

DIGITALISATION: AN ENABLER OF GIG ECONOMY

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ABSTRACT

The gig economy has evolved as a result of the proliferation of internet communication channels. A new economic structure that includes various types of short-term work is swiftly spreading over the world, becoming popular and transforming the labour market. The purpose of this research is to evaluate the impact of digitalization on the gig economy in India. It evaluates and analyses the influence of Information and Communication Technology and income of individual towards the preference for the gig work. For this study, 120 people were chosen from Odisha by using cluster sampling technique, of which 111 people took part in the poll. The secondary data analyzed also shows a positive relation between number of internet users and consequent increase in gig workers in India. The paper explores the drivers of the gig economy phenomenon. The study focuses on the idea that having access to ICT infrastructure facilitates the availability of gig labour. We discovered that the growth of the gig economy is significantly influenced by ICT infrastructure. Given its capacity to link workers from different parts within the country, we observe evidence of rising income gaps, suggesting that the growth of the gig economy is influenced by individual income.

Keywords: Digitalisation, Gig Economy, Gig Workers, Information & Communication Technology, ICT

JEL Classification: D33, E1, E24, M52, M55

1. INTRODUCTION

The phrase "gig economy" refers to labour that is temporary in nature, performed under contract or on a freelance basis, or that has flexible hours as opposed to the usual full-time job. It has experienced tremendous global expansion over the preceding decade. In general, a free-market system has been created by digital platforms, where independent workers interact with service consumers. The world is swiftly approaching digitalization since digitalization is the world's future. With the advancement of services, technologically advanced or developed nations are approaching the next levels of digitization. Developing countries, such as India, is in desperate need of reshaping their work environments in order to compete in the rapidly expanding trend of digitization. The present "gig economy" has arisen and is rapidly expanding. It is a total transformation and interruption to business as usual. However, enterprises must recognise the opportunities offered by the gig economy. Many professionals and skilled workers started taking up temporary jobs to augment their income after the 2008 global financial crisis and the subsequent rise in unemployment. IT professionals with expertise drove the expansion of gig work by initially searching for such opportunities on online digital platforms. Job seekers, retirees, and low- and high-skilled professionals are increasingly turning to gig employment. The introduction of the gig or platform economy is one of the most ground-breaking transformations in the world of employment. Online labour platforms, that includes both internet platforms, where work is contracted to a geographically dispersed crowd via an open offer, and location-based apps (mobile applications), which facilitate in assigning work to people living in a particular geographical area, typically to accomplish service-oriented tasks such as driving, delivery service, consulting services, IT, so on, are an essential component of the platform economy. The ILO has been investigating online work platforms since 2015 in order to better grasp the impact of this emerging work system on workers and employment in general. According to NITI Aayog estimate, Indian gig labour is expected to expand to 23.5 million employees by 2029-30, an almost 200 percent increase from 7.7 million currently. According to the report, gig work is on the rise across all industries, despite the fact that 47% of employment are medium-skilled, 22% are high-skilled, and 31% are low-skilled. There has been a substantial growth in freelancers' enrolment on job portals, with 73% of freelancer claiming that they do not expect to go back to full-time 9-to-5 work [AppJobs, 2020]. While the gig economy remains too new for researchers to fully analyse or investigate, media reports claim that its expansion is being driven by substantial positive trends for both demand and supply. We contend that encouraging digitization is a critical necessity for such transition. The majority of digital works are carried in Western nations, and theoretical development is inspired by Western cultures. As a result, it is equally crucial to investigate the impact of digitization in the context of emerging countries such as India. This analysis is a sincere attempt to examine the impact of digitalization on gig economy in India, with special reference to Odisha.

2. REVIEW OF LITERATURE

Participation in the platform economy has expanded as a result of the global wave of digitization and technological innovation. The gig economy has increased significantly as a result of its phenomenal expansion since 2010. Digital platforms that connect service vendors or employees with clients in order to meet their needs characterise this economy. Although these digital or online platforms are regarded to be disruptive, they neither create an entirely new work order nor completely disrupt the old pattern of job relationships (Collier et.al 2017). Several researchers have created their own categories for gig labour performed via these sites. (Woodcock and Graham 2019) classified gig jobs as either locally tethered or cloud labour. (Gleim M.R et al 2019)

Considering the increasing utilisation and proliferation of enterprises into the gig economy, individuals desiring to participate in the gig economy now have more employment options. Geographically tethered employment has been around for a long time, requiring the employee to be present physically in a specified place to fulfil the activity. For a long time, a comparable classification of platform work into two categories—the first including web-based platforms and the second including location-based platforms—has been offered (Berg et.al 2018). Workers in this sector are provided temporary employment and are compensated on a task-by-task basis (BEIS, 2018). Online web-based labour can be used to undertake remote data entry, bookkeeping, report writing, and other professional responsibilities. To perform professional services online, you must have some formal education and a few special skills (Kässi & Lehdonvirta, 2018). People in low-income and emerging economies who would normally be excluded and denied employment opportunities can now do so via internet labour. High-income employers and low-income workers connect on online digital platforms to improve North-South commerce (Agrawal et al., 2013). The remote nature for gig labour allows to enable flexible timing for employees as well as a variety of jobs for labourers who might otherwise be limited by social duties, transportation constraints, and other obstacles. The gig economy, platform economy, or freelance economy assists employees in entering the labour force and honing their talents while specialising on a certain job (Behrendt & Nguyen, 2018). However, the independence and flexibility provided by gig labour comes at a cost in regards to employment security issues (Coulter 2019). As per (Willma 2016), the flexibility of gig workers prevents them from being categorised as employees, depriving them of benefits like as social security and health care. (Melián-González S. (2022) According to the report, food-delivery companies in the gig economy outperform traditional professional service organisations in terms of quality of service and client happiness. The gig economy has transformed the way many individuals work in recent years. The developing new economy is massive and bursting with potential, but it continues to suffer due to a lack of worker protection regulations that would transform it into a worker-friendly model. (Gussek, L.& Wiesche, M. (2022).

3. RESEARCH GAP

The majority of research on gig economy has been undertaken in the Western countries, with only a few studies conducted in India. The majority of available works mainly concentrated on the opportunities and difficulties associated with the gig economy in developed nations, includes a few articles delving into subjects such as testimony of gig workers amid the pandemic, demonstrating how lockdowns changed labour alternatives, developing and establishing different patterns of both mobility and immobility. However, no significant research has been undertaken in India to analyse the impact of digitization on the gig economy. However, no comprehensive study has looked into the influence of digitalisation/platform economy (app based) on gig workers. The purpose of this study is to investigate the impact of digitalization on gig economy. This study also looks into the other reasons that lead people to select gig jobs. There have, however, been several national-level studies. India has an enormous amount of human resource that haven't been used effectively or efficiently. This has contributed to the country's backwardness. The current study is an earnest attempt to analyse the role of digitalization in enabling the gig economy in India. It is concerned with Odisha and has a regional scope. It might be viewed as an addition to the present body of research in the field of digitization as an enabler of gig economy research.

4. RATIONALE OF THE STUDY

Human resources, as inventories, determine the growth of the country. If we can explain that digitisation has an influence on growing the number of gig workers and their performance, businesses and organizations will be forced to spend more creatively in their workforce. Gig jobs will boost gig employees' performance, and the organisation will meet its financial goals.

5. RESEARCH OBJECTIVES

- O1- To study the impact of digitalization on gig economy.
- O2- To explore the impact of income on the gig economy.

6. RESEARCH HYPOTHESIS

- H0: There is no significant relation between digitalisation & the number of gig workers
- H0: Gig economy is negatively influenced by the availability of Information and Communication Technology
- H0: Gig economy is negatively influenced by reducing/lower income of individual.

7. RESEARCH METHODOLOGY

This section explains the sample process, data collection, and analysis. The information was gathered from both primary and secondary sources and analysed using various statistical techniques.

7.1 Primary data: Once all of the important parameters had been assessed, primary data was obtained from the Odisha population using a cluster sampling approach, in which samples are taken based on different age groups and persons with varied income, via interviews and a pre-tested questionnaire. The collected data were analyzed using descriptive statistical approaches, Pearson's correlation, and Multiple Regressions using SPSS, to examine the relationship between a single dependent variable (Preference for Gig work) and a number of independent variables Information and Communication Technology (ICT) which includes mobile access, internet service, broadband connections, and electricity supply Accordingly, we include Income of individual as an independent variable. The purpose of multiple regression is to determine the values of a single dependent variable using known explanatory variables. Cronbach's Alpha was used to assess the variables' internal consistency or reliability.

7.2 Secondary data was obtained through two distinct sources. The information about the Indian gig economy stems from Oxford University's iLabour Project's Online Labor Index (OLI) (Stephany et. al 2021), and so internet gig workers are the dependent variable in this analysis. The data on number of internet users in India is collected from the website Statistica, as the rise in number of online gig workers is dependent on number of internet users so it is considered as independent variable.

Secondary data analysis was performed using descriptive statistical analysis and Pearson's correlation to study the relation between the growth of internet users in India and the growth of the gig economy in India. Alexa16 unique visitor figures on important gig platforms, as well as surveys of the top five gig portals: Upwork, Freelancer, People per hour, Mturk, and Guru dot com, are among the secondary data sources. Accounting, consultancy services, and legal support, administrative and data entry, creativity and hypermedia (logos, animation), marketing and sales support, software technology development and writing and translation are examples of professional services offered through the aforementioned portals.

8. The impacts of digitalization on gig economy

Global digital order is gradually taking shape. In this decade, emerging countries such as India embraced the digitization wave. This decade has been tremendous in terms of elevating India to the top of the gig economy. The gig economy has been significantly impacted by digitalization. Businesses and organisations have begun to outsource their work to independent freelancers, specialists, and consultants. All short-term and long-term ventures seem feasible.. People want to be their own bosses because they value the ease of flexible engagement models and appropriate remuneration packages. Undoubtedly, freedom and flexibility are advantageous. By utilising on-demand service providers, firms may alleviate the pressure of permanent employees. The following are the implications of digitalization in the gig economy:

a) Digital Transformation on Industries

The growth of digital platforms is altering many social and economic sectors. Amazon, for example, has digitalized the commerce sector, Google has digitalized the knowledge sector, and ride-sharing services such as Ola and Uber have digitalized urban transportation. The impact of digitization on the gig economy has opened up new avenues for job creation. Examples include entrepreneurship, seamless consumer experience, experimenting with social license, and commencing rivalry with traditional incumbents.

b) Major Growth Potential of Gig Economy

The growing gig economy has enormous potential for expansion. It draws infrastructure investments, which can be both governmental and independent. As the need for internet access develops, the nation's internet penetration may be aided by the growing gig economy. Several gigs are increasing and growing, producing several career chances around the country. The gig economy is critical to closing the unemployment gap. This is especially noticeable in a developing country with a high population density, such as India. Innovative employees can even utilise free job-posting services to launch their own enterprises.

c) Flexibility and Convenience

The gig economy is challenging traditional business norms. Their staff have to follow strict rules and regulations controlling the engagement models. Employer-centric approaches have recently fallen out of favour. As a result, the flexibility and convenience of the gig economy are growing in popularity among the general population. According to experts, emerging nations feel at ease with informal economies. India has the highest proportion of young individuals between the ages of 20 and 30. The growing tide of the gig economy is highly enticing and lucrative to them. They can work on many projects at the same time if they like. There are online employment platforms where professionals and freelancers may look for part-time, full-time, or freelance work. In the digital era, personal laptop computers and internet connection are essential for project execution. Individuals may now stay connected via applications thanks to smartphone and internet usage. If you have the necessary expertise and motivation, you may be able to excel in the sector of on-demand services. It is handy since it allows you to work from home or at the client's site. Work can be completed on weekends and after working hours. To support the expansion of the country's gig economy, the Indian government has launched programmes like as "Digital India" and "Make in India."

d) Hi-tech solutions used In Gig Economy

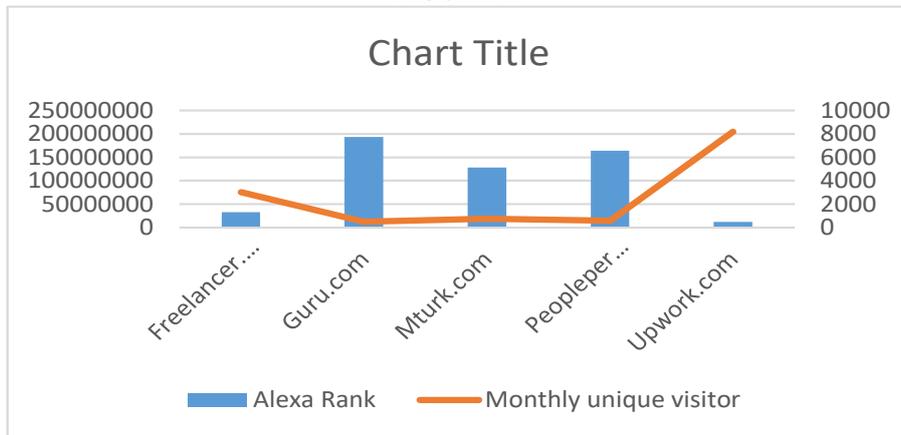
Humanity has arrived at the tipping point of a digital world in which digital sovereignty is under threat. People are becoming increasingly comfortable with exposing personal information about themselves on public internet platforms. The gig economy has gained the trust of a large user base. Users will not be afraid to divulge information on the website. A job applicant, for example, will not hesitate to submit his/her résumé with his/her name, address, phone numbers, and so on on digital platforms that are visited by millions of people. Individuals have become more internet-friendly as a result of the gig economy, but they are not immune to criminal activities such as data theft and security breaches. As individuals become more reliant on the internet, so increases the risk of cybercrime. The simple accessibility of the internet, smartphone usage, improved literacy, and rising income have all led to the emergence of the gig economy in the internet era.

9. SECONDARY DATA ANALYSIS

TABLE-1

Online Platform	Alexa Rank	Monthly unique visitor
Freelancer.com	1308	75755378
Guru.com	7742	12617987
Mturk.com	5144	19052971
Peopleperhour.com	6563	14904412
Upwork.com	488	204657137

FIGURE-1



The data above has been collected from the secondary sources, represents the number of visitors to the digital platform for the purpose of gig work.

FIGURE-2

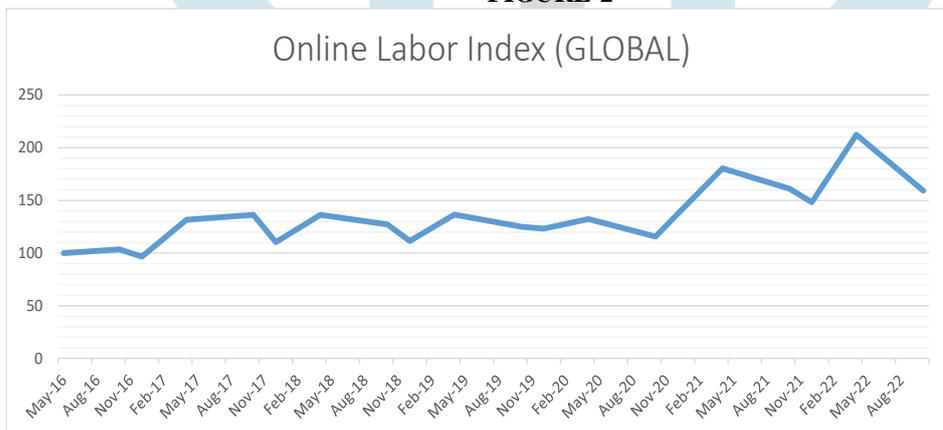
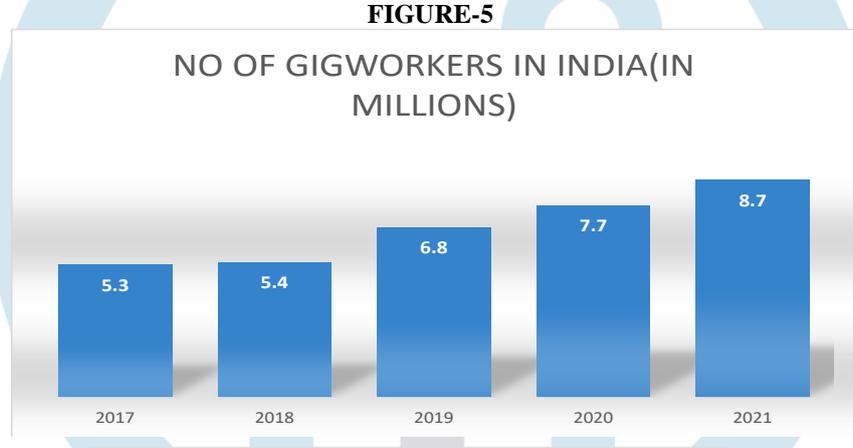
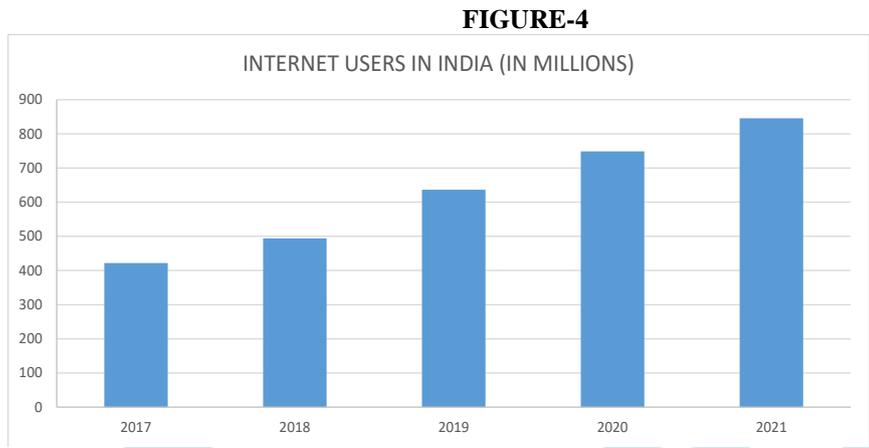


FIGURE-3



The Online Labour Index monitors the use of online freelance platforms over time, across countries, and across professions. Online labour platforms are platforms wherein buyers, sellers of work or services conduct their transactions fully online. With the exception of local service platforms like Uber and Airbnb, we need that the worker & employer be connected digitally, that compensation be processed digitally through platform, as well as the job result be provided digitally. The above **figure-2** and **figure-3** represents the rise in usage of online gig platforms over the time period.



According to statistics obtained from secondary sources during the past five years (from 2017-2021), the number of internet users in India has increased enormously, as well as a considerable upsurge in the number of online gig employees of India.

TABLE-2

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	Variance
NUMBER OF INTERNET USERS	5	422.2	845.68	629.528	174.94816	30606.857
NUMBER OF GIG WORKERS	5	5.3	8.7	6.78	1.46867	2.157

TABLE-3

Correlations			
		NUMBER OF INTERNET USERS	NUMBER OF GIG WORKERS
NUMBER OF INTERNET USERS	Pearson Correlation	1	.992**
	Sig. (2-tailed)		0.001
NUMBER OF GIG WORKERS	Pearson Correlation	.992**	1
	Sig. (2-tailed)	0.001	

***. Correlation is significant at the 0.01 level (2-tailed).

Data collected from the secondary sources (financesonline.com & Oxford University's iLabour Project's Online Labor Index (OLI) (Stephany et. al 2021), was analysed. First, descriptive statistical techniques are used to analyse the dependent variable, which is the number of gig workers in India, and the explanatory variable, which is the number of internet users in India. The descriptive statistical techniques depict the overall distribution of data for the variables being analysed in terms of mean, median, & standard deviation. The Pearson correlation analysis is then used to assess the linear relationship between the explanatory & dependent variables. The correlation coefficient ranges in value from +1 & -1. With the correlation value = 0.992 at the significance level of 1%, the findings show a substantial positive relationship between the number of internet users and the number of gig employees in India. This implies that rise in the internet users and the number of gig employees in India is favourable, and it also reveals that there has been a substantial growth in the number of gig employees in India due to increasing internet users

10. PRIMARY DATA ANALYSIS

TABLE-4

Reliability Statistics	
Cronbach's Alpha	No. of Items
0.719	6

TABLE-5

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PREFERENCE FOR GIG WORK?	21.37	7.781	0.732	0.639
(ICT) DO YOU HAVE ACCESS TO INTERNET?	21.4	7.187	0.786	0.608
(ICT) DO YOU HAVE ACCESS TO MOBILE/LAPTOP?	21.4	6.969	0.772	0.6
(ICT) DO YOU HAVE ACCESS TO BROADBAND CONNECTION?	21.34	8.282	0.671	0.664
(ICT) DO YOU HAVE ACCESS TO ELECTRICITY?	21.43	6.557	0.787	0.582
INCOME OF INDIVIDUAL	24.41	8.027	-0.005	0.957

Cronbach's alpha was determined to be 0.719, or 71.9 percent, as shown in **Table 4**. According to the test statistics, 71.9 percent of the variables are regarded as reliable. This suggests that the variables exhibit almost near to perfect measurement consistency. It is also revealed that deleting the variable Income of Individual improves the consistency of the effect of factors on the number of gig workers by 0.957 or 95.7 percent. Overall, it can be concluded that the entire variables (06 in total) included in the test are extremely closely related. Furthermore, it reveals that the correlation among the variables is very high, implying that all aspects are highly associated when an individual's preference for gig labour is taken into consideration.

TABLE-6

DESCRIPTIVE STATISTICS			
	INCOME OF INDIVIDUAL	INFORMATION & COMMUNICATION TECHNOLOGY (ICT)	PREFERENCE FOR GIG WORK
Mean	1.33	4.9009	1.05
Std. Error of Mean	0.095	0.05011	0.02
Median	1	5	1
Mode	1	5	1
Std. Deviation	1.003	0.52795	0.208
Variance	1.006	0.279	0.043
Skewness	3.03	-5.797	4.447
Std. Error of Skewness	0.229	0.229	0.229
Kurtosis	7.991	33.771	18.106
Std. Error of Kurtosis	0.455	0.455	0.455
Range	4	3.75	1
Minimum	1	1.25	1
Maximum	5	5	2

TABLE-7

CORRELATIONS				
		PREFERENCE FOR GIG WORK	INCOME OF INDIVIDUAL	INFORMATION & COMMUNICATION TECHNOLOGY (ICT)
PREFERENCE FOR GIG WORK	Pearson Correlation	1	-.336**	.823**
	Sig. (2-tailed)		0	0
INCOME OF INDIVIDUAL	Pearson Correlation	-.336**	1	-.379**
	Sig. (2-tailed)	0		0
INFORMATION & COMMUNICATION TECHNOLOGY (ICT)	Pearson Correlation	.823**	-.379**	1
	Sig. (2-tailed)	0	0	
**. Correlation is significant at the 0.01 level (2-tailed).				

Individuals' preference for Gig work is positively and significantly associated with information & communication technology (ICT). According to the **table 7**, information & communication technology has a positive impact on individuals' preference for Gig work. There is a strong relationship (.823) between information and communication technology and influence on people's preference for Gig work as a career option. Income has a negative impact on people 's preference for Gig work as a career option, exhibiting a negative correlation (-.336) here between two.

TABLE-8

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.601	2	1.801	165.704	.000 ^b
	Residual	1.174	108	0.011		
	Total	4.775	110			
a. Dependent Variable: PREFERENCE FOR GIG WORK						
b. Predictors: (Constant), INFORMATION & COMMUNICATION TECHNOLOGY(ICT), INCOME OF INDIVIDUAL						

In the ANOVA table (Table-8), the F statistic has a significant value of less than 0.05, suggesting that the model is statistically significant.

TABLE-9

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.868 ^a	0.754	0.75	0.104
a. Predictors: (Constant), INFORMATION & COMMUNICATION TECHNOLOGY (ICT), INCOME OF INDIVIDUAL				

The value of R square is 0.868, suggesting Information and Communication Technology and individual's income explain 86.8% of variance in individual's preference for gig work. (Table-9). As a result, the suggested model is responsible for the variation in individual's preferences for gig work. That is, independent variables such as information and communication technology and income have a favourable influence on people's inclination for gig labour. As a result, it is demonstrated that the independent variable contributes positively towards changes in dependent variable. As a result, the null hypothesis is rejected in favour of the alternative hypothesis which is Gig economy is positively influenced by the availability of Information and communication Technology and Gig economy is positively influenced by the lower Income of individual.

11. FINDINGS AND CONCLUSION

The data analysed from secondary sources revealed a positive relation between the number of internet users & the number of gig employees in India, indicating that as the number of internet users rises, so does the number of gig workforce in India. The findings from primary data analyses; regression analysis results confirm the hypothesis that gig economy is positively influenced by the availability of Information and Communication Technology. The significant negative income shows that low-income workers are driven to participate in the gig economy. The gig economy enhances the conventional brick and mortar economy by unlocking previously untapped markets. The study investigates the factors driving the gig economy phenomena and analyses the effects for worker productivity, employment, and income distribution. As an instance, we proposed that incomes and the availability of ICT infrastructure boost the supply of gig workers. We discovered that ICT infrastructure is critical to the expansion of the gig economy. Given its potential to connect employees across the country, we found evidence of rising income disparity among individual is one of the reasons for people preference for gig work. People in order to increase their income and to supplement their existing income are getting more interested towards gig economy, even people with skills and with no source of income are getting drawn towards this phenomenon of gig work indicating that the phenomenon impacts the individuals differently. Businesses in transportation, health, education, personal care, in this gig economy have led to the relocation of brick-and-mortar employees at their points of interaction with the conventional economy.

12. LIMITATION OF THE STUDY

There are a few limits to our work. First, while we show that digitalization has a large beneficial impact on the gig economy, there is empirical evidence of unequal distribution of the phenomenon. Beyond digitization, it is critical to evaluate if societal elements, particularly those linked with access to and utilisation of such technical infrastructure, exist. Second, government rules & regulations governing unemployment benefits influence the demand for gig work. Regression analysis lags short to address the policy implications & will need further in-depth analysis. Third, the diverse interest in information & communication technology usage across profession and age groups will require intensive research to understand how the phenomena works. Finally, further study is required to discover how employees' skill levels impact their participation in the gig economy.

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