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Why Gig Economy is growing: an Investigation through Technology Index Approach

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Abstract: The proliferation of digital media has resulted in the emergence of the "Gig" or "on-demand" workforce. There is a new economic paradigm that is quickly becoming a daily reality and reshaping the labor market, and it includes a wide range of temporary work arrangements. This paper examines the dynamics of this process and its primary impacts, and the variables that affect them. Despite its significance, the testing of the primary hypothesis revealed that the varying prevalence of the gig economy and its effect on various sectors, occupations, and skill levels cannot be attributed solely to the evolution of technical infrastructure.We developed a technology index for investigating impact of technical infrastructure on emergence of Gig Economy.

Keywords: Gig Economy, Labor Market, On-demand workforce, Digital workers, Digital Platforms, Income Distribution.

1. Introduction

Many professionals and experienced employees have taken on short-term jobs since the global financial crisis of 2008, when unemployment skyrocketed and permanent positions became less available. Using a metaphor from the music business, in which musicians regularly play live performances, the term "gig economy" was coined to characterize this trend.Skilled IT workers were a driving force in the growth of the gig economy because they were the first to use digital platforms to find employment. Students, retirees, and people of varying talent levels are increasingly turning to gig labor as a means of subsistence. Collins et al. [Collins et al., 2019] analyze US job statistics and find that since 2011, the vast majority of the growth in the gig economy has been attributable to labor on online platforms. Researchers have taken notice of the growing labor industry.Various explanations have been proposed in an effort to shed light on this occurrence.When discussing the "gig economy," various meanings are bandied about that do not always align with useful strategies. The phrase "platform economy" (also known as the "gig economy") has been causing confusion among academics because it is not precisely defined [Frenken & Schor, 2019].

Our analysis of the gig economy is grounded in the existing literature, and we rely upon its main characteristics to offer commentary on its effects on labor efficiency, job growth, income distribution, and business tactics.The impact of India's expanding labor market on the country's legal framework is then discussed. To further investigate the hypothesis that improvements in information and communications technology (ICT) infrastructure contribute to the expansion of gig labor, we construct a Technology Index (TI) that includes mobile, internet, broadband connectivity, and power connections. We conclude by making policy recommendations based on our results.

Microwork, Freelancing, and Business Process Outsourcing are the three main kinds of outsourcing identified by the World Bank in their study [World Bank, 2015]. The word "gig economy" also displays a few other traits that are rooted in the empiricist paradigm. First, freelance employment is typically temporary and ad hoc [Berg, 2016; Van Doorn, 2017]. Gig labor is also known as the 1099 economy2 because it is compensated based on results rather than hours worked [Kalleberg, Dunn, 2016].The terms "short term" and "short-term contract" are not well-defined. Gig employees may be employed for a year or more on successively extended fixed-term contracts, but these still count as short-term employment [Connelly, Gallagher, 2006].The platform-enabled nature of the contract economy is a defining trait [Kenney, Zysman, 2016]. To facilitate transactions between gig economy participants—including employees, hirers, asset proprietors, and end users—technological networks serve as intermediaries. Transactions that involve a site for exchanging labor fall into one category, and those that involve an exchange of money into another fall into a different category [Farrell, Greig, 2016].Uber, Task Rabbit, Swiggy, and Zomato are just a few examples of networks in the job market. Workers utilizing these platforms can choose to work for multiple contractors since the tasks they perform are highly specialized.

Someone who delivers meals for Swiggy or Zomato can also drive for Uber at other times. It is possible that providers will offer more than one service. Uber, for instance, is best known as a cab service aggregator, but it also offers Uber Eats, an app for ordering and receiving food delivery or internet takeout. In the context of the capital markets, service providers like Airbnb, which helps homeowners hire out extra rooms when they are vacant, are prime instances.The same holds true for vehicle hire websites like Zipcar and Hertz.

Next, we look at scalability and the lack of entrance obstacles. There is room for a sizable number of consumers and vendors in the platform-enabled gig economy. The barrier to entry is low in a platform-enabled industry. There has been a reduction in the transaction costs associated with hiring casual workers and renting products and services thanks to the prevalence of digital platforms [Drahokoupil, Fabo, 2016]. Because of the gig economy, the communication asymmetry that traditionally accompanies the expenses of looking for work has been greatly diminished [Zhao, 1999]. For example, before the emergence of the digital era, job-seekers in India routinely stood in line, sometimes for an entire day, to register at national employment centers. Present day job searchers are able to perform the majority of their search and inquiry procedures online thanks to digital platforms. Finally, in the contract economy,

'standardized' results are the norm. The dangers of moral hazard and unequal knowledge are lessened because the work is outcome-based. Employees employed under a long-term contract, for example, cannot be let go without first completing their notice time or receiving the approval of relevant labor unions. Employers are responsible for any consequences arising from workers' efforts.

Problems of knowledge asymmetry and/or moral hazard are rarely an issue in the task-based employment that power the gig economy. Platforms for task-based services with rating systems in place guarantee that only the most consistent and effective service providers are ultimately awarded.

The freelance economy is growing rapidly because it has these features and because of the flexible employment options it provides. The US Bureau of Labor Statistics estimates that 1.6 million people participate in the "gig economy," providing their services through platforms like Uber and TaskRabbit. IT, IT-enabled services, e-commerce, retail, leisure, and the fast-moving consumer goods (FMCG) industries generate the most demand for gig employees because of their need for workers with both short- and long-term commitments at intermediate and senior levels [AfDB et al., 2018]. Jobs involving social media management, content creation, and analytics were in high demand in 2015. About 26,000 positions were available with hourly wages between $16 and $22 [World Bank, 2015]. Those already employed in the "brick and mortar" industry will benefit from the increased employment possibilities made possible by the proliferation of digital platforms. According to research by Collins et al. [Collins et al., 2019], between 2000 and 2016, the proportion of Americans who relied on gig labor for financial support increased by 1.9 percentage points. Approximately sixty percent of workers in the freelance economy also receive a full-time salary from a traditional employer.

2.What the Freelancing Economy Means

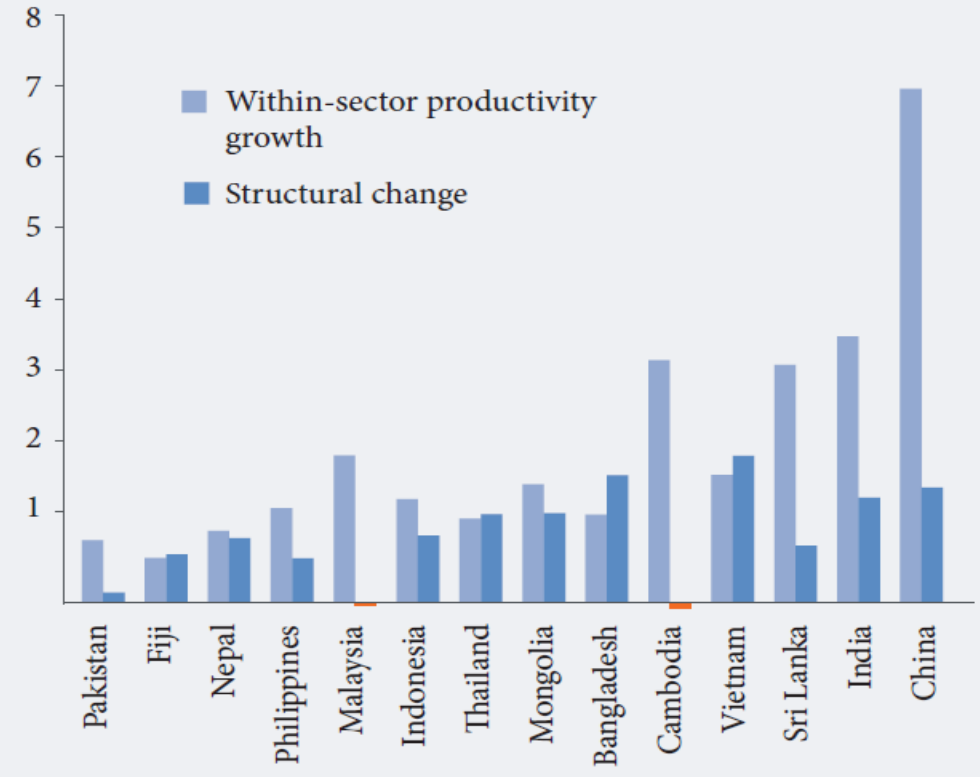
The freelance economy is expanding thanks to advances in technology, a surplus of inexpensive labor, and an increase in business initiative. These tools facilitate communication between remote employees. As a result, output is increasing, and both job and revenue distribution are improving. We give these factors careful thought in the following part.

Results and Specialization

With more people entering the labor force and easier access to lower-wage employees from overseas, the growth of the gig economy is likely to increase total output through increased specialization and standardization of work. As an example, Europe has experienced a decline in worker output and an aging population over the past few decades. Traditional methods of boosting output through increasing people's involvement in the labor force have become increasingly ineffective as the population has aged and fertility rates have dropped. Many nations in the Eurozone have seen their population growth rates decline below the 2.1 percent mark needed to maintain a stable population. For instance, Greece has a positive population increase rate of 1.38, Spain 1.39, Italy 1.41, and the United Kingdom 1.94. Both Spain and Greece are expected to see a rise in their elderly population, from about 17% today to 25% by

2030 [Banik, 2019]. Worker productivity is challenging to boost in an aging society with powerful trade unions [Sherk, 2009].4 Gig work, which boosts productivity by boosting labor participation via digital networks, is likely to alter this. Companies can save money by assigning specific duties to freelancers who focus on those areas rather than employing a single person to do everything. Since workers' salaries are tied to their success, they have more incentive to do well. Even in European nations where there is a current shortage of labor, connected global labor markets will contribute to an increase in economic output. In all likelihood, workers from underdeveloped nations where labor is plentiful will benefit. Thanks to the standardization of the contract economy, service workers from developing countries who previously earned poor wages can now make more money performing the same tasks in developed countries. All that is required to join is a mobile/internet link and a power source, so there are no real barriers to admission. Gig work and the systemic change brought about by technological innovation both contribute to rising labor efficiency and rising per-capita income [Bassanini, Scarpetta, 2002]. (Figure 1)

Figure 1. Source of Labor Productivity Growth (%)



Source: [AfDB et al., 2018].

3. Income and Distribution

The advantages of the emerging freelance economy, a multifaceted and nebulous occurrence, are not equally shared. In developed nations, full-time contract economy work may leave low-skilled employees economically vulnerable and with reduced incomes [Bergman, Jean, 2016]. Increases in pay for employees in developing nations are likely to outpace that trend as they become better linked to prospective employers in more developed regions. A low-skilled worker from a developed nation stands a similar chance of failing to make it in a world where rivalry is fierce. As a result of technical advancement, working conditions for unskilled workers may worsen. As a result, the division of wealth around the world becomes more unequal. Companies in Germany, for instance, are contributing to rising salary inequality by paying more to their highly trained workers than to the rest of their employees [Card et al., 2013]. Wage premiums rise as the pool of available highly trained and talented employees shrinks. It is because of the wage increase paid by more competitive firms to retain their highly qualified employees on a full-time basis that wage disparity exists in the United States.

Low-skilled labor is usually contracted out as freelance work in the United States and other developed nations like Sweden, Japan, and the United Kingdom.

According to the International Labor Organization, gig employees are earning less than the legally required minimum pay rate [ILO, 2018]. Approximately 67% of Amazon Mechanical Turk workers in the United States earned less than the federal minimum wage rate of $7.25 per hour, and only 7% of Click worker platform employees in Germany made the statutory minimum pay of 8.84 Euros ($10.40) per hour.Seven There is no minimal pay floor for workers in the "sweatshops" established by technological platforms. Workers are not afforded other perks like insurance, sick days, working hours, contract renewal, or conflict resolution [Chandy, 2017]. Increasing weight is being put on platform services to follow the same regulations as more conventional service suppliers. Seattle has approved a legislation allowing Uber and Lyft drivers to unionize, and workers who are unionized are eligible for unemployment benefits.8 The Supreme Court of India ruled against an Indian garment maker, determining that home-based female contractual workers are to be treated as "employees" of the business that has hired them to do piecework [Kumar, 2019].Ownership of capital networks is another potential cause of wage inequality.Despite the pervasiveness of platform software, the combined market value of Uber, Airbnb, Facebook, and Amazon may be greater than the GDP of many developing nations.Those who drove for Uber in the United States were involved in a protracted court fight, claiming they should be classified as workers rather than independent freelancers and entitled to greater non-monetary compensation as a result [Lobel, 2016].

Uber drivers, for example, are paid per ride and can choose when and where they work, but Uber determines how much passengers will pay and removes drivers whose ratings are too low. In 2019, Uber agreed to pay $20 million to resolve a class-action lawsuit that was initially brought by drivers in 2013.It is not just internal factors that can shift the way money flows; external disruptions like COVID-19 can do the trick, too. Delivery, advising, telecommuting, and online polls were identified as industries that benefited from the epidemic in a survey

performed by APPJOBS, which included 1,400 employees from 58 different nations. While the in-person businesses like house sitting, babysitting, transportation, and hospitality (hotel and tourist) suffered [AppJobs, 2020].

4. How the Gig Economy Has Changed Workplaces:

The fields of business strategy and performance management are the hardest hit by the gig economy. Whether a company is structured as a hierarchical entity, a grid, or a network, the work is traditionally divided into smaller tasks and assigned to employees in a linear fashion, with each employee following the next in an assembly-line fashion [Schmenner, Swink, 1998]. However, in practice, organizations often fall short of their full potential because of things like faulty design, missing information, sluggish processes, and human error. To make up for these shortcomings, businesses fine-tune their worker selection and allocation procedures to generate buffers of additional personnel and abilities. Coordination issues are compounded by the unequal assimilation of additional staff due to the fluctuating volume of work. Therefore, in most companies, overstaffing and understaffing occur at various points throughout the work cycle. The overall result of this dynamic is a disorganized smattering of downtime across different workplaces. Workers' varying work paces under various circumstances account for the downtime. This happens both during the transition between tasks and endogenously within the tasks. Management teams worry about this kind of downtime in an unevenly staffed company and use a variety of techniques to schedule tasks to optimize output.

As an example, consulting companies handling complicated contracts need to hire highly specialized personnel. Businesses rarely hire such specialists on a permanent basis, instead turning to the freelance market. Consequently, the freelance economy may encompass both highly specialized tasks and more basic services like driving, cleaning, and delivering food. Such a wide scope presents operating management with both challenges and opportunities, as they will need to build the organizational capacity to plan, separate, and define the work bundles, as well as take part in the digital platform in order to choose the contract workers, allocate the work, and control the performance. These kinds of abilities are still underdeveloped in conventional businesses. As a result, businesses that want to reap the benefits of the contract economy will need to create systems to standardize the tasks and skills that can be outsourced to labor marketplaces. Companies that make investments in such skills naturally gain more adaptability, scale, and speed.

Gig employment also has a negative impact on workers' ability to advance in their chosen profession and acquire new skills [Kost et al., 2020]. As businesses transform their operations to accommodate freelancers, they will need to retrain their full-time workers from generalists to experts capable of monitoring the quality of contracted work and coordinating effectively with contractors. Division of labor, specialization in duties, and a strict chain of command are cornerstones of the standard organizational system. The administrative and interpersonal skills of regular workers will need to be updated significantly, and so will the methods of hiring, onboarding, training, and evaluating workers' output [Meijerink, Keegan, 2019].

As a final point, it should be abundantly clear that gig work's relevance within value networks will vary. Platform-style gig outsourcing may work better with standard, low-stakes tasks like employee benefits, salary, transportation, storage, and website development than with more creative, high-stakes ones like new product development, product strategy, or branding. Switching to more flexible and agile designs can be difficult for traditional organizations that adhere to a 'one size suits all' design mindset because of the obstacles presented by producing consensus and the action within the established person-organization fits.

5. Look at India's Increasingly Popular Gig Economy:

Anecdotal evidence suggests that the freelance economy in India has been growing rapidly over the past few years. With roughly 3 million gig employees in 2018, India overtook the United States, China, Brazil, and Japan as the world's fifth biggest flexi-staffing nation. It predicts a sixfold increase to two million by the end of 2021. The banking, financial services, insurance, IT, and retail industries are named as the main ones hiring freelancers. Big businesses are helping fuel the gig economy by outsourcing key initiatives and experimenting with new business models to freelancers and independent contractors [FlexingIt, 2019]. There has been a significant increase in the number of contractors signing up on job boards, with 73% of those individuals stating that they have no plans to return to traditional 9-to-5 employment [AppJobs, 2020]. The media stories indicate that the increase in the gig economy is led by strong favorable trends on both the demand and supply sides, but academics have not had enough time to conduct a complete poll or study of the job phenomenon.

From the employer's point of view, gig labor consists of contracting employees on a temporary basis and compensating them based on the results they produce. As a result, being able to divide projects into manageable chunks is essential in the freelance economy. Until 2015, most contract employment came from startups and other early-stage businesses. Large corporations have recently entered the market in an effort to systematically reengineer the processes involved in doing work, which has given the market more stability and resilience. For this reengineering to be successful, it is necessary to classify all tasks as either regular or non-routine, to reevaluate the processes by which they are performed, and to create administrative frameworks for enlisting and contracting with freelancers. Production, sales, inventory management, and preventative plant repair are all examples of processes that need to be performed on a regular basis as part of an organization's continuing operations. These tasks necessitate the constant participation of employed individuals. However, regular employees are not needed for labor that is only needed occasionally or on rare occasions. New product or service development, market research and analysis, software development, process consulting, the odd failure of specialized equipment, changes to infrastructure or architecture, and so on are all examples of non-routine activities.

Regarding the availability of workers, India has traditionally relied on a sizable informal (or disorganized) population. More than 90 percent of workers in India are employed by the private economy, which also produces 50 percent of the country's gross domestic product [Government of India, 2012].

In 2015, the government reported that 84% of India's labor population was employed on temporary or non-permanent contracts. Given the scale of India's informal economy, it is no wonder that it has produced a wealth of research and attracted the attention of lawmakers, legislators, economists, attorneys, and tax officials. Although there have been few comprehensive studies conducted on the freelance economy, the data that is accessible suggests that it is already sizable and is expanding quickly. It is commonly assumed that people working in the informal sector of the business have minimal or no formal training. However, existing writing on the contract economy highlights freedom of action and independence as essential features of gig workers [Rosenblat, 2016]. People who make a living through a series of short contracts were once thought of as "gig workers," a term coined to describe highly trained employees.Several authors have expanded upon these original points since then, arguing that technological platforms have a moderating impact on the gig economy by fostering variety and fostering skills. We propose that gig labor is distinguished by its emphasis on individual agency, organizational responsiveness, and technological facilitation. Therefore, the gig economy cannot include sectors of the private economy that lack free will and platform intervention.

India's governmental policies and labor regulations have been strongly socialist-oriented ever since the country gained independence. Modern India has strong labor law mechanisms in place to safeguard employees from their bosses' potential abuse. These regulations date back to an era when industry and industrial production dominated the mainstream economy and the service sector played a much smaller role. Over the years, manufacturing's share of GDP dropped from 40 to under 20 percent, while services increased to make up more than half of the economy. However, the labor laws have not evolved along with the times, and some argue that they are too rigid, and that their pro-labor stance is stifling investment and the expansion of the organized labor force. The government has attempted to implement reforms of the labor laws in light of such critique, but experts have called these efforts, at best, sputtering starts. In the midst of the political upheaval, the plight of the private economy's workforce has been largely overlooked. While employees in the organized sector are shielded from harmful employer practices, the vast majority of workers in the unorganized sector are not.

Workers' rights, benefits, and social security are becoming increasingly problematic as the contract economy expands rapidly in an unregulated legal environment. After a disagreement over pay with Ola and Uber, two companies that run the intermediating technology networks, drivers in India went on strike in 2018. Surie [Surie, 2018] writes an in-depth analysis of the character of these gig workers' involvement and makes a case for regulatory structures and organizations that take into account the possibility of exploitation of these workers.

Preexisting disparities in work environments have been worsened by the rapid growth of digital centers and the freelance economy. Inequalities in internet access and the gender disparity in labor force participation have prevented some groups from realizing the advantages of modern technologies. The first is the fact that although the use of mobile phones is prevalent in India, the majority of people in outlying regions are still using outdated, slower 2G networks and thus have no connection to the internet. This severely restricts their capacity to engage in high-level

commerce. Another issue is that females haven't been able to participate in the gig economy due to factors such as reduced reading percentages as well as digital illiteracy, family responsibilities, and gender-based social limitations. regardless of what kind of freelancer you are, you will face difficulties with welfare, workplace harassment, and fulfilling the conditions of your contracts.

In conclusion, the expansion of India's freelance economy has the potential to solve the country's chronic job shortage and kickstart the long-stalled process of reforming India's labor laws. If appropriate legal and regulatory systems are not put in place, however, the potential of the gig economy is unlikely to be realized.

6. Model Development and Analysis

Hypothesis Development

To better understand the freelance economy's growth in relation to broader socioeconomic factors, we built a model. Value is being added by the platform economy as a result of the monetisation of commodities and labor. The proliferation of mobile, internet, and broadband links, as well as reliable sources of electrical power, are all factors that stand to benefit the freelance economy. In light of this, we put forth the following hypothesis:

H1: *The number of gig workers is positively influenced by the availability of internet, mobile, broadband subscriptions, and electricity connections*

We also argue that employees in low-skill categories have to pay more time and energy looking for employment and are less likely to succeed when they do find it. They will be enticed to participate in the gig economy as new technology networks arise that allow them to do so. Therefore, we predict that the number of available gig employees will increase when average incomes are reduced. As a result, we propose the following theory:

H2: Rising per capita income negatively influences the number of gig workers.

7.Dependent Variable

The quantity of freelancers in a nation serves as our dependent variable. The International Labor Organization's (ILO) publication ILOSTAT breaks down job numbers by industry, profession, and gender. The International Labor Organization's estimates of employment by profession classify abilities on a four-level scale, from level 1 (Low skilled) to level 4 (Highly skilled). (Professionals). ILOSTAT information has a number of drawbacks. First, it only covers traditional industries when reporting workforce statistics, so no gig economy information is included. Second, many professionals, including teachers, physicians, and engineers, are employed through institutionalized channels rather than the freelance sector. Because of this, the ILOSTAT likely underestimates the number of workers who rely on gigs for income. Third, the International Labor Organization (ILO) describes employment as having a job that you regularly attend for at least one hour per week or day [Hussmanns, 2007]. As a result, it does not account for any unintended but financially valuable activities. For instance, if a full-time

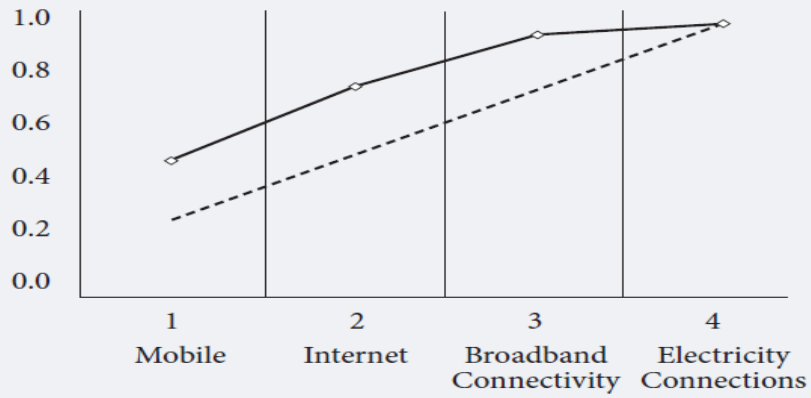
worker also works a side gig, that income is not reflected in official employment data. Gig labor in fields like product development, design, and marketing, for example, is hard to quantify in published macroeconomic statistics [Corrado, Hulten, 2010]. Gig workers are numerous, particularly in emerging countries, but they are not accounted for in the public macroeconomic statistics.

We employ the Online Labor Index to work around these restrictions. (OLI). This data collection provides the traditional labor market numbers as they relate to the gig economy. Data on the number of people currently participating in the gig economy is compiled by OLI in near real time from key online gig platforms, and it covers a wide range of nations and occupations. Accessing webpages via gathering technologies like APIs, scraping, and data downloads provides the foundation for OLI [Kässi, Lehdonvirta, 2018]. It utilizes information from polls of the top five task platforms (Upwork.com, Freelancer.com, PeoplePerHour.com, and Mturk.com) and from Alexa unique user numbers on major job platforms.Jobs in the fields of bookkeeping, consulting, law, marketing, software engineering, translation, and secretarial work are all included in this. Due to its higher breadth and the large number of countries included in the sample, the OLI database is, to the best of our knowledge, the first database to provide a full evaluation of the number of contract employees.

We suggest information and communication technology (ICT) elements like cell phone use, internet access, broadband connectivity, and electricity availability as potential explanatory factors. A number of other studies [De Stefano, 2016; Aubert-Tarbey et al., 2018] corroborate the importance of ICT to the freelance economy. Taxi drivers, builders, graphic artists, and lawyers are just some of the service providers that 42% of respondents in a survey conducted by the Foundation for European Progressive Studies and UNI Europa say they have found through an internet portal.

After combining these four ICT factors into a single one, TI, we were able to disprove the multicollinearity concerns that had been raised. When attempting to explain something, we use TI as a proxy for causation. Research by Gomez-Herrera et al. [Gomez-Herrera et al., 2017] shows that people from low-income countries are open to working in high-income countries. As a result, we use the log of per-capita revenue as an independent variable. World Development Indicators [World Bank, 2017] contains statistics on 139 nations, including their mobile, internet, and broadband access, energy connections, and per-capita revenue.

Figure 2. Cumulative Proportions of Eigen Values



Source: compiled by the authors.

8. Model

We follow Ordinary Least Squares method to estimate the following equation:

$OLIi = \alpha + \beta Ti + \gamma PCi$,

Where, OLI refers to the online labor index, TI is the technology index, and PC refers to log of per-capita income. Subscript *i*refers to the country

9. Results and Analysis

We use PCA [Mardia et al., 1979] to model TI as a vector X (X = X1, X2,..., X4), where X1 represents a cell phone, X2 represents the internet, X3 represents a broadband membership, and X4 represents an electrical outlet. Before building TI, we normalize the data to eliminate unit-of-measure differences. The first PC has the highest variance (1.94) and explains 48.5% of the scatter in the regressors.(Figure 2). It gives X1, X2, X3, and X4 probabilities of 0.65, 0.35, 0.66, and 0.05. Broadband and internet connectivity are given heavy emphasis due to their critical role in today's society, while cell telephony and electricity connectivity are given middling and light emphasis, respectively. However, only 27.3% of the overall change is explained by the second principal component, which has a variance of 1.09. Therefore, we keep TI's weights and use them as the variable in the analysis.We then use EViews 11, a software program, to calculate TI for each nation.The results of the regression analysis are shown in Table 1.The findings corroborate the theory that there is a positive and substantial relationship between the availability of technological infrastructure and the volume of freelancers. Because of their large negative per head income, it is likely that people from low-income nations are coerced into working in the gig economy.Employers and companies that subcontract gig work are concentrated in high-income nations, while low-income nations are a viable option for workers to perform the freelance work.[*Gomez-Herrera et al.*, 2017; *Song et al.*, 2019]

Table 1. Gig Worker Index (Base Regression)

Variable	Coefficient
Constant	0.036** (0.017)
Technology Index	0.008* (0.002)
Per capita Income	-0.003*** (0.001)
R-squared	0.14
Adjusted R-squared	0.13
No. of Observations	139

Note: Robust Standard Errors in Parenthesis; *p<0.01, **p<0.05, ***p<0.1.
Source: authors.

High-skilled employees who already hold down full-time positions are less likely to switch gears and look for freelance work within a nation, according to data from the United States (Collins et al., 2019).We conduct sensitivity analysis [Levine, Renelt, 1992] by adding Manufacturing value-added to GDP and Service value-added to GDP to our base regression model to ensure the findings are stable. The factors of industrial value-added to GDP and service value-added to GDP are found to be statistically negligible in the augmented regression.

10. Conclusion

The freelance economy serves as a supplement to the more established retail sector by enabling the commercialization of previously untapped areas. This study investigates the causes of the gig economy and analyzes its effects on business strategies, employee morale, and earnings distribution. Consider the following example: we postulate that the quantity of gig labor is regulated by economy and the accessibility of ICT infrastructure. We discover that the proliferation of the freelance economy is inextricably linked to the development of advanced information and communication technologies.

Despite its apparent power to unite employees across borders, we discover that this global reach does not result in pay parity. Instead, we find that the wage gap between low-skilled and high-skilled gig workers is widening, suggesting that the occurrence has differential effects on the various skill levels. Brick-and-mortar jobs have been lost at the places where the transit, healthcare, education, personal services, and gig economies meet the conventional economy. Given our findings, lawmakers should consider implementing new regulations or taxes to level the playing field in the freelance economy across all sectors and skill sets. Government officials must also devise measures to help relocated employees find new careers or retrain for existing ones.

The study we did has a few obvious caveats. To begin, there are empirical accounts about the phenomenon's uneven spread, despite our finding that technological infrastructure plays a major beneficial part in the gig economy. Beyond the physical setup, it's important to check for social factors that affect people's access to and utilization of technological infrastructure.

Second, regulations concerning jobless insurance can affect the demand for gig labor. The effects of a strategy cannot be properly studied using cross-sectional research; instead, we need to conduct longitudinal studies. Third, more research is needed to decipher the mechanisms behind the varying rates of technology infrastructure adoption across professions and age groups. Last but not least, more study is required to learn how employees' ability levels influence their involvement in the gig economy.

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