

# Using online job portals to track the real-time impacts of COVID-19 in India



## In brief

- A real-time assessment of the impact of COVID-19 on the economy (and labour markets in particular) has been an important policy challenge, especially in low-income countries like India.
- We leverage real-time, high-frequency data on over 300,000 job postings from Shine.com, India's second largest online job portal, to investigate the impact of lockdowns on the labour market between March-May 2020.
- We find that total job postings declined by 60% by May 2020 (as compared to the pre-COVID levels), particularly in female-dominated occupations (more than 80%).
- Low-skilled workers and inexperienced young jobseekers looking to work in entry-level jobs were severely affected. Minimum experience and education required for a job increased and fraction of entry-level jobs fell by 40%.
- We highlight how online platforms (like Shine.com) can provide rich, real-time data that can help policymakers assess the impact of economic shocks and formulate appropriate policies responses to protect the most vulnerable groups.

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## Overview of the research

The COVID-19 pandemic continues to ravage the world, with more than 115 million confirmed cases worldwide, and over 2.5 million deaths (500,000 in the US alone) as of March 2021. Policy responses to slow the spread of the virus have ranged from sealing borders and restricting domestic travel, to implementing stay-at-home measures and large-scale lockdowns. The economic contraction associated with the pandemic has triggered rapid increases in job-losses with many companies and institutions implementing hiring freezes to account for a marked decline in business revenues. Real-time data that could help assess the impact of the lockdowns (and the pandemic more broadly) has been a consistent challenge for policymakers, especially in low-income countries such as India. In this research, we partner with India's second largest online job portal (Shine.com) to use real-time data on around 300,000 job postings between January-May 2020 and assess the impact of the COVID-19 lockdowns on the labour market. The richness of the data not only allows us to study whether certain types of jobs and jobseekers are more affected than others, but also whether the trends come from shifts in the types of jobs posted by firms, or the types of firms that choose to post.

Policy impact: With 58.5% of high school-educated workers employed in urban areas, and 38% of these workers in formal sector jobs, our research provides a new source of high-frequency data to credibly track the impacts of large economic shocks (like the COVID pandemic) in real-time, especially in developing countries.

## Policy motivation for research

In the Indian context, rising COVID cases in March 2020 were met with a series of (well-enforced) national lockdowns, which continued until July 2020. The Indian GDP contracted by 23% in the second quarter of 2020, and 9% overall during the year, its largest historical contraction since independence. Unlike developed high-income countries, real-time data to assess the impact of economic shocks has always been a challenge in India. Moreover, given the rapid and uncertain unfolding nature of the pandemic, real-time data of this nature are necessary to inform the design of new programmes and policies aimed at stimulating different sectors of the economy, and alleviating costs incurred disproportionately by certain groups of the population. Online jobs portals provide us with reliable, high-frequency data to be able to assess the economy in real time. While mostly focused on formal-sector jobs in urban areas, these portals can shed light on a significant share of the labour market (40-60% of the labour force), even if they do not shed light on how the informal sector or the rural economy responded to the pandemic.

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# Research findings

## 1. Large declines in job postings, especially in female-dominated occupations

The number of vacancies posted declined by 34% on average in the first four weeks following the lockdown and around 60% by May 2020 (Figure 1a). Moreover, the fraction of job postings in female dominated occupations and particularly for the top 10 percentile of female-dominated occupations, fell by 80% by the end of May (Figure 1b).

## 2. Low-skilled workers were affected more than high-skilled ones

By the end of May, the fraction of jobs requiring a graduate degree increased by 9.2%. This effect was driven both by the types of firms posting jobs, as well as the requirements demanded within firms and occupations (Figure 2a).

## 3. Large declines in entry-level job postings

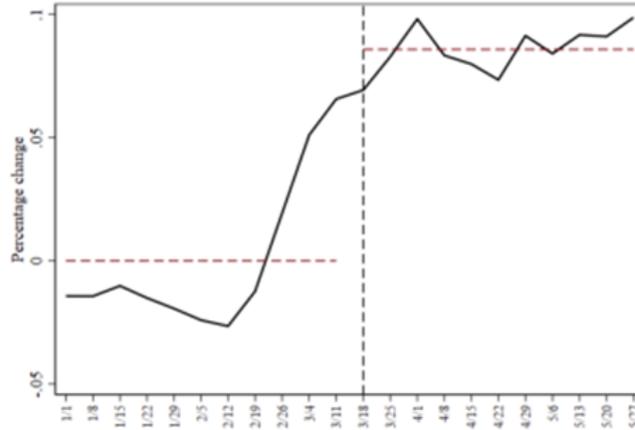
The minimum experience required for a job rose by 20%, and the fraction of entry-level jobs fell by 40% (see Figure 2b).

Figure 1. Impact on job postings

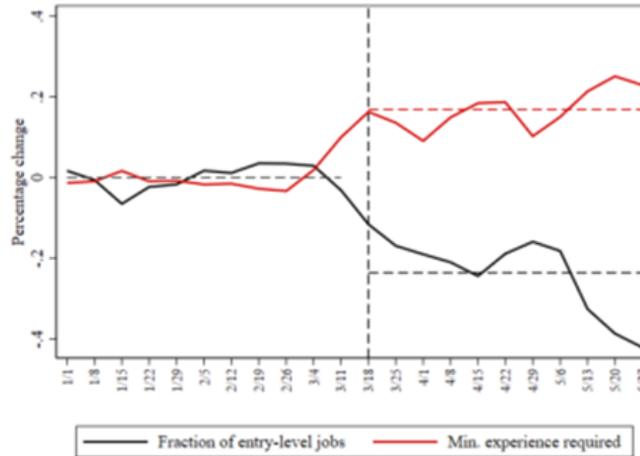


Figure 2. Impact on education and experience requirements

(a) Minimum education requirements



(b) Experience requirements



Notes: Figure 1(a) plots the total number of vacancy postings for each week in 2020. Figure 1(b) plots the fraction of jobs in female-dominated occupations. Top 10% are the occupations with 90th percentile and above fraction of female workers, as reported in the PLFS while top 50% are the occupations with above-median female workers. Figure 2a plots a two-week moving average of the minimum education requirement for a job. Figure 2b plots the minimum experience required and the fraction of entry-level jobs. The variables are normalized to have zero mean in the pre-period. The dotted red lines are the averages in the pre and post period. India announced a Janata Curfew on 22nd March, followed by four lockdowns immediately after between 25/03-30/05.

## Policy recommendations

- *Utility of high-frequency data for monitoring the impact of economic shocks*

We contribute to these efforts by leveraging a new source of high frequency real-time data that tracks how thousands of companies and jobseekers across India responded to the COVID-19 pandemic. Policymakers could use the data to inform their decisions.

- *Economic impact and impact on women-dominated jobs*

In the Indian context, it is well documented that women already face greater barriers to entering and remaining in the labour market. The fact that young and female jobseekers in India may have been disproportionately affected by this labour market contraction highlights the importance of protecting the female jobseekers by providing them with adequate social safety nets.

- *Protecting the inexperienced young jobseekers and low-skilled workers*

Given that the number of entry-level jobs and those requiring less experience and education fell sharply, a greater share of young jobseekers may struggle to gain a foothold in the labour market. This confirms the results of prior studies that have shown that the long-term consequences of such economic shocks can be large and persistent for young and low-skilled workers. By exacerbating these trends, the lockdowns have reinforced – and potentially accelerated – the need to enact policies that protect existing employment opportunities and create new ones for youth.