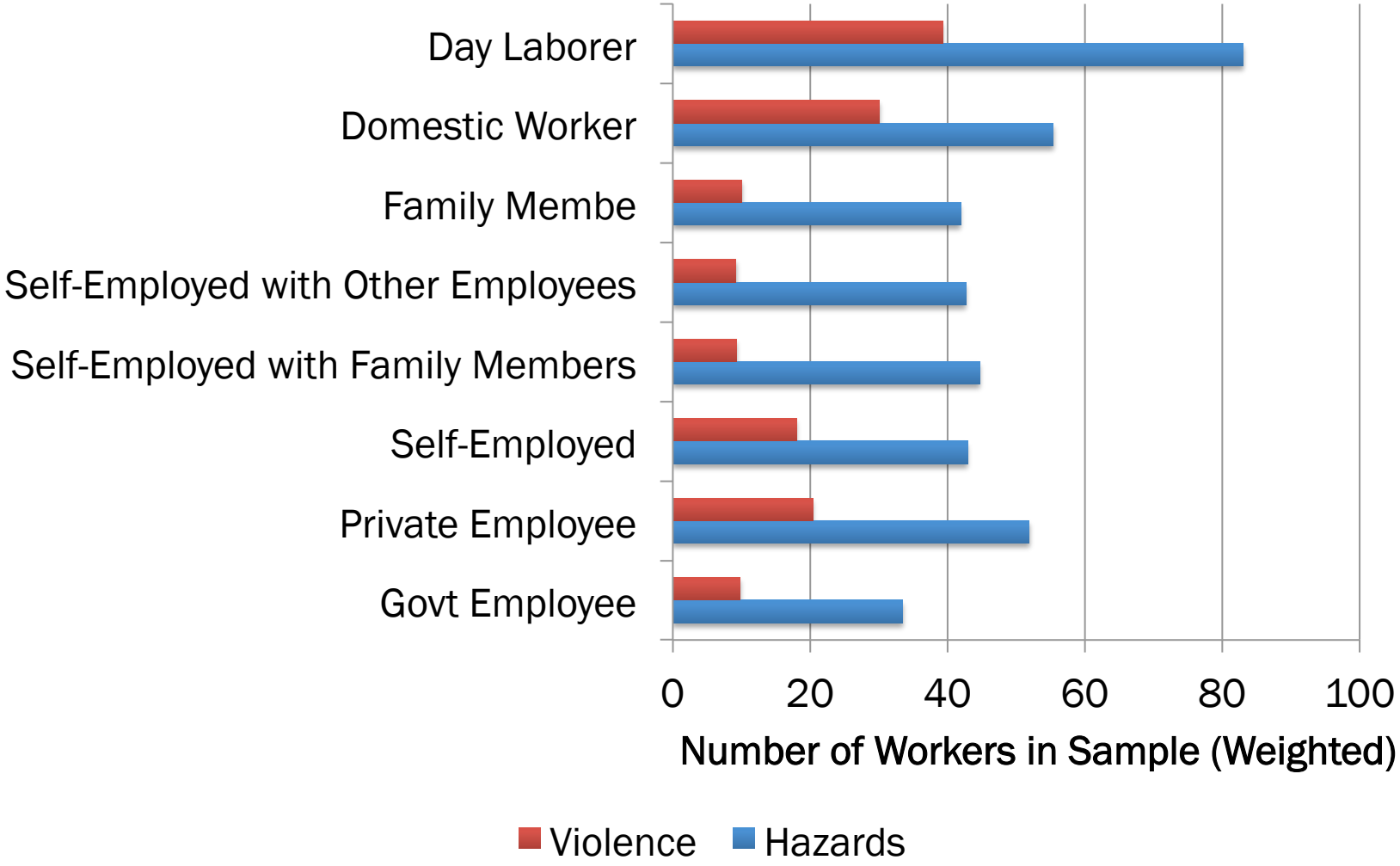
# As is the Probability of Moving from Formal to Informal Job

| | (1) Contract | | (2) Notice | |
|---|---|---|---|---|
| Male | -0.135 | (0.060)** | -0.026 | (0.045) |
| Age | 0.000 | (0.002) | 0.006 | (0.002)*** |
| Some primary | 0.051 | (0.031)* | 0.080 | (0.039)** |
| Some secondary | 0.079 | (0.043)* | 0.031 | (0.032) |
| Some high school | 0.107 | (0.070) | 0.131 | (0.056)** |
| High school | 0.285 | (0.148)* | 0.307 | (0.122)** |
| Bachelors and more | 0.000 | (.) | 0.161 | (0.066)** |
| experiencecj | 0.003 | (0.004) | -0.009 | (0.004)** |
| Found Preferred Job | -0.092 | (0.048)* | -0.060 | (0.036)* |
| Formal Job Search | 0.000 | (.) | -0.016 | (0.049) |
| Observations | 149 | | 230 | |

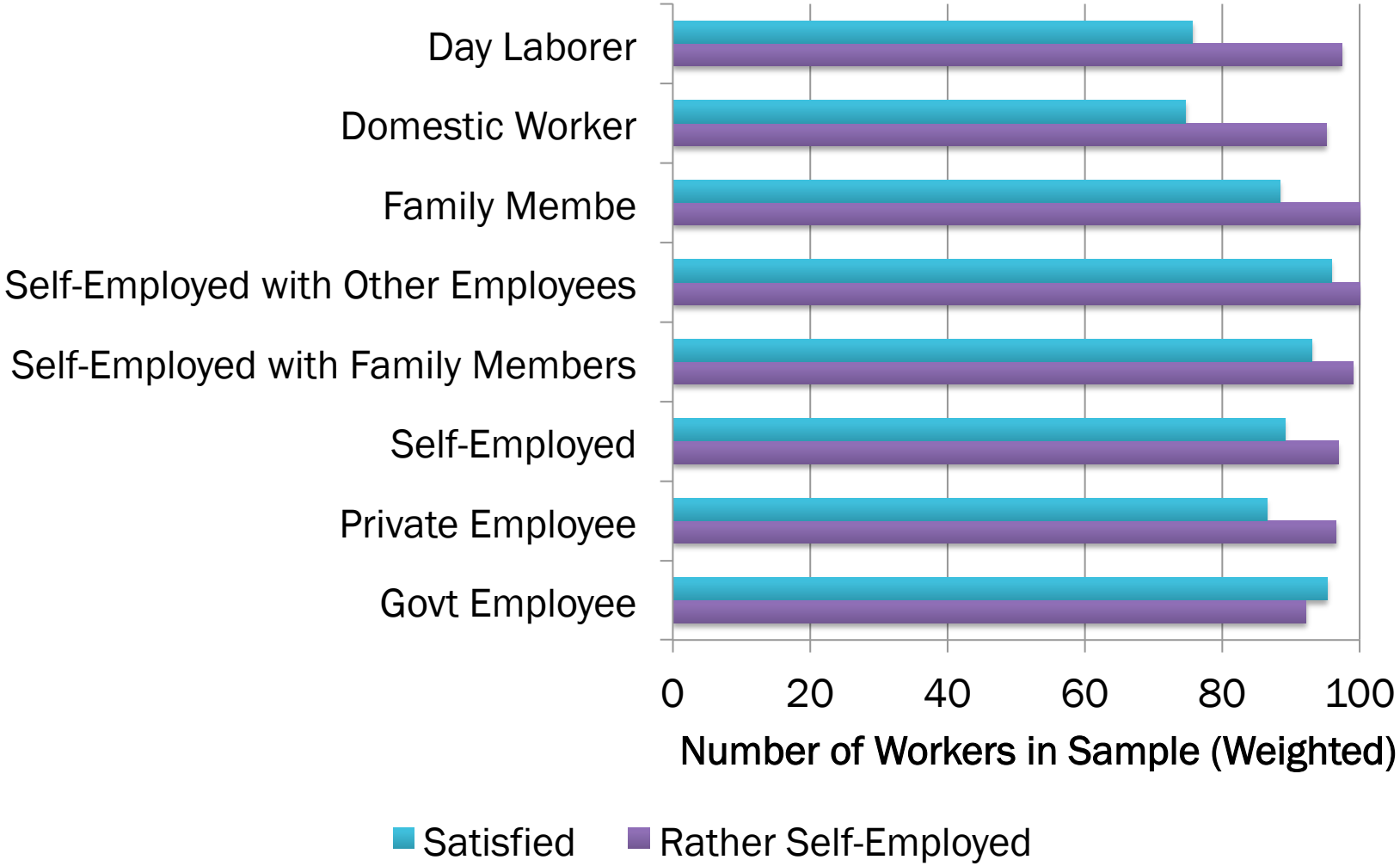
se in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

# Day Laborers, Domestic Workers Are Most Likely to be Exposed to Hazards and Violence



# They are Also Least Likely to Report Being Satisfied




Note: sampling weights are applied.

# Choice Experiment - Background

- SP method for eliciting preferences for specific *attributes*
- Frames individual's choice among alternatives in terms of random utility maximization (RUM)
- Individual chooses most preferred alternative based on its attributes and the "price" associated with the choice – in this case the wage

# Random Utility Maximization

Utility from job *j* depends on its attributes $x_j$ and wage $w_j$:

$$U_j = v(x_j, w_j; \beta) + \varepsilon_j$$

Probability the individual selects job *i* from choice set *C* is:

$$Pr(i|C) = Pr(U_i > U_j) = \Pr(v_i + \varepsilon_i > v_j + \varepsilon_j) = \Pr(v_i - v_j > \varepsilon_j - \varepsilon_i), \forall j \in C$$

If utility is linear-in-parameters and $\varepsilon_i$ are distributed Type I Extreme Value:

$$Pr(i|C) = \frac{\exp\left(\sum_{k=1}^{l} \beta_k x_{ik} + \beta_w w_i\right)}{\sum_{j \in C} \exp\left(\sum_{k=1}^{l} \beta_k x_{jk} + \beta_w w_j\right)}$$

# Random Utility Maximization

- We can then estimate the parameters on each attribute and on wages using a conditional logit model
- Marginal rate of substitution between any two attributes is given by:

$$MRS_{km} = \frac{\frac{\partial U}{\partial x_k}}{\frac{\partial U}{\partial x_m}} = \frac{\beta_k}{\beta_m}$$

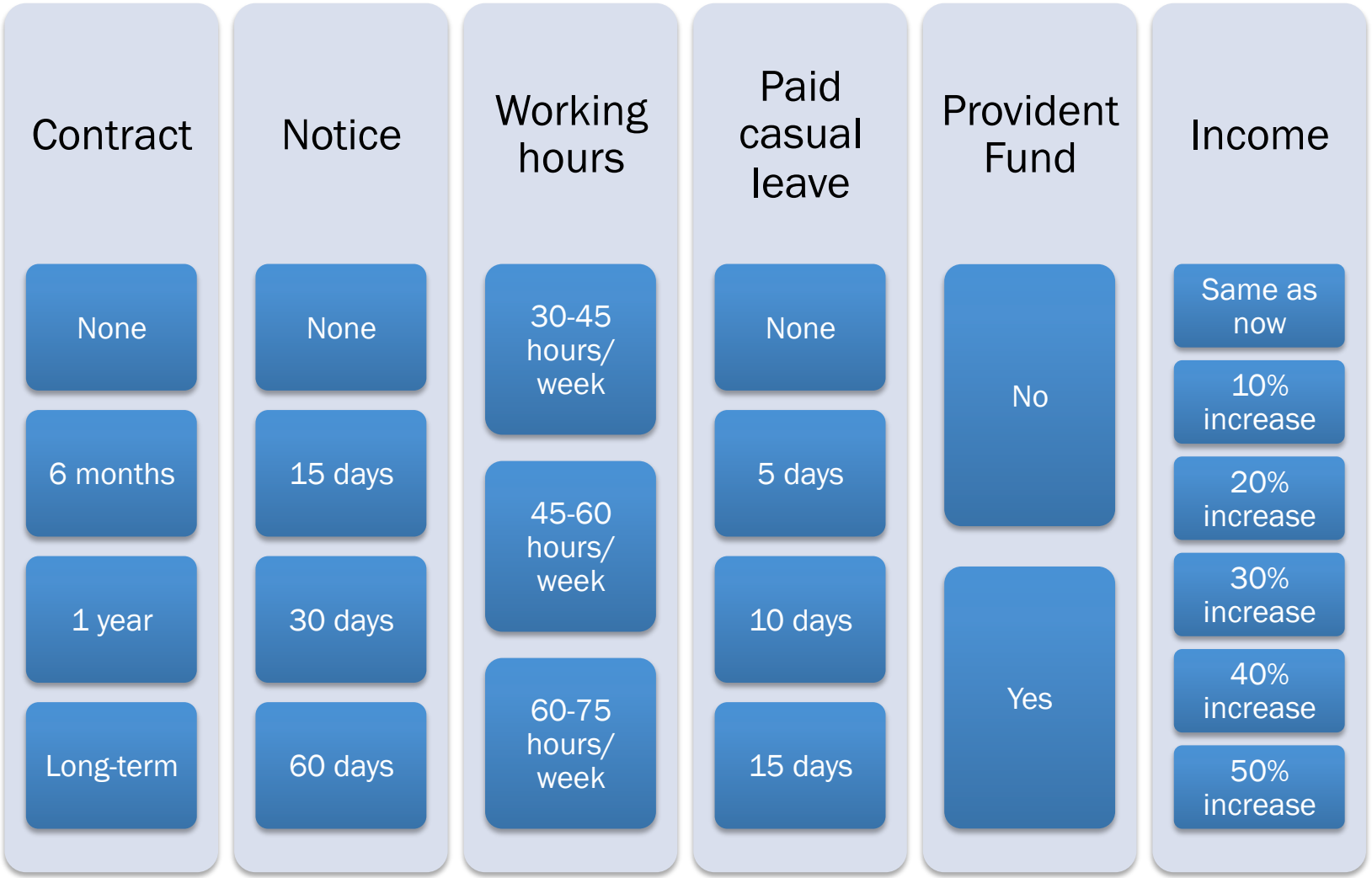
- If attribute *m* is price or wage, then the MRS can be interpreted as the marginal *value* of a one-unit increase in the attribute

# Choice Experiment - Example

If you were given the opportunity to choose between these two different jobs that differ in the levels of some or all benefit types, which job would you choose?

| | JOB A | JOB B |
|---|---|---|
| Written Contract | 3 months | 1 year |
| Termination Notice | 15 days | 15 days |
| Working hours | 30-40 hours per week | 40-50 hours per week |
| Amount of paid leave (not including major government holidays / festival leave) | 14 days | 14 days |
| Provident Fund | Yes | No |
| Monthly salary | 20% higher than your current monthly income from main economic activity | 10% higher than your current monthly income from main economic activity |

# Attributes and Levels



# Baseline Results Show Contracts and Provident Fund Most Valued

| | Coefficient | Std. Error | Marginal value in terms of % income ($\beta_k/\beta_w$) |
|---|---|---|---|
| Contract - 6 months | 0.95 | (0.051)*** | 19.1 |
| Contract - 1 year | 1.31 | (0.055)*** | 26.4 |
| Contract - long-term | 2.12 | (0.086)*** | 42.8 |
| Notice (days) | 0.02 | (0.001)*** | 0.4 |
| Hours (median) | -0.02 | (0.001)*** | -0.5 |
| Leave (days) | 0.03 | (0.002)*** | 0.5 |
| Provident Fund (Yes) | 0.87 | (0.052)*** | 17.5 |
| Percent change in income | 0.05 | (0.002)*** | 1.0 |

# And Valuations Similar Across Gender and Type of Employment

| | Men | Women | Self-Employed, Family Members | Private Employees | Day Laborers, Domestic Workers |
|---|---|---|---|---|---|
| Contract - 6 months | 18.8 | 19.7 | 19.8 | 18.7 | 15.6 |
| Contract - 1 year | 27.2 | 24.5 | 25.1 | 26.7 | 23.4 |
| Contract - long-term | 43.8 | 40.7 | 41.7 | 41.7 | 39.0 |
| Notice (days) | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Hours (median) | -0.4 | -0.6 | -0.4 | -0.4 | -0.5 |
| Leave (days) | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 |
| Provident Fund (Yes) | 18.1 | 16.1 | 17.4 | 18.4 | 16.0 |
| % change in income | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |

# Discussion and Next Steps

- We find active transition across different employment types and benefits
- Employees value contracts and retirement plans
- Will more fully exploit rich survey data we have collected
  - For example, how do perceptions of working conditions depend on job history and other characteristics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