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► Rural women's transitions in and out of employment in India since COVID-19

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▶ Abstract

This brief discusses the transitions of rural women in and out of employment since the start of the global pandemic in response to changes in the household due to the COVID-19 crisis. We postulate that these household changes, i.e. loss of employment by other household members, increase in household size, and increase in unpaid care work, affected women's exit and entry into employment. The key findings highlight the complex coping strategies at the household level where women's work – paid and unpaid – plays a critical role. This brief summarizes the paper Bárçia de Mattos, Fernanda; Dasgupta, Sukti; Esquivel, Valeria; and Ghani, Sajid (2023), "Push and Pull Factors and Women's Rural Employment in India since Covid-19," *Review of Agrarian Studies*, vol. 12, no. 2.¹

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¹ Available at <http://ras.org.in/0c943c2aee6fa4fba787697314cd23e>.

1. Introduction²

The COVID-19 pandemic had devastating impacts on the world of work, with unprecedented job and income losses globally, hitting women the hardest (ILO 2020; 2021). In India, the negative impacts on women workers were particularly harsh, as they added to their already adverse labour market situation with low and declining employment-to-population ratio, particularly in rural areas (Deshpande and Kabeer 2021; Kapsos, Silberman, and Bourmpoula 2014; Chaudhary and Verick 2014). This has been attributed to the lack of job opportunities for women along with their expected role as primary care givers. The COVID-19-induced labour market crisis further compounded this trend.

As job losses increased sharply, along with a rise in those seeking work (particularly in rural areas due to return migration³), women – who were more likely to be engaged in low-paid and unstable work – were more likely to be crowded out of the labour market. Deshpande (2021) notes that women's employment fell to 61 per cent of pre-lockdown levels in 2020, compared to 71 per cent for men. Abraham, Basole, and Kesar (2022) find that women were seven times more likely to lose work during the nation-wide lockdown in 2020. At the same time, greater demand for unpaid care work (UCW), with business and school closures and return migration, impacted women relatively more than men, and may have decreased their availability for employment. Available evidence shows that, on average, women in India spent more than double the time in care work than men did (around 4.5 hours, compared to the 2 hours for men).⁴ Moreover, while men spent additional time in UCW at the beginning of the COVID-19 crisis, the trend had reversed by August 2020, and by December the gender gap in time spent on unpaid household work was larger than in the same period the previous year (Deshpande 2021; 2020a). On the other hand, as household incomes declined, and men lost their jobs, distress and survival strategies could have led women's labour supply and employment to rise.

This brief builds on the work done by Deshpande (2021; 2020a; 2020b) Abraham, Basole, and Kesar (2022; 2021), and others, in an attempt to understand the labour market dynamics for rural women, particularly their transitions into and out of employment in response to the COVID-19 labour market shock.

2. Methodological approach⁵

To understand how rural women's labour market engagement responded to the sanitary and economic crisis triggered by the COVID-19 pandemic, our analysis focuses on the movement of persons of working age in and out of employment. Rural women's employment transitions are analysed in comparison to urban women as well as to rural and urban men.

We first directly estimate the impacts of COVID-19 as a shock on women's entry and exit using a difference-in-difference estimator. We utilize the Stringency Index from the Oxford Coronavirus Government Response Tracker (OxCGRT)⁶ to construct a continuous treatment variable which allows us to test the variable effects of COVID-19 on women's employment transitions. All other data come from the Centre for Monitoring the Indian Economy's (CMIE) Consumer Pyramids Household Survey (CPHS).

We then examine the role of different factors in determining entry and exit from employment. More specifically, we seek to explore the impact of COVID-19 on rural women's employment through specific channels, which women in focus group discussions indicated as key changes that they experienced at the household level during the COVID-19 crisis.⁷ We postulate that these channels, i.e. loss of employment by other household members, increase in household size due to return migration, and increase in unpaid care work, affected women's exit from and entry into employment. We do not test for other possible effects of COVID-19, such as losses in income due to reduced hours, nor do we identify other channels that could have impacted employment in the short run (for example, sickness of household members).

We hypothesized that (i) the loss of employment of another household member is positively linked to women's employment, therefore positively associated with entry and negatively associated with exit, and (ii) increases in unpaid care work time are negatively linked to women's employment, therefore negatively associated with entry and positively

² The views expressed in this brief are those of the authors and do not necessarily represent the views of the ILO.

³ Mamgain (2021) notes that between April 2019 and May 2020, when stringent lockdown measures were in place, the rural share of total employment increased from 68.2 per cent to 70.5 per cent.

⁴ Figures calculated from time-use data collected by the Centre for Monitoring the Indian Economy (CMIE) between late 2019 and mid-2022.

⁵ For detailed information on the methodological approach, see original paper.

⁶ Available here: <https://ourworldindata.org/covid-stringency-index>.

⁷ We use a mixed-methods approach to explore the impact of COVID-19 on women's employment. In partnership with the Foundation for Agrarian Studies, four focus groups discussions with a total of 39 women were conducted in selected rural areas in Karnataka and Tamil Nadu.

associated to exit. Finally, the expected impact of return migration (proxied by an increase in the number of household members of working age) is two-fold, with unclear net results for women’s employment: the greater the number of household members, the greater the income needs which could push women towards employment; but a larger household can also be associated with greater UCW needs, which tend to fall disproportionately on women, thus curbing the time available to engage in economic activities.

To investigate the presence of the added-worker effect and the relationship between UCW and women’s engagement in employment, we run a two-way fixed effects (TWFE) specification. Robustness is assessed through an Arellano-Bond Generalized Method of Moments (AB GMM) estimator to account for endogeneity issues and incorporate dynamic effects between our main variables of interest. The key findings highlight the complex coping strategies at the household level where women’s work – paid and unpaid – play a critical role.

3. The impact of COVID-19 as a shock on women’s employment

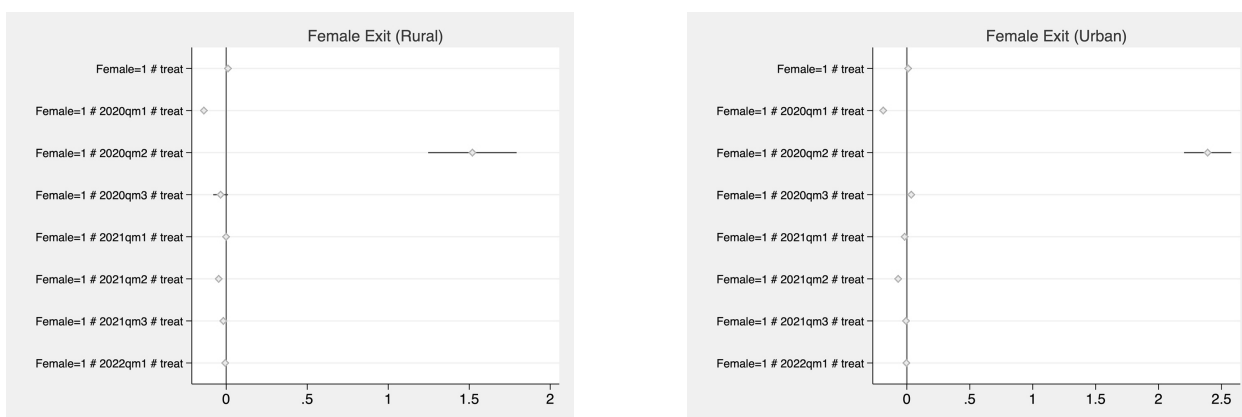
Our difference-in-difference analysis (figure 1) suggests that there was a noticeable increase in the rate of exit in May-Aug (QM2) 2020, capturing the most stringent lockdown period (May-June), when many workers were unable to remain in employment. The effect is stronger for women in urban areas, which could be tied to stricter (*de facto* and *de jure*) confinement regulations compared to rural areas, where agriculture and allied activities were permitted to continue during the lockdown while industry and services came to a halt. There was also a sharp increase in the rate of entry during May-Aug 2020, in both rural and urban areas, however, the effects are stronger on exit than entry in this period, resulting in a likely aggregate contraction of employment.

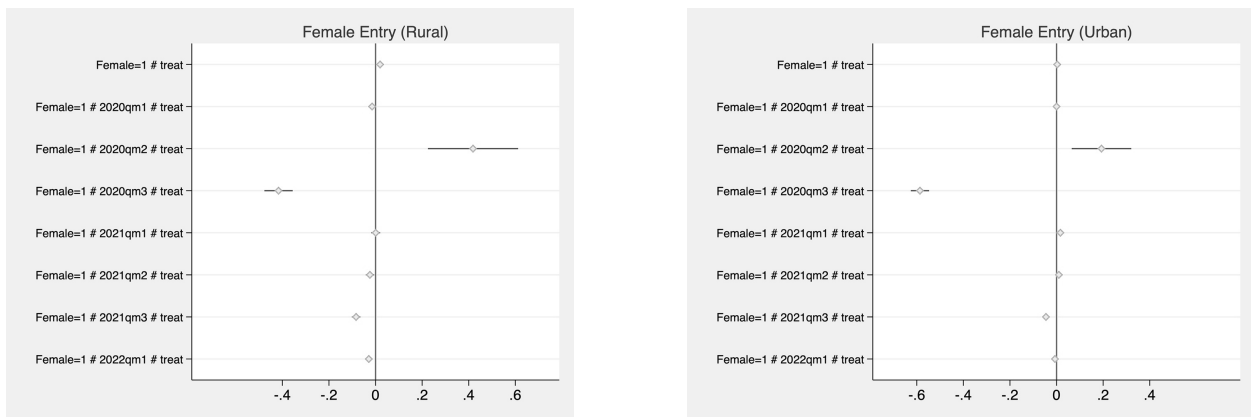
These increases in the rate of entry are followed by a sharp decrease in Sept-Dec 2020, the subsequent quadrimester (QM3). This hints towards an increase in the variability of entry and exit into employment, exacerbated by lingering (and rapidly shifting) lockdown measures. The effect is again stronger for urban areas.

The new lockdowns in May-Aug (QM2) 2021 are associated with a decrease in exit rates, but the effect is weaker compared to the lockdowns of 2020; while no significant effects could be identified for the rate of entry in that period. Rates of entry decreased in 2021 Sept-Dec (QM3) for both rural and urban women, but this effect has largely disappeared, as early as Jan-Apr (QM1) 2022.

Overall, the direct effects of COVID-19 observed in our difference-in-difference specification are significant on the rates of entry and exit, but short-lived, as they are barely observed after a quadrimester. Further decomposition of both time intervals (from four-month periods to months) and the Stringency Index (from states to districts) would be useful to advance our understanding of the impact of COVID-19 on employment entry and exit dynamics.

Figure 1. Difference-in-difference estimation results





4. Determinants of entry in and exit from employment and the effects of COVID-19

We use fixed effects to investigate women’s and men’s entry into and exit from employment. The first (second) column of tables 1 and 2 show the estimated impact of the four major explanatory variables, number of children, increase in unpaid care work, household distress, and increase in working-age household members on the entry of rural (urban) women and men into employment. Similarly, the third (fourth) column shows results on exit from employment. In all cases, we control for industry, type of occupation, wage levels and household income levels.⁸

For women, all four independent variables were statistically significant in the equations for entry into and exit from employment with the expected signs (table 1). Estimates for the entry and exit of rural and urban women show a positive relationship between loss of employment in the household and women’s entry into employment, supporting the added worker hypothesis.⁹ Results also confirm a negative relationship between exit and loss of employment by another member of the household. The coefficients for both entry and exit are greater for rural than urban women, suggesting that these effects are stronger among the former. Regarding care, estimates for increased time spent in UCW and for the number of young children in the household confirm a negative (positive) relationship between increases in the demand for care and women’s entry (exit), in line with our expectations. In both cases, the coefficients are greater (in absolute terms) for women in rural areas, indicating a stronger impact of changes in care time on women’s employment in rural areas relative to urban areas. Finally, we attempted to capture the effects of return migration to rural areas through an increase in the number of working-age household members. Results indicate that an increase in household members is positively linked to both entry into and exit from employment, but the much greater coefficients for entry suggest greater household income needs – the added worker effect once more – can outweigh the increase in demand for UCW.

The regression results for men (table 2) are starkly different from those for women. Estimates for men are suggestive of cultural norms which designate men as primary breadwinners and women as secondary workers. Loss of employment in the household and an increase in the number of working-age household members influence men’s entry into and exit from employment to a much higher degree than women’s. In rural areas, the number of children in the household is not significantly related to their entry into employment and it is only weakly significant to their exit. As for women, an increase in the time spent in unpaid care work was negatively associated with entry and positively linked with exit among men. The coefficients for men were much larger than for women, suggesting men’s entry and exit to and from employment are more sensitive to shifts in unpaid care work than women’s. An explanation for the differences in the sensitivity of women’s and men’s entry and exit to changes in UCW is that it results from their very different starting points, as women’s average hours of UCW are approximately double those of men. Increases of UCW over and above these levels seem to be more acceptable for women, who are expected to carry out the brunt of UCW irrespective of their employment status. This result is also in line with the finding pointed out in the literature that reservation wages are higher for women due to their

⁸ Additional regressions for entry and exit of women and men in households with young children are reported in the original paper.

⁹ Several studies have found that women’s labour supply is counter-cyclical and can be seen as a household insurance mechanism in developing countries. See for instance Dasgupta and Verick (2016) and Calero and Delautre (2023).

greater UCW responsibilities – in other words, that labour market conditions should change much more than for men's in order for them to engage in employment.

As noted earlier, to address endogeneity problems, we also estimated a dynamic panel generalised method of moments (AB GMM one-step) estimator.¹⁰ The dynamic panel regressions act as a robustness check to our results from the two-way fixed effects (TWFE) specifications. They confirm the significance of our main variables of interest, i.e. number of children, loss of employment in the household, number of household members, and increase in time spent on unpaid care work.

Table 1. All households for women and rural/urban areas

VARIABLES	(1)	(2)	(3)	(4)
	Entry	Entry	Exit	Exit
	Rural Female	Urban Female	Rural Female	Urban Female
No. of children in household	-0.00529*** (0.000470)	-0.00314*** (0.000262)	0.0124*** (0.000573)	0.00866*** (0.000384)
Increase in care time	-0.00745*** (0.000379)	-0.00525*** (0.000192)	0.0155*** (0.000532)	0.0123*** (0.000298)
Household employment shock	0.0816*** (0.00178)	0.0435*** (0.000966)	-0.0991*** (0.00182)	-0.0709*** (0.00119)
Household member increase	0.0113*** (0.000871)	0.00715*** (0.000514)	0.00379*** (0.00105)	0.00394*** (0.000682)
Constant	0.307*** (0.0211)	0.248*** (0.0488)	-0.123*** (0.0148)	-0.0331 (0.0387)
Observations	398,481	882,643	398,481	882,643
R-squared	0.274	0.305	0.141	0.092
Number of iid	94,982	179,890	94,982	179,890
Industry Controls	Yes	Yes	Yes	Yes
Nature of Occupation Controls	Yes	Yes	Yes	Yes
Wage Level Controls	Yes	Yes	Yes	Yes
Household Income Level Controls	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

¹⁰ See original paper for regression results and discussion.

Table 2. All households for men and rural/urban areas

VARIABLES	(1)	(2)	(3)	(4)
	Entry	Entry	Exit	Exit
	Rural Male	Urban Male	Rural Male	Urban Male
No. of children in household	0.000728 (0.000652)	0.00351*** (0.000494)	0.00101* (0.000583)	0.00143*** (0.000432)
Increase in care time	-0.0102*** (0.000555)	-0.0125*** (0.000364)	0.0234*** (0.000669)	0.0237*** (0.000440)
Household employment shock	0.194*** (0.00670)	0.152*** (0.00535)	-0.161*** (0.00499)	-0.163*** (0.00430)
Household member increase	0.0161*** (0.00123)	0.0181*** (0.000907)	0.00685*** (0.00113)	0.00955*** (0.000841)
Constant	0.140*** (0.00744)	0.148*** (0.0287)	-0.0287*** (0.00664)	0.0302 (0.0294)
Observations	462,646	1,011,556	462,646	1,011,556
R-squared	0.160	0.150	0.164	0.144
Number of iid	107,293	200,622	107,293	200,622
Industry Controls	Yes	Yes	Yes	Yes
Nature of Occupation Controls	Yes	Yes	Yes	Yes
Wage Level Controls	Yes	Yes	Yes	Yes
Household Income Level Controls	Yes	Yes	Yes	Yes

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5. Conclusion

To conclude, the paper used mixed-methods to probe rural women's employment transitions in response to the COVID-19 shock. The paper focuses on four channels identified in focus group discussions through which the COVID-19 crisis affected women's rural employment, namely loss of employment by a household member, addition to household size because of return migration, increase in unpaid care work, and the presence of children in the household. Combining findings from the focus groups with a review of literature, we hypothesized that (i) the loss of employment of a household member was positively linked to women's employment, therefore positively associated with entry and negatively associated with exit, and (ii) increases in unpaid care work time were negatively linked to women's employment, therefore negatively associated with entry and positively associated to exit.

Our findings support the hypothesis that the COVID-19 shock both pushed women into the labour market, the so-called added worker effect, and pulled them out, and these effects were stronger for rural women as compared to other categories of workers (urban women, and rural and urban men). The channels through which the COVID-19 crisis impacted these transitions into and out of employment for rural women (specifically losses in household employment, increases in unpaid care work, and an increase in household size as migrants returned from urban centres), however, are factors that influence rural women's employment status on a long-standing basis and continue to impact women's employment beyond the COVID-19 crisis. To address these issues in a systematic and comprehensive manner, targeted gender-responsive employment policies, along with investments in care, are required. Further research is needed to identify the probability of women with differing income levels exiting from employment and entering employment and to better understand the extent to which COVID-19-related short-term transitions have a longer-term impact on rural women's employment in India.

References

- Abraham, Rosa, Amit Basole, and Surbhi Kesar. 2021. 'Tracking Employment Trajectories In the Covid-19 Pandemic: Evidence from Indian Panel Data'. Working Paper 35. CSE Working Paper. Centre for Sustainable Employment, Azim Premji University.
- . 2022. 'Down and out? The Gendered Impact of the Covid-19 Pandemic on India's Labour Market'. *Economia Politica*, no. 39: 101–28.
- Calero, Carla, and Guillaume Delautre. 2023. 'Participation and Employment in Seven Developing Economies: An Age-Period- Cohort Analysis'. Geneva: ILO.
- Chaudhary, R., and S. Verick. 2014. 'Female Labour Force Participation in India and Beyond'. New Delhi: ILO.
- Dasgupta, Sukti, and S. Verick. 2016. *Transformation of Women at Work in Asia: An Unfinished Development Agenda*. Geneva and New Delhi: ILO & Sage.
- Deshpande, Ashwini. 2020a. 'The COVID-19 Pandemic and Gendered Division of Paid and Unpaid Work: Evidence from India'. Discussion Paper 13815. IZA DP. IZA.
- . 2020b. 'The Covid-19 Pandemic and Lockdown: First Effects on Gender Gaps in Employment and Domestic Work in India'. Discussion Paper 30. Discussion Paper Series in Economics. Ashoka University.
- . 2021. 'The Covid-19 Pandemic and Gendered Division of Paid Work, Domestic Chores and Leisure: Evidence from India's First Wave'. *Economia Politica*. <https://doi.org/10.1007/s40888-021-00235-7>.
- Deshpande, Ashwini, and Naila Kabeer. 2021. 'Norms That Matter, Exploring the Distribution of Women's Work between Income Generation, Expenditure-Saving and Unpaid Domestic Responsibilities in India'. Working Paper 070/2. WIDER Working Paper. Finland: UNU-WIDER.
- ILO. 2020. 'A Gender-Responsive Employment Recovery: Building Back Fairer'. ILO Policy Brief. Geneva: ILO. https://www.ilo.org/emppolicy/pubs/WCMS_751785/lang--en/index.htm.
- . 2021. 'An Uneven and Gender-Unequal COVID-19 Recovery: Update on Gender and Employment Trends 2021'. Policy Brief. Geneva: ILO. https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_824865.pdf.
- Kapsos, S., Silberman, and E. Bourmpoula. 2014. 'Why Is Female Labour Force Participation Declining so Sharply in India?' Research Paper 10. ILO Research Paper. Geneva: ILO.
- Mamgain, Rajendra P. 2021. 'Understanding Labour Market Disruptions and Job Losses amidst COVID-19'. *Journal of Social and Economic Development*.



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