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COVID-19 Pandemic and the Rising Gig Economy: An Emerging Perspective

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Abstract: The Gig economy refers to short term jobs, contract or freelance work and flexi timing jobs as opposed to traditional full-time labor, which has witnessed a rapid growth in the last decade across the globe. Digital platforms have largely developed a free market system where independent workers connect with the buyers of the services. The Platform or Gig economy has grown at a much faster pace than ever before from the onset of COVID-19 pandemic. Since the COVID-19 lockdown, the labor market has been affected in a drastic way and a trend towards short-term and temporary jobs has become commonplace. The Economic Survey, 2020-21 highlights the growing importance of Gig economy in India amid the pandemic-induced lockdown which has led to an immense growth in the online retail business. The employers began layoffs and instead engaged freelancers or flexi staff to bring down their overhead costs. Many studies have been conducted now on assessing the impact of the ongoing pandemic on the economy and stock markets, however, very few studies focus on the influence the pandemic had on the Gig economy. The present study attempts to fill this gap by evaluating the impact of COVID-19 on the Gig economy by assessing whether the increase in new COVID-19 cases lead to an increase in the number of gig workers in the Indian economy, or in other words, exerts a significant impact on the Indian gig economy or not.

Keywords: gig economy, COVID-19, online labor, platform economy, freelancing

JEL Code: O1, O2, A1

1. Introduction

The gig economy has witnessed a surge in recent years the world over, however, an exponential rise has been observed in this economy since the onset of the COVID-19 pandemic. The “gig economy” is characterized by freelancing work and refers to a work environment where temporary short-term contracts, and independent work assignments are common. The gig work is different from the traditional work in the sense that the jobs are temporary and short term in nature with flexible work timings. The gig economy operates through two models: the digital gig economy and the physical gig economy. The digital gig economy comprises online freelance labor or microtasks performed over the digital platform whereas the physical gig economy fulfills the demand by delivering the products physically

for the orders placed through Apps (Heeks, 2017). The International Labour Organization defines gig economy to be comprised of 2 kinds of jobs. Firstly, it includes gigs or small tasks conducted online globally ('crowdwork'). Secondly, it comprises of the services that are performed locally through websites and mobile applications. The gig economy has become very popular with the advent of platform-based companies like Uber (ridesharing), Swiggy (food delivery), and Urban Company (personal services). In this gig economy, the contracts are given to individuals to execute for companies that operate through platforms using the internet for the supply of labour fulfilling the demand for offering services (Tassinari & Maccarrone, 2020). Due to the emergence of these tech-based platform companies, the gig workforce comprises over 200 million people across the globe. Studies suggest that the labour participation in the gig economy is more in emerging economies (5-12 percent) compared to the developed countries (1-4 percent); a major part of gig work has been witnessed in lower-income jobs like food deliveries, personal services and ridesharing among others.

Since the onset of the COVID-19 pandemic, technology has replaced the way work is done. Due to COVID-19 lockdown measures, the participation in gig economy has increased due to consumers' reliance on gig workers for the delivery of daily necessities. Moreover, many people started gig jobs to serve as an additional source of income while for others it acted as a primary income source amid the tough COVID-19 crisis. Globally, USA (47%) dominates the demand for online work, the demand is uneven across countries during the pandemic. During the pandemic, the demand for online gig work increased in the UK, Australia, Canada, India and Germany, but decreased for USA. The gig work viz. creative and multimedia, clerical and data entry, and writing and translation accounted for the decline in USA. However, India and the UK witnessed an increase in online gig work, this was mainly in the software development and technology activities (Rani & Dhir, 2020). The online gig workers' number increased by 27% in March, 2021 over the previous year (see Figure 1, Data and methodology section). While many studies have assessed the impact of the COVID-19 pandemic on the stock markets and traditional economy, hardly any study has assessed the impact of the pandemic on the gig economy of India whose potential seems to be really exciting. The present study aims to fill this gap by studying the impact of COVID-19 on the Indian gig economy.

2. Review of literature

The wave of digitalization and technological innovations across the globe has led to an ever increasing participation in the platform economy. Due to the tremendous growth of the gig economy, it has gained huge momentum since 2010. This economy is characterized by digital platforms which connect the service providers or workers with the consumers to meet their demands. These digital or web-based platforms are believed to be disruptive, however, they do not create an entirely new work order nor do they completely disturb the prevailing pattern of employment relations (Collier et al., 2017). Some researchers have given their own classifications for the gig work done through these platforms. Woodcock and Graham (2020) classified gig work as geographically tethered work and cloud work. Geographically tethered work has been into existence for quite a long time requiring the labor to be present in a geographical location to perform the task. Berg et al. (2018) suggested a similar categorization of platform work of two types, the former comprised of web-based platforms and the latter the location-based platforms. The workers in this economy are assigned short-term jobs with the payments being done on per task basis (BEIS, 2018). Online web-based labor can be conducted in a remote manner with services like data entry, accounting, report writing and other professional services. However, some years of formal education and specific skills are required to render professional services online (Kässi & Lehdonvirta, 2018). Since the online labour can be performed remotely it offers employment for the workers of low income and developing economies who were otherwise inaccessible and deprived. Online digital platforms promote the North-South trade, having employers from high-income countries and the workforce from the low-income countries (Agrawal et al., 2013). The remote nature of gig work offers flexi timings for workers and a choice of work for labour otherwise constrained by social responsibilities, mobility issues and other barriers. The platform economy or freelancing economy or gig economy helps the workers enter the labour market and develop their skills while specializing in a specific job (Behrendt & Nguyen, 2018). The flexibility and freedom associated with the gig jobs however, come at a cost in terms of job security concerns (Coulter, 2019). Willma (2016) also suggested that this flexibility excludes the gig workers from being labelled as employees and thus deprives them of the social security and other employee benefits. Similar views are held by de Stefano (2015) and Graham and Anwar (2019).

The risks associated with the relationships in traditional employment due to COVID-19 pandemic push further the

organizations for expansion of gig workers post-pandemic to scale up and down the workforce as and when needed in business (Mahato et al., 2021). The impact of the pandemic will subsequently give companies a chance to hire workers for specific tasks they are good at without spending much on fixed amount salaries, giving rise to an increase in gig economy (Knowledge@Wharton, 2020). One of the significant impacts of a pandemic is a rise in employees working from home and also more firms outsourcing tasks to independent workers. CEO Kaufman of gig website Fiverr says, “As the COVID-19 pandemic has forced employers and workers to reexamine all aspects of the modern workplace and adopt new technologies to maintain pace from the comfort of home, skilled freelancers are at the forefront of this adoption curve” (Fiverr’s Third Annual Freelance, 2020).

Researchers have examined the impact of COVID-19 on stock markets and economies. Baker et al. (2020) suggest that the adverse effect of COVID-19 on stock markets is more adverse in comparison to the impact of earlier pandemics. However, Sansa (2020) found exactly the opposite in case of US and Chinese stock markets revealing a positive impact of the current pandemic. Mahendra Dev and Sengupta (2020) assess the effect of COVID-19 on the Indian economy suggesting the country may face an economic downturn due to lockdown, global recession and supply chain disruptions. A good number of studies have been conducted on the impact of the ongoing pandemic on financial markets and economies at the national and global level, however, hardly any empirical study examines the impact of COVID-19 on the emerging gig economy which is considered to be an important economic change of the previous decade and deserves much attention. This study aims to bridge this gap by focusing on the impact of COVID-19 on the Indian gig economy whose potential seems to be huge.

3. Theoretical framework

The COVID-19 pandemic affected life and work beyond expected levels. Not only has the way we live or work been affected but also the economy has been affected badly due to the pandemic. It was not only the stock markets and economic growth which got affected due to COVID-19 but also the informal economy involving the gig workers which include ‘people who use platforms like an application to do labor’ (Taylor et al., 2017; Wood et al., 2019)-platform workers. In the Gig economy workers perform jobs by either taking orders online and delivering physically (e.g. Uber), or performing jobs online without requiring physical presence (Huws et al., 2016). In India, the gig economy is growing tremendously. As per the ASSOCHAM estimates, the Indian platform or gig economy is estimated at \$250 billion projected to increase to \$455 billion by the year 2023. The Indian gig economy is projected to serve up to 90 million jobs in the non-farm sector alone with a potential to contribute almost 1.25 percent to the GDP of the country in the long run (Augustinraj & Bajaj, 2021). During the COVID-19 lockdown when people had to stay indoors, they would demand necessities to be delivered at their doorsteps which gives the platform workers promising earning opportunities despite the downturn in the economy. Due to the rapid expansion of COVID-19 pandemic globally, numerous issues have arisen like health problems, an increase in population growth and increased mobility (Nkengasong & Mankoula, 2020). In these unprecedented times, new business models could be developed to generate revenue by application of Industry 4.0 giving rise to digital businesses with hyper-personalization. Owing to this shift, many companies have reconsidered their functioning and thought to move to online mode from traditional offline mode, giving way to short-term online gig jobs to be performed over platforms. Healy et al. (2017) consider these platforms as applications which users download and use subsequently which gives rise to an innovative business concept depicting a triangular relationship where goods and services are exchanged between buyers and producers with a digital intermediary as facilitator (Stewart & Stanford, 2017).

Although a good number of studies have focused on the impact of the ongoing pandemic on stock markets and economies (for instance, see Baker et al., 2020; Sansa, 2020; Mahendra Dev & Sengupta, 2020), hardly any study focuses on whether the pandemic has significantly affected the Indian gig economy whose potential seems huge or not, despite the fact that the demand of online gig work increased in India amid the current pandemic. The present study makes a modest attempt to fill this gap using the data and methodology discussed in the following section.

4. Data and econometric methodology

The study employs secondary data collected from two sources. The data on the Indian gig economy is taken from the Online Labor Index (OLI) from the iLabour Project of Oxford University (Kässi & Lehtonvirta, 2018), therefore online gig workers is the dependent variable under the study. The proxy for COVID-19, the explanatory variable is new COVID-19 cases in India (Jeon & Ostrovsky, 2020) collected from 'Our World in Data' (<https://ourworldindata.org/coronavirus-data>). The daily time series data for both the variables ranges from 1st March, 2020 to 31st March, 2021.

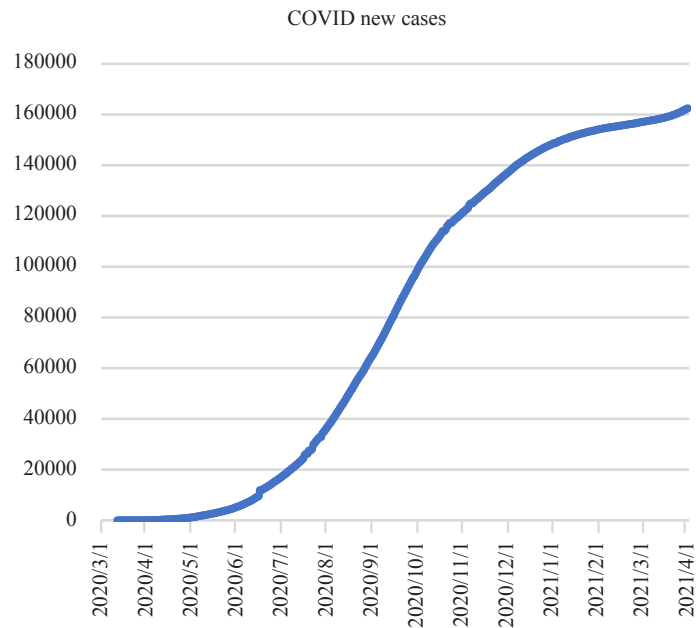


Figure 1. COVID new cases

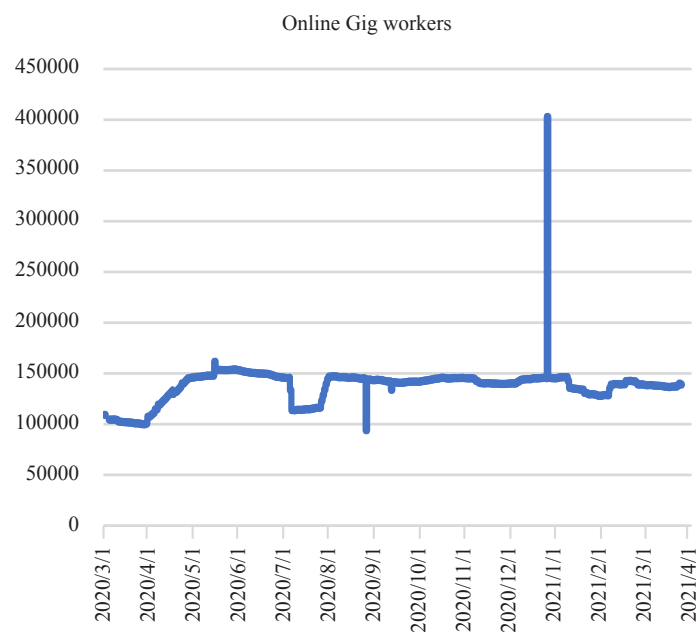


Figure 2. Online Gig workers

There has been a tremendous rise in new cases of COVID-19 in India from March, 2020 to March, 2021 as can be seen from Figure 1. Also, the online gig workers have shown an increase with some fluctuations during the same period (Figure 2), having increased from 109125 in March, 2020 to 138623 in March, 2021.

Firstly, the descriptive statistical analysis of the dependent variable i.e., online labour and explanatory variable i.e., new COVID-19 cases are conducted. The descriptive statistics describe the general behaviour of the data in terms of the mean and standard deviation of the variables under study. Then, the Pearson correlation analysis is performed to assess the linear relationship between the dependent and explanatory variables. The value of the coefficient of correlation varies between +1 and -1.

Before performing the econometric analysis, it is important to check the stationarity of data and for that the Unit Root Test is conducted. The Augmented Dickey-Fuller test (ADF) (Dickey & Fuller, 1979) is used for testing stationarity in time series data, that is, to check whether the data series contains a unit root or not. Based on the results obtained from the ADF unit root test, we conduct simple Ordinary Least Squares (OLS) regression to examine the impact of COVID-19 pandemic on the Indian gig economy, the hypothesis of which is as follows:

H_0 : COVID-19 pandemic has no significant impact on the Indian gig economy.

Lastly, we conduct the Granger causality test for determining the cause-effect relationship between the gig economy and COVID-19 pandemic taking their respective proxies. Bidirectional causality is tested with the following hypotheses:

H_1 : New COVID-19 cases do not granger cause gig economy.

H_2 : Gig economy does not granger cause new COVID-19 cases.

5. Results and discussion

First of all, we present the results of descriptive or summary statistical analysis in Table 1. The results reveal that the average number of online gig workers for the period 01/03/2020 to 31/03/2021 is 80080 with a standard deviation of 62999 approximately. The average new COVID-19 cases equals 137869 with a deviation of 19272 for the period under study.

Table 1. Summary statistics of dependent and independent variables

Variables	N	Mean	Std. Deviation
Online gig workers	386	80080	62999
New COVID-19 cases	386	137869	19272

Table 2. Pearson correlation matrix for GDPG and FDI

	Online gig workers	New COVID-19 cases
Online gig workers	1.000	-
New COVID-19 cases	0.5299	1.000

Next, we present the results of correlation analysis in Table 2. The results reveal a positive significant correlation

between COVID-19 and the gig economy with a correlation coefficient of 0.5299 at 1% level of significance. This indicates that there is a positive association between the COVID-19 cases and online gig workers in India.

The results of the Augmented Dickey-Fuller (ADF) unit root test are presented in Table 3 which reveals that the data series does not contain a unit root and is stationary at level. A data series is said to be stationary if the statistical properties in terms of mean and variance are constant over a period of time.

Table 3. ADF unit root test

Variables	Test statistics P-value Decision		
Online gig workers	-7.070	0.000*	Stationary at level
New COVID-19 cases	-16.237	0.000*	Stationary at level

Note: * denotes significance at 1% level.

Since the variables are integrated of the same order, that is, both the variables are stationary at level. On the basis of these results obtained from the Augmented Dickey Fuller (ADF) test, it is recommended to perform Ordinary Least Squares (OLS) regression to study the impact of COVID-19 on the gig economy of India. The results of simple OLS regression are presented in Table 4 revealing that the COVID-19 pandemic has a significant positive impact on the Indian gig economy rejecting the null hypothesis (H_0) of no significant impact. As per the regression results, for 1 unit increase in covid cases, the number of gig workers may increase by 0.022. This could be due to the lockdown imposed in the pandemic due to rising cases which has increased the demand of gig work to be performed through platforms where people sitting at home order all the necessities through various applications and more gig workers are needed to fulfil the orders placed online.

Table 4. OLS regression results

Dependent Variable, Online Gig workers	Coefficient	Std. Error	t-value	P-value	Sig.
New COVID-19 cases	0.0227	0.0018	12.15	0.000	*
Constant	11.604	0.0194	595.71	0.000	

Note: * denotes significance at 1% level.

To determine the causal nexus between the gig economy and the COVID-19 pandemic, we lastly conduct the granger causality test, the result of which revealed a significant bidirectional causal relationship between the COVID-19 pandemic and the gig economy (Table 5).

Table 5. Granger causality test

Hypotheses	Test statistics	P-value	Decision
New COVID-19 cases do not granger cause gig economy	7.746	0.021	Rejected
Gig economy does not granger cause new COVID-19 cases	6.624	0.036	Rejected

Our results strongly support that the pandemic has a positive impact on the gig economy of India as opposed

to its impact on the conventional economy. Also, a strong cause-effect relationship is found between the two, i.e., the COVID-19 pandemic and gig economy. Our results corroborate with the findings of Jeon and Ostrovsky (2020) which also found a significant positive impact of a pandemic on the online gig economy. It is, therefore, suggested to policymakers to take every step to support the gig economy and institute measures like offering job security to these gig workers because doing this can keep the wheel of the economy moving even in times of the crisis the world is facing.

6. Conclusion

The Gig economy believed to be an important economic change since the last decade has grown at a much higher rate than ever before from the onset of the COVID-19 pandemic. The COVID-19 lockdown has drastically affected the labor market across the globe with an increasing trend towards short-term and temporary gig jobs. However, very few researchers have studied the gig economy, specifically since the ongoing pandemic. The potential of the gig economy is huge and exciting in India and the present study examines the impact of the pandemic on the Indian gig economy. The findings reveal that the COVID-19 pandemic has exerted a significant positive impact on the Indian gig economy thereby contradicting many earlier research studies which only show the devastating effect of the coronavirus pandemic on the traditional economy (Baker et al., 2020; Mahendra Dev & Sengupta, 2020). The lesson should be taken from the findings of this study, which is the first of its kind being conducted in India, by the policymakers to support the gig economy in the difficult times when economic downturn seems huge due to pandemic and the gig economy can thus be a ray of hope used to fuel the economy. Also, the Granger causality test finding that not only COVID-19 causes gig workers to increase but the gig workers can also further cause the pandemic which is worrisome and obvious to given the fact that these workers are highly exposed to the virus as they need to work and go out during the pandemic, thus businesses employing these workers should revisit their policy framework to look after the safety of these gig workers and provide them all the protective equipment they require to keep themselves safe from virus. The policymakers may, therefore, draw important insights regarding this positive impact on the gig economy and resolve the problems faced by gig workers like job insecurity, well-being and safety concerns, and absence of other employee benefits for these workers who are an important part of a positive economic change in the country, corroborating the findings of Jeon and Ostrovsky (2020). The regulatory framework should be developed in order to ensure the protection of labor in all aspects on these digital platforms.

Conflict of interest statement

The authors declare no competing financial interest.

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