# COVID 19, Social Protection and Women's Work

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# Covid 19: Supply & demand shock

- India witnessed strictest nation wide lockdown from 24 March 2020
- Non-essential manufacturing/services discontinued
  $\Rightarrow$ reverse migration $\Rightarrow$ increased labor supply in rural economy $\Rightarrow$ increased burden on existing resources
- Rural women more vulnerable
  - Face higher competition from more skilled returning back migrants
  - Larger household size, loss of remittances from urban areas
  - Higher burden of hh chores
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# Motivation: Public work programs to mitigate crisis

- 1. MGNREGA (2005) – pan rural India 100 days of work per household
  - 1/3 of provision for women Distribution
  - enhanced women's agency in rural India (Sangwan and Kumar (2021), Maity (2019), Zimmermann (2012), Rodriguez(2022))
- 2. GKRA (20 June 2020) – introduced in 116 districts with 25,000 and more returnee migrant workers to provide 125 days of employment Distribution
  - provision of 25 works under 12 different departments/ministries worth Rs 50,000 crores
- Inadequate measures
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  - Overall catered to 2/3$^{rd}$ of returnee migrants

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# Research questions

- Did MGNREGA safeguard women's employment in face of higher competition due to reverse migration?
- Did GKRA complement MGNREGA in this regard?

# Estimating equation

Baseline specification:

$$Y_{dt} = \beta_0 + \boldsymbol{\beta_1} Post_t + D_d + \epsilon_{dt} \quad (1)$$

For GKRA subsample:

$$Y_{dt} = \beta_0 + \beta_1 Post_t + \boldsymbol{\beta_2} Post_t \times GKRA_d + D_d + \epsilon_{dt} \quad (2)$$

- Counterfactual eq(2)=average personday in non-GKRA neighbors
- Robust clustered standard errors at district level

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# Fall in women's share post pandemic

Table: Role of reservation for women in NREGA persondays

| Category | Overall (1) | Below bound (2) | Above bound (3) |
|---|---|---|---|
| **Panel A: Persondays** | | | |
| POST | 0.262*** | 0.427*** | 0.234*** |
| | (0.058) | (0.122) | (0.065) |
| Observations | 1,138 | 166 | 972 |
| R-squared | 0.983 | 0.980 | 0.983 |
| Mean Y | 4.34 | 3.15 | 4.54 |
| District FE | ✓ | ✓ | ✓ |
| **Panel B: Share of women** | | | |
| POST | -0.002** | 0.007** | -0.004*** |
| | (0.001) | (0.003) | (0.001) |
| Observations | 1,136 | 166 | 970 |
| R-squared | 0.993 | 0.939 | 0.992 |
| Mean Y | 0.49 | 0.27 | 0.53 |
| District FE | ✓ | ✓ | ✓ |

*Note:* Panel A reports the estimates for NREGA persondays (per rural inhabitant) and Panel B reports the share of women persondays. Column (1) has the 'Overall' estimates for the full sample and its bifurcation into 'Below' and 'Above' the 33.33% reservation cut-off for women are in Columns (2) and (3), respectively. This classification is based on the pre-pandemic (2019) share of women in a district. 'Mean Y' denotes the mean value of the dependent variable. All specifications have district fixed effects. Standard errors clustered at District level are reported in parentheses

# GKRA *somewhat complemented* MGNREGA

Table: Role of GKRA

| VARIABLES | Person days | | Share of women | |
|---|---|---|---|---|
| | All States (1) | GKRA States (2) | All States (3) | GKRA States (4) |
| POST * GKRA | 0.320** | 0.197 | -0.003 | 0.000 |
| | (0.148) | (0.134) | (0.004) | (0.004) |
| Observations | 352 | 220 | 352 | 220 |
| R-squared | 0.714 | 0.758 | 0.880 | 0.904 |
| Mean Y (GKRA) | 3.88 | 3.38 | 0.49 | 0.46 |
| Mean Y (Non-GKRA) | 3.54 | 3.31 | 0.44 | 0.42 |
| District FE | ✓ | ✓ | ✓ | ✓ |
| Year FE | ✓ | ✓ | ✓ | ✓ |

*Note:* Columns (1)-(2) report the estimates for NREGA persondays (per rural inhabitant) and Columns (3)-(4) report the share of women persondays. In Columns (1) and (3), the counter-factual of GKRA districts is constructed by taking an average of the dependent variables across all of it's non-GKRA neighbouring districts (irrespective of the State of the district). In Columns (2) and (4), the construction of the counter-factual is restricted to the non-GKRA neighbouring districts within the State of the GKRA district. 'Mean Y (GKRA)' denotes the mean value of the dependent variable in GKRA districts while 'Mean Y (Non-GKRA)' denotes it for the counter-factual. All specifications have district and year fixed effects. Standard errors clustered at District level are reported in parentheses (*** $p<0.01$, ** $p<0.05$, * $p<0.1$).

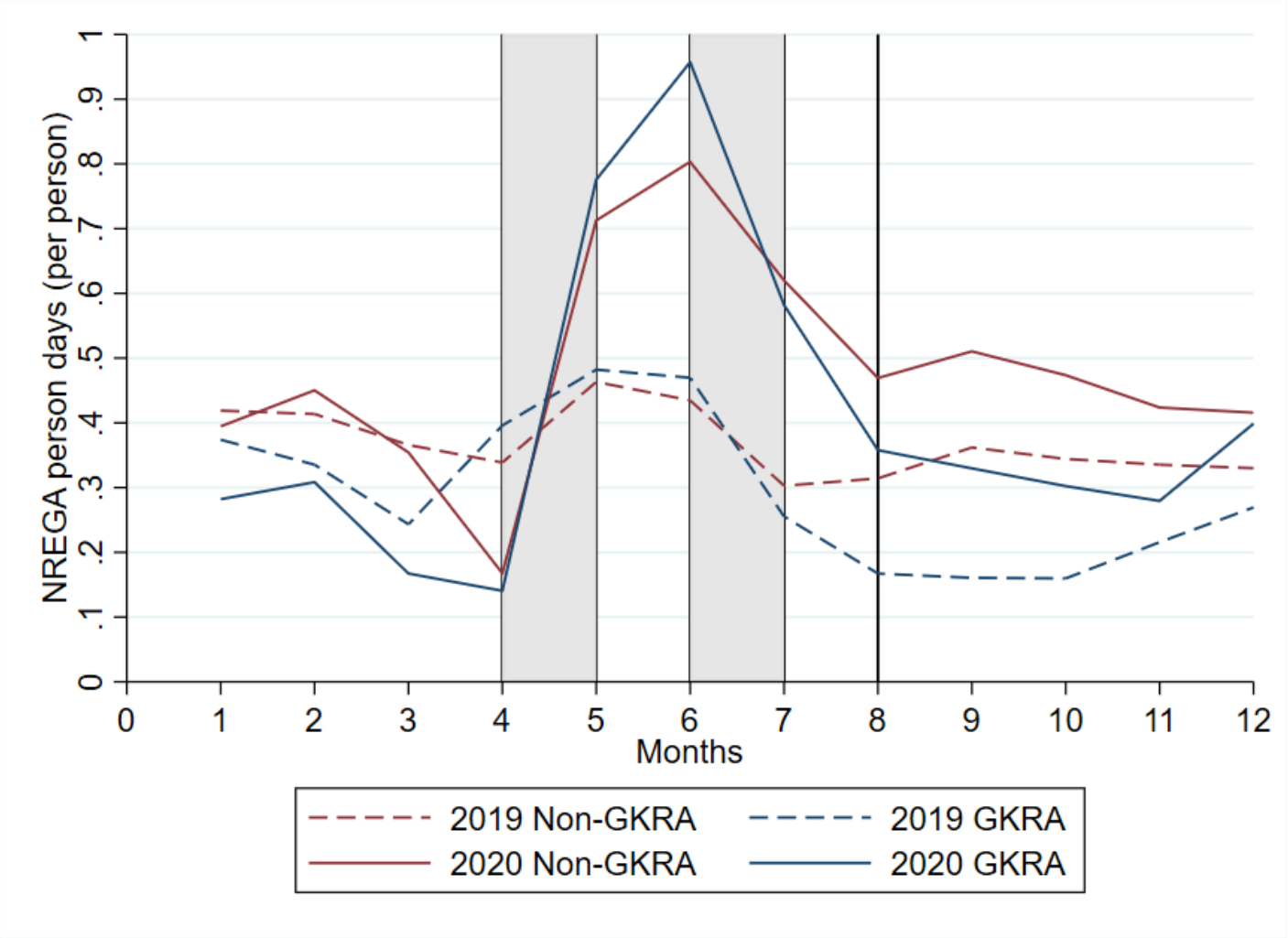
# ...but not in preserving women's share

Table: Share of women in NREGA by GKRA and NREGA reservation

| | GKRA | | Non-GKRA | |
|---|---|---|---|---|
| NREGA reservation | Below bound (1) | Above bound (2) | Below bound (3) | Above bound (4) |
| POST | 0.016* | -0.012*** | 0.006 | -0.002 |
| | (0.008) | (0.003) | (0.004) | (0.001) |
| Observations | 20 | 200 | 146 | 770 |
| R-squared | 0.929 | 0.986 | 0.937 | 0.993 |
| Mean Y | 0.3 | 0.51 | 0.26 | 0.53 |
| District FE | ✓ | ✓ | ✓ | ✓ |

*Note:* The dependent variable is the share of women in the NREGA persondays. Columns (1)-(2) report the estimates for GKRA districts while Columns (3)-(4) have the Non-GKRA districts. The districts are split by the pre-pandemic (2019) share of women in NREGA persondays into - 'Below' and 'Above' the 33.33% mandated reservation. Columns (1) and (3) have the estimates for the districts that were below this threshold while Columns (2) and (4) are for above this cut-off. 'Mean Y' denotes the mean value of the dependent variable. All specifications have district fixed effects. Standard errors clustered at District level are reported in parentheses (*** $p<0.01$, ** $p<0.05$, * $p<0.1$).

# Seasonality in MGNREGA



# Refined equation

$$\mathsf{Y}_{mdt} = \alpha + \beta_0 Post_t + \beta_1 Post_t \times Pandemic_m + \beta_2 Post_t \times Pandemic_m \times GKRA_d + DFE + MFE + \epsilon_{mdt}$$

- $Post_t$=1 for 2020, 0 for 2019; $Pandemic_m$=1 for April to December 2020, 0 otherwise
- $GKRA_d$=1 if district had GKRA scheme, 0 otherwise
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# GKRA **complemented** MGNREGA

Table: Impact of GKRA on NREGA persondays (per rural inhabitant)

| | (1) | (2) | (3) |
|---|---|---|---|
| 2020 | -0.013 | -0.001 | -0.001 |
| | (0.015) | (0.017) | (0.017) |
| 2020 $\times pandemic$ | 0.170*** | 0.155*** | |
| | (0.014) | (0.016) | |
| 2020 $\times pandemic \times GKRA$ | | 0.082** | |
| | | (0.034) | |
| 2020 $\times Apr$ | | | -0.171*** |
| | | | (0.019) |
| 2020 $\times Apr \times GKRA$ | | | -0.019 |
| | | | (0.030) |
| 2020 $\times May$ | | | 0.249*** |
| | | | (0.026) |
| 2020 $\times May \times GKRA$ | | | 0.110*** |
| | | | (0.042) |
| 2020 $\times Jun\_Aug$ | | | 0.282*** |
| | | | (0.024) |
| 2020 $\times Jun\_Aug \times GKRA$ | | | 0.118** |
| | | | (0.054) |
| 2020 $\times Sep\_Dec$ | | | 0.117*** |
| | | | (0.023) |
| 2020 $\times Sep\_Dec \times GKRA$ | | | 0.074* |
| | | | (0.038) |
| Observations | 13,850 | 13,850 | 13,850 |
| R-squared | 0.583 | 0.583 | 0.593 |
| District FE | ✓ | ✓ | ✓ |
| Month FE | ✓ | ✓ | ✓ |

# Extensions & Validation checks

- Using CPHS data:
  - Women's (conditional) probability of employment ↓ significantly during pandemic, *irrespective of GKRA*
    - Similarly for conditional casual employment
    - *but*, probability is ↑ in below bound districts

- No such negative results for conditional probability of employment of men
- Similar results with hh/individual fixed effects or unconditional estimates

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# Summary

- Dependence on public employment programs as fall back option evident
- Women more vulnerable to employment shocks
- MGNREGA reservation for women had a positive association with preserving women employment
- GKRA complemented MGNREGA but not women employment
  - *targeted support required for preserving FLFP*
- Severe hh level welfare implications

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THANK YOU

# MGNREGA distribution by "mandated provision" in 2019

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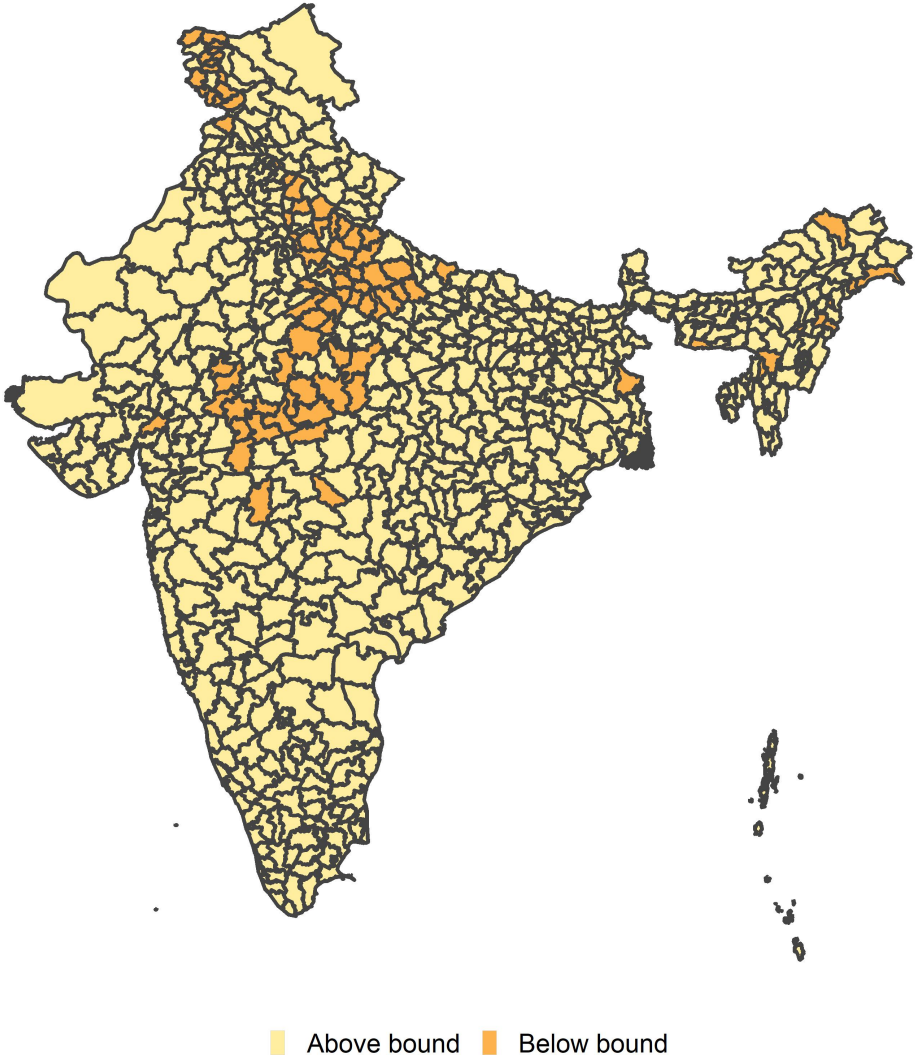

# GKRA distribution

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