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**IMPACT OF COVID-19 ON GIG ECONOMY OF DEVELOPED COUNTRIES: THE
CASE OF US**

MURAD RASHIDOV

SUPERVISOR

DR. INGILAB AHMADOV

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REFERAT

Covid-19 has affected economy of world and even stopped it, whole world economy suffered from it and especially stock markets have been impacted, despite that, very few are aware about its effects on Gig economy. In this phenomenon, the main focus is to investigate and measure the impact of pandemic on very tight side of economy, which is not well-known, Gig economy. Throughout the master thesis there will be used a correlation model and as a descriptive study interpretation with graphs, charts for clarifying result and interpretation with tables are going to be a pioneer.

There exist lots of studies which have searched the impact of Covid-19 pandemic on economy and mostly stock markets, however very few exists about the Gig economy. Despite Gig economy is very unique and rare case for recent years, however last shifts in economy makes this specific version of economy very important. This should be considered one of the most predominant change in the history of modern economy and it has four measurements: tasks, which are given and paid, online intermediation services, private services and free contractors. As a reason of pandemic lockdown was applied probably all over the world and companies also were obliged to suggest to their employees to work from their home, there a question arise, does Covid-19 affected Gig economy negatively or in a positive way?

Gig economy merely is a non-traditional, because it is an online platform, in which purchaser and sellers collected together. It was inevitable for huge number of countries to face with recession or depression. Unemployment was a strict problem and new type of work status, shifting the structure of traditional working condition was such as an obligation. Moreover, the number of online jobs automatically rose due to necessity and belief to Gig economy also increased.

In this work, there will be researched impact of pandemic on gig economy and measuring effects of it for economy and interpret results from findings. Clearly, this research

mainly focuses on developed countries, exclusively typical example of USA and comparison with whole world to make it general and global. Data will be used for this study more broadly, longer, latest and with explanation. There will be used a lot of preliminary studies to investigate and determine structure of the thesis during research.

The general overview concludes that Covid-19 positively affected the Gig economy, average demand of buyers in that online platform increased since pandemic. It is very time taking, hard to calculate and balance various parts of economy, also to declare an exact law as a decision. For that extraordinary situation economy adjusted and because of uncertainty some part of it harmed. The study also will attempt to mitigate adverse results of pandemic, such as Covid and find more alternative solution for future.

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ABBREVIATIONS

US - United states of America

DPD - International parcel delivery system

POL - Poland

LTU – Lithuania

KOR – Korea

JPN – Japan

CHI – China

EST – Estonia

LVA – Latvia

CHE – Switzerland

DEU – Germany

CAN – Canada

FIN – Finland

SWE - Sweden

ISR – Israel

IRL – Ireland

NZL – New Zealand

AUS – Austria

FRA – France

SVK – Slovakia

NOR – Norway

ITA – Italy

GBR – Great Britain

ESP – Spain

MEX – Mexico

BEL – Belgium

PRT – Portugal

HUN - Hungary

NLD - Netherlands

TUR – Turkey
LUX – Luxembourg
CZE – Czech
ZAF – South Africa
IND – India
RUS – Russia
SAU - Saudi Arabia
BRA – Brazil
ARG – Argentina
EU – European Union

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INTRODUCTION

Nowadays, Gig economy includes whole freelance workers, temporary contractors, staff and other type of workers who are independent worker or self-employed either online or offline in variety of businesses. Firstly, freelance workers, according to latest updates of government sources 26 million Americans, approximately 10 % of the USA workforce are self-employed, independent contractor or freelancer. On August, 2018, for Forbes, in USA 57 million¹ of workers, which is one third, are part of the Gig economy. With the growth of UBER, Amazon, LYFT, EBAY, ETSY, Freelancer.com, greater extend of laborers do part-time jobs, that is formally known as Gig economy. Specially, this happens whenever people are jobless or they seek to find a job which has more flexible hours. And the most noticed thing that it is rising so fast! This kind of workers come from different sides of the fields, marketing, design, even law, accounting, also medical.

The Gig economy is about to provide services to people, especially on demand. The idea is that when anyone needs to find a service can reach the right person with the help of platform in a given time. For greater efficiency hiring process going through from specific process which deduct spending and save time of both parties in an online platform². There are lots of misunderstandings around the Gig, however it has several different and positive components, including:

A freelancer is a person supply services to customer for an agreement, who chooses to work as a freelancer they are automatically liable to configurate rates and to reach their clients. Freelancers typically decide to work separately, so they are hiring and firing their employees themselves. While working, they are not getting benefits as health insurance or holidays, vacation and retirement savings. Despite that you are able to pay taxes on your own

¹ TJ MS Cue (31.08.2018). 57 million U.S. Workers Are Part of The Gig Economy, <https://www.forbes.com/sites/tjmccue/2018/08/31/57-million-u-s-workers-are-part-of-the-gig-economy/?sh=53dd2f037118>

² Alois, A. (2018) Dispatch No. 13 – Italy – ‘With great power comes virtual freedom’: A review of the first Italian case holding that(food-delivery) platform workers are not employees. Comparative Labor Law and Policy Journal, <https://cllpj.law.illinois.edu/dispatches>

and getting your own tax returns. Being a freelancer let you to construct your own schedule, working hours and individual projects. Traditional working hours make you feel in frame and that usually does not match your interest and desires. That gives you a chance to control yourself, being your own boss and let you pursue opportunities you are prone to fulfill.

“Independent contractor is considering a person, who is either self-employed or performs services outside the organization without being employee of that organization and lawful worker of client. Various number of contractors are interested in to have a contacts depend on nature of their industry. Different³ fields of people, such as doctors, lawyers, accountants, auctioneers who offer various services to public are overall independent contractors. Business people do that because of deducting labor costs, an increase in flexibility and reducing spending on employee benefits and payroll taxes. Most of the independent contractors are paid for their services refer to contracts fixed-price time or material based.

Main purpose of this thesis is to investigate about modern, updated version of economy, Gig, which is very actual and future oriented. The emergency case of pandemic has created new category of work, which is specified by recurrent, short-term and usually precarious work. Actually, it has been associated with employees in lower income, a little ambitious, less skilled positions on labor market of developed countries. As a reality, belief on social media’s strength in recent years, relying on online platforms to find work, Gig workers guarantee to earn money for living.

Technology is the biggest possibility maker in this system, finding job with uploading apps to your smartphones and selecting criteria is enough, you are able to do that from everywhere despite the traditional challenges, as being far from workplace, getting through hard and long recruitment processes, saving your time and also controlling your stress level more easily during short-term, guaranteed process. This a life saver program which is created and both parties are happy to be part of it, that is not always happen to have both parties agreed to the structure of the system simultaneously.

Gig economy make available a lot of pet-siters, unemployed people employed and contributes to economy in very large scale. Popularity of this work make some people think about extra earnings and as an opportunity get more money. Specially focusing in developed

³International revenue services (02.11.2022). Independent Contractor Defined, <https://www.irs.gov/businesses/small-businesses-self-employed/independent-contractor-defined>

countries, rising demand to Gig workers during the pandemic has an effect on this types works, people's options are reduced and new type of economy seemed as a solution to them. From the example of USA, in this thesis there will be statistics show that how the crisis converted to the advantage. As a result, it is now one of the largest segments in economy and it is growing day by day.

Gig economy also named on economy as sharing economy, on demand and access economy, this is an activity that provides works on demand, also services and goods. More often, previously spoken that happen through apps, online or digital platforms and sites. As a job, Gig includes activities to make money through platforms like:

- Driving cars, motorcycles, even bikes for rides which are ordered by users or a delivery of goods.
- To finish given special assignments and run errand.
- Rent part of a building, business centers.
- Also rent equipment for usage.
- Online sells
- Providing consulting, marketing, education and other services for improvement of people.
- Also, to supply hotly on demand, temporary and freelance works, services through various segments.

Digital platforms are very new and spectacular form of digital tools that helps to exchange transactions between suppliers of products, services, goods and information and also their customers. It is very important to construct healthy relationship with one another and maintaining, prospering it in long term. There are some influencer platforms as Quora, Reddit create thoughts about business and product, this is a specific case of marketing which is considered new and very effective. New digital platforms are a great tool to promote efficiency, collaboration and sharing information.

There are variety of features of digital platforms:

- This is a local or an international platform which allows creating a relationship between inside and outside of companies or individuals.
- Automated system to apply same tasks over a touch and give a chance to do repetitive tasks.

- Data analytic and data visualization opportunity makes you screen and observe your team's data and progression.
- Complicated and comprehensive tools with the help of artificial intelligence to conclude the work easier and correctly.
- Centralized system to change, create and analyze data during work process.
- Separate working and earning and getting benefits from enterprises and organizations.

From different angles, newscasters and newsmakers, readers, drivers who listen to radio, pizza carriers, even unemployed people are familiar with that system. Nowadays, most of people are aware of Gig economy and they are keen on to work for it, there are statistics to prove that. In UK, there are 1.1 million people to work for Gig economy, that is outstanding for a developed country. Interesting fact is that this amount probably equals to the number of workers whose job is with National Health Service. (Balaram et al., 2017). And 11 % of workers have earned in digital platforms in UK. (Huws and Joyce, 2016). The feature of digital labor platforms helps to reach out to all people who use internet. It is calculated and forecasted that 1/3 of all transactions on labor will be with the help of advanced, online and digital platforms (Standing, 2016).

The idea is to reach globally to all parts of the world, manage people to find jobs and to be engaged for contributing economy and talent hunting through the process. Other purposes are aimed to reduce the level of unemployment, increase the number of part-time and freelance works, also extra work hours who need money for even traditional workers. As a clue these platforms are a great tool to configurate and suit workers considering their desires and skills for matching to jobs.

The master thesis focuses on how current work shifts today and it is very debatable topic about Gig's future.

The research question: How the Covid-19 made an impact on Gig economy in USA? ***As sub-questions*** will also be examined: Which groups benefits from various perspective and how the loss can be compensated?! The most important detail is to explain how sustainable the Gig economy is, the pandemic's pressure and its changes in perspectives of modern economy and how to be ready to future epidemics will be discussed.

The Gig's main "friend", online platforms are growing rapidly day by day, so from precarious, unstable work to stable, growing, modern format of job is a great privilege. By attention, redesigning of digital platforms also reshape the economy, work status, it is

inevitable. Fairness, strong and health job conditions are core in Gig, because lots of negative thoughts affect it, however changes and new rules will correct problems of digital world, also. So, the interaction of digitalization and automatic system help to improve both economy and employee rights. Flexibility and independence of Gig economy will help to stay strong against adverse events and influenced by positive manners. Covid-19 effect is a great lesson for whole economy, also for Gig, not only for that pandemic, sustainability ⁴should be considered for all systematic jobs, Gig is a great model and in this thesis some extra, new, non-repetitive findings can be seen as a solution.

⁴ Graham, M., Hjorth, I. and Leoncica, V. (2017a) Digital labor and development: Impacts of global digital labor platforms and the gig economy on worker livelihoods. *Transfer: European Review of Labor and Research*, 23(2): 135–162.

CHAPTER 1. CHANGES IN THE STRUCTURE OF STANDARD EMPLOYMENT AND NEW UNDERSTANDING OF ‘INSECURE JOBS’ REPRESENTING GIG ECONOMY

1.1 STANDARD EMPLOYMENT CONTRACT VERSUS THE GIG ECONOMY AND NECESSITY OF A NEW APPROACH

First of all, from earlier times, the labour was on demand, urgent and extremely important to survive, that was not an option to construct your own schedule, these days dynamics of employment altered a lot and converted to “**gig work**”.⁵ Despite those, even conditional jobs have digital platforms, online interviews, webinars, Gig economy’s incredible possibilities are a great difference maker. There are similarities between Gig economy and sharing economy in their basic idea, the difference is sharing economy provides goods and services with the help of internet, however gig attracts freelancers and also independent contractors by giving flexible and mostly non-perpetual jobs.

There have been lots of changes in gig economy, however it still grows up. It is a paid job, very important point in gig is an individual sell its time to another person, these persons are free to choose each other and both parties gain when have interaction. As a structure the new approach is seen, but the core idea is very simple and same, the little transaction, buyer and seller remain still here.

Standard employment contracts, in the case of payment, social protection was predominant from 20th century. Social security contracts diminished results from lack of consistent work due to negative reasons, adverse events, serious disease and bad working conditions. Gig economy is usually talked negatively because of some negative occurrences,

⁵Woodcock, Mark Graham (2020). The Gig economy, 18

such as death. In 2018, January, a courier died due to an accident and DPD⁶ logistics company connected with Gig and it resulted to distrust for this economy. Actually, he was not an employee of DPD company, he was an independent contractor of this firm, the main consideration was that he missed some essential appointments of hospital. The problem was DPD fined 150£ that driver because of not delivering packages of that day, in that day he has gone to appointment of doctor. After that, DPD changed strategy about medical care, however, more serious problem was that the company doesn't care about this driver's health issues, but fined by that firm for indiscipline. That is the key consideration, negative fact which creates bad arguments about Gig economy, it will be deeply investigated, some steps will be shown for an ideal system that is a great disadvantage and make to think about structure of this system again.

The problem is not marginal actually and against the core ideas of Gig economy. Most of experts commonly says that the Gig is an ideal type of work that substitutes cost maker, old-fashioned, standard employment condition which is employment contract. Companies, who has Gig workers, get the results they exactly wish by the help of Gig economy's flexibility. The idea is that, there are not any standard hours being in workplaces and the workers can be called to the work when the boss urgently needs them, to do some extra tasks and get rid of to pay compulsory social insurance, also detected the minimum wage amount for that region. Also, employees can enjoy to select to whom for what they work. The most ideal part of the Gig economy is freedom in their choices, so employees have a right to be as a normal one, more clearly, they can also get be paid while they are sick, for holidays, in retirement pension, however in that case they are going to obtain lower rate for their delivery.

The workers in Gig, as a result can do simultaneously lots of jobs for benefit with their own preference. They can be employee of various companies at the same time and also doesn't depend on anyone, the delivery of them is not limited, this means their income also depend on themselves, in standard type of employment contracts there has no chance to orientate like this economy.

Research, done by McKinsey institute in 2016, saying that 20-30 per cent of whole workers engage in 'individual work'. Independent work is very general understanding, being in the border of shadow economy can cost them to feel lack of employee status. And 40% of independent workers are mainly students, people who retired, they actually should not be

⁶ Crouch, Colin (2019). Will the gig economy prevail? 1-10

considered part of this economy. These groups should not be separated to have a regular job, they are not seen in statistics officially also.

More broadly McKinsey shows that, 30% of workers, who are independent were free and the interesting fact is that 14% of them were not satisfied, also 16% of others were doing that, because they are obliged to have. That should not be a core to compare and apply this data to Gig economy, however the attitude towards to this is better and changing perspectives make it more attractive day by day.

The gig is very extensive and specific case, policymakers, especially neoliberals try to reduce the dependence of employees from government, the main point in their position is not be considered insecure. Zero hours contract and on-call principle were not successful, earnings from it were so low and they just lost right for unemployment benefits, without contract it is shadow or illegal economy, so there can be understood that there must be more optimal economy, that is the Gig.

In recent years there exists necessity to identify and close gap between advantages of employment contract and others who stay beyond these benefits and suffer from precariousness. The doubtful condition grows in thoughts and a belief to new type of economy stays in danger when considering skilled workers' employment contracts. Standing (2011) ⁷ named 'precariat' does not have sufficient practice, education or skills and companies can be dissatisfied while recruiting if they really care.

The problem gets an attention by Gig economy and grows by penetrating to drivers, couriers, cycle riders about their demand and rights. To reach the center of the problem and construct relationship between worker who has a right to rule labor of people and others supply it. The aim is to build a bridge and find an optimal way for the changes in markets, there should be seen prediction and security to all kinds of workers to be motivated and believe to the system, also they should be ready to technological advancements and adapt to shifts during they serve.

All the doubts fall behind the nature of employment contracts, the standard contracts make the Gig lag behind of former employment contracts. To eliminate asymmetric information between parties in 20th century they make an authority to employers to know about their workers. During the period of neoliberalism, employee rights in job palaces are

⁷ Cambridge university press (20.12.2022). The Precariat: The New Dangerous Class. London: Bloomsbury Academic. £19.99, pp. 198. <https://www.cambridge.org/core/journals/journal-of-social-policy/article/abs/guy-standing-2011-the-precariat-the-new-dangerous-class-london-bloomsbury-academic-1999-pp-198-pbk/E57E7B6F364EA19171C6637B63E0109D>

planned to be less, however they were not enough successful with that conflicted idea that has a biased approach about workers.

Actually, the lesson should be taken by an event when South London gas workers have a strike in 1889, there were 100000 workers of dock has a desire to diminish a bonus money, which is paid to unload ship. Also, they were interested in an increase in their wage, pay for overtime work, minimum work task guarantee. The winning mentality of these workers were a pioneer to further approaches.

The precarious condition in Gig economy is not understood and spread correctly, the Gig has a great change in the heart of economy and reconstruct ideas by considering all problems during employment contracts. It gives workers power, make them geographically free and ready to technological and social changes.

1.2 FACTORS AFFECT STRUCTURE OF GIG ECONOMY AND ITS EMPLOYMENT CONTRACT

There is a phenomenon to make an attention to technology while talking about Gig economy, however there are more factors interconnected and has a great influence on the Gig economy. These preconditions shape the economy with the factors of political economy, society and technological advancements. As being in the middle of the diagram Gig economy reacts to them as a change in whole outcome. All of the factors inside the diagram and its parameters with relation with Gig, which have the most influence will be discussed and interpreted in this section broadly.

Diagram 1.1 – The Gig economy ⁸and factors that determine the shape of that economy



Source: Jamie Woodcock. (2020). The Gig economy,27.

⁸ Jamie Woodcock, Mark Graham. (2020). The Gig economy, 27
Design by Murad Rashidov

Structure of application

That is the main feature in Gig economy, logically it is reasonable to relate it to technology that helps to formulate the preconditions of Gig. The core idea in platforms is to build a connection between purchaser and seller of this economy. As an example, with the existence of Fiverr, the platform plays a role bridge for people who look for a freelance designer or editor and suggests many kinds of services. Not like beforehand, people find easily way to reach one another throughout the apps and it only took a few minutes for both of engaged parties.

The mechanism make feel that the term of employee is an unfamiliar concept in this process and workers does not feel the pressure on shoulder on them in relationship with their boss. This is not a coincidence that today jobs are designed around the possibilities of technology. The app, with its technological basis helps to employ the people from various dimension. Clients just upload the amount and description of work of their need and platform's job seekers also create their resume, then the apps interconnect them with their minimum effort.

Nowadays, platforms work in the system of 2 basis: One of them is based on negotiation between parties and the other is price matching principle. The main innovation is about price determination, before the workers, sometimes clients set a bid and then reach out the party, but now prices are set and stay fixed, negotiation is not acceptable. Former CEO of UBER says they are not setting prices, market is configurate it itself, clearly the algorithms determine it.

The only thing is not matching, there is much more complexity in the system, such as payment, trust, oversighting board, security system, numerous functions like routine for their workers or the emergency button in dangerous situations. So, the marketplace is more than a place in which seller and buyer meets, it can cover all the process from beginning to the end of the process.

There exist rules and some encoded norms that follow the process, fundamentally there should be regulation for the system to survive, parties with these security services feel comfortable and believe the strength of the system. These platforms have an effect on the Gig economy and make it more comprehensive, advanced system. New ideas, rules are calculated for making interactions easier and make fraud minimum or zero and also update the process

bags which sometimes occurs during payment or some interaction process, the more is still in progress.

Digital sustainability

Platforming is for the technological measurement for work, in companies' workers get the salary paid for time they spend on workplaces, so the point is managers are interested in getting service they need by buying employee's time. It is hard to imagine and predict how workers are efficient enough. All of the employees do not put effort in maximum level and especially whenever they have been treated poorly and get low salary.

For Gig economy this should be considered that the platform should stay a s priority and measurement should be based on this. To create a system about evaluating rating for babysitters and guards is not easy and hard coding, however recommendation by familiar people can be superior. Deliveries, with coded by considering geological factors are not the same with human interventions when the problem occur. However, for human factor geospatial data is a huge guide.

Massive connection and cost-minimum technology

Only in recent years internet obtained importance and stand as a main element in jobs. Accessing internet created much more opportunities to people for making their duties in less time and with the least effort. Penetration was incredibly fast and it covered all over the world. The possibility to access mobile phones in low cost and build a connection with others make difficult processes available. Many people from population have been a potential client or worker of Gig economy without any problem.

There are two important factors that the massive level of technological advancements entered into our life by changing traditional work condition to modern version of the Gig economy. First, Gig economy companies make the workers to find more client and work with them. It has also affected on recruiting process and also daily interaction of the parties. However, there still some people use basic, old-fashioned phones and do not have enough information about last changes. There is a remedy for that, in Maputo, as an example, people can interact with each other with SMS system, maybe it is deteriorated, but it still works and make people to connect the Gig. Second one is more global, Gig economy helps people to

reach each other not only locally, as a driving or delivering, it has also been a global probability maker for other markets of labor. Graphic designer does not need to move from one place to another to negotiate about details of his or her work. Migration is not only about people, labor can also migrate despite the kilometers and being stay inside of human ability, this let people connect to the global network.

Consumer's desire and point of view

Logically, a modern economic status requires consumer's support, preference. Platforms, engage in delivery, sometimes do changes to encourage people to use, for example apps' features are enlarged to some extent, so there is no need for connection with phones. The changes should not be drastic and they should seem interesting and helpful to users for being accepted by them quickly. Consumer power is never overrated, petitions or public pressure should be considered while there is need to declare very important, enormously vital decisions during this socially active process.

Racial and not gendered bias approach

Relationships of racialized and promoting equality principle is a social factor and in the core of Gig economy. Bias can be reduced, because machines do not discriminate, however the machines also is prepared by human factor, there is no guarantee these people use data or construct algorithms. Gendering is only can happen naturally by choice, because domestic work is also about raising new workforce for generation. It is not always straightforward that women at home and men at work. Women are not an 'emotional burden' in jobs, they are able to perform inside and outside of the home effectively, unpaid work domestically cannot motivate women and it can result feeling not valuable. Migrated workers may seem appropriate to less salary or hard works; in Gig economy they still have a choice where to be and what to do for whom.

Preference for flexibility of workers

This factor is not only a social factor, but also about political economy. Flexibility is important for both of employers and workers with cultural and social effects. With possibilities of Gig economy workers feel free to choose among various kinds of work. For some to deliver with car is normal, others prefer bike or even cycles, different age groups can

think in a different way. The treatment also differs, UBER has a good approach, they do not see their employee as a worker, they named them a partner. This a new standard and against some requirement and responsibilities of standard employment relationship. Working hours are also crucial point, standard hours can be barrier to workers' flexibility. It is not about less time at work, the point is to configurate your own hours and that should not be tolerated refusal of work, that is on-demand principle.

Regulatory form of states

For the regulation of state, we should take a sense about neoliberalism, this a factor of political economy. Despite the challenge of plenty of economic problems with or without neoliberalism everything is not going to be fine. From the point of view of David Hervey⁹, he says: Human welfare can be evaluated making freedom to humanity and strong property, entrepreneurship rights, free market and also trade. There is an obvious consideration that the Gig economy has been impacted by neoliberalism. Gig economy is a perfect cover of venturing capital.

Power of employees

The Neoliberal context has diminished protections about employment, shifts have a great influence also in jobs. There happened some deregulations, subcontracting and also the fragmentations on different class of work appeared. The failure of movement to unite reduced worker's appropriate capital, attitude about employment shifted. Those changes decreased authority of workers to conduct their work themselves. Workers insisted, united against law, however lost protection of institutions.

Globalization

Globalization is a final aspect of preconditions and also has great influence as a political economy and technological factor. From developed countries to developing countries globalization shifts trade to different parts of the world, does not matter in what extend they developed. Nowadays, some global platforms rounded us and it is hard to imagine life without

⁹ David Harvey (2007). A Brief History of Neoliberalism, <https://academic.oup.com/book/40603>

their features that enlarged opportunities. Mastercard, Online Maps, GPS systems, WhatsApp and operating systems as IOS, Android make life easier. Globalization create an opportunity to grow and extend scale to international level. Companies easily adapt the situation and apply last updated versions to succeed in their job status. That is a technological infrastructure that monitor and let people to reach out one another, in a globalized word the Gig take an advantage and catch the opportunities.

1.3 PROTECTION OF INCOME, SOCIAL INSURANCE PROGRAM AND NON-WAGE TYPE OF INCOME

The contract of employment includes some advantages on it as pension and insurance of health. Broadly, employees are attracted to work by social packages as them. Those contracts are under control of companies, organisations and they are prone to keep the balance. That is not practically very hard to monitor all of workplaces how they are engaged with these programs.

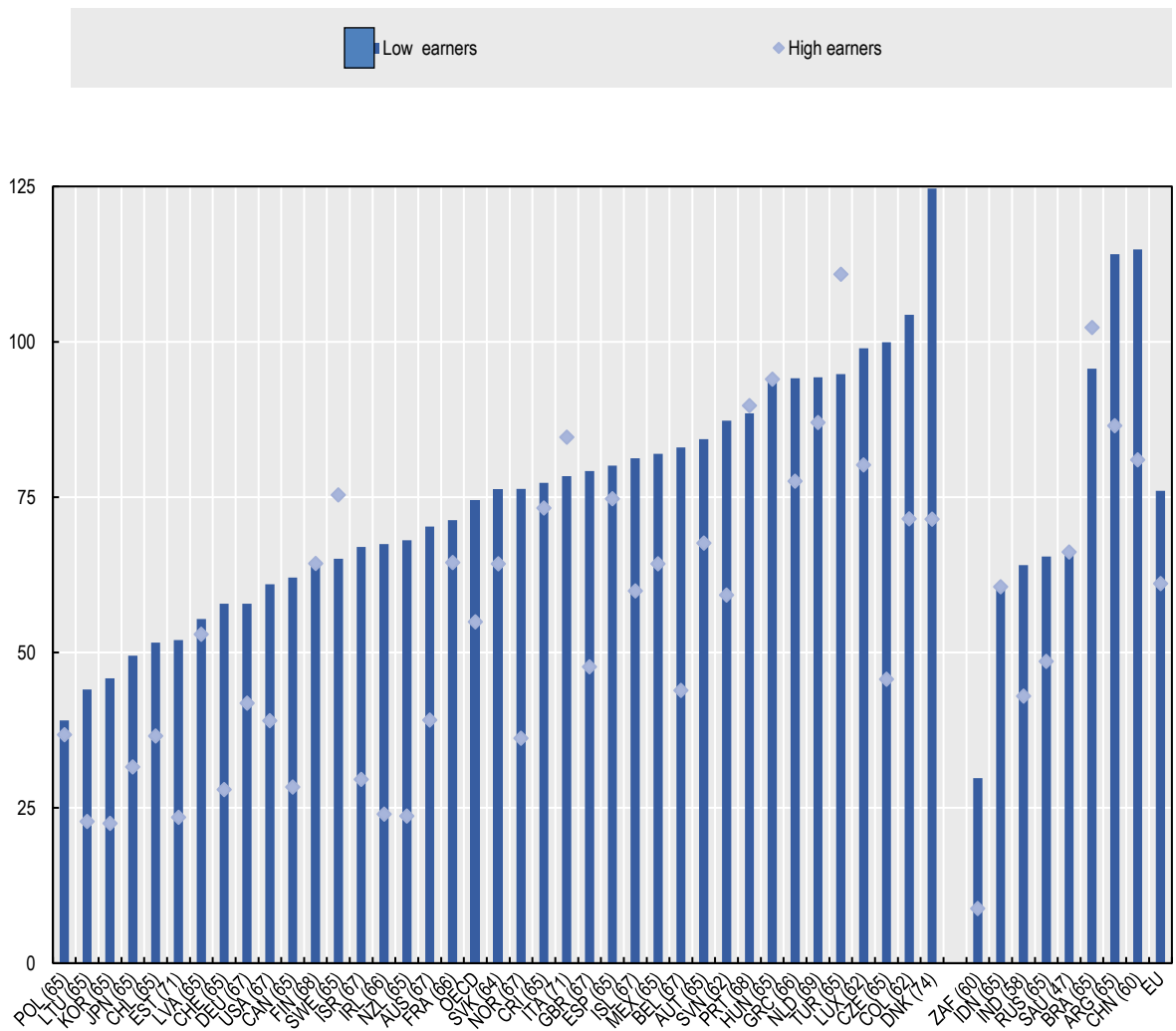
Situation in comparison with private sector differs in public sector, government support employees with their other income from different sources and their expectations of predicted income and it diminish dominant level of employers. In the period of 1960s and 1970s, social insurance packages were very famous. Most of Europe countries during this time self-employment has been slowed and get a low level of preference. Then, women started to have rights and they all begin thinking about to get the same benefits with men. There also appeared pensions – being old for working and performing effectively, unemployment - not able to match your job appropriate skill to jobs or not finding a job and disability benefits – to be disable by a misfortune accident or being ill that prevent you perform in a better way in a workplace.

Pension, after retirement comes into mind after observing poverty level of old people in lots of countries including Europe. In agriculture, mining, engineering age can reduce effective level of working, also young generations' education level is considered higher than former workers. So, as a result the amount paid in pension increased by raising taxes for employment and pension age reduced. However, people who have middle income level were impacted the most and for productivity it was not expected and a problem for balance. In the year of 2002 more justified and systematically comparative data principle applied, they raised age of retirement, diminished benefits and added extra contributing, most importantly

calculating variables are determined as contributions during life of work and performance of them considered.

Low-income level of recipients suffered; their mean of earnings decreased. Turnover rate also was very high, it is not always that easy to protect balance. Support for their income lowered because of high taxes and losing some benefits, it is logically normal, because their performance evaluation cannot be so high, the reason is low-income jobs' importance cannot expect too much.

Figure 1.1 Net pension replacement rates over the countries: Low and high earners¹⁰



Source: OECD, <https://stat.link/oher2v>

¹⁰ OECD, <https://stat.link/oher2v>, <https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fstat.link%2Ffiles%2Fca401ebd-en%2Foher2v.xlsx&wdOrigin=BROWSELINK>

The net pension replacement rates are person's net entitlements of pension divide by net earnings of pre-retirement disposable income. This can be a great evaluator about countries' pension system. In the chart mainly OECD countries represent 10.6 % of higher gross rate of replacement, this means those countries have a strongly effective tax rates, at the same time social packages through their career. Logically, pensioners have a lower rate in income tax, therefore gross replacement rates are lower than net replacement rates.

As a comparison net replacement rate is 35% in Estonia is considered low and 103% in terms of highly enough in Turkey. Low earners are typically related to minimum wage levels in those countries, and also the other factor impacts that is a pension age in these countries, the death age even is a maximum point that a pensioner get the benefit's amount.

Compensation due to unemployment

The idea of unemployment compensation is similar with compensation of disabling. In the beginning of the process, government suffered huge amount of spending and therefore obliged to diminish being eligible level to the benefit. So, as a result people started accepting all kind of jobs not to be unemployed, however in Gig economy there is a chance to select among various options. The core principle while evaluating unemployment compensation was calculated by considering how much time the unemployment continued. It is necessary to be eligible to categories and suitable to strict rules.

Support for income

Income support is essential for people to live, this should be calculated by taking attention to minimum living standards and benefits of government from taxation from individuals.

Impact of 2007-2008 crisis

The impact of crisis was incredibly huge and it also has impacted labour markets. The Trade Union Institute of Europe have some decisions on public policy and experience about unemployment covering countries The Netherlands, Slovakia, Slovenia, Sweden, UK, Czechia, France, Germany, Greece, Ireland, Italy. They are forced to decrease unemployment

insurance. Overall, looking at European countries and US laws about job protection laws lowered, however other employment rights optimized. Generally, asymmetry of employment contracts has been lost and quality level of contracts declined. The declining trend was not only seen at parental rights which has been developed.

Maternal and parental care can be seen as an obstacle to their employment contracts. In standard employment contracts in comparison with Gig the benefits were enough and they do not positively affect employment. Workers, who care about their career in advanced level, they can deny those benefits in order to gain more, opportunity cost is very high, but when thinking in a macro aspect traditional right can sometimes be a barrier which enlarge human capacity and do not let them to perform in a better way. All these considerations come out to the one new principle, which is Gig.

1.4 FROM UNSTABLE WORK CONDITION TO NEW APPROACHES IN EMPLOYMENT SECURITY

There always existed a debate about current work condition and year by year it is increasing. Lots of forms of insecure jobs affect whole employees and the young people also. The most famous and important ones will be discussed broadly: Part-time work which is done involuntarily, temporary jobs, Gig economy workers and the shadow or illegal economy.

Involuntarily done part-time work

Part time work has been increased so much especially in last 15-20 years. In its first forms it has been considered for moms to be able to engage in work. Some of part-time work seekers could not find full time jobs and work as a part-time worker, they are not considered precarious workers, we take into account naturally part-time job holders. Part-time workers want same rights, authority with full time workers, that's why in OECD countries they are called 'involuntary' part-time workers. That is not a coincidence that there are 5 % of total workforce in part-time jobs and the number of women is much more there rather than men reasonably.

Temporary jobs

Temporary jobs appear for a reason, they are form of employment that workers cannot be able to work for full time, in labor market and to them suggested jobs for a known period that is secured income and automatically they cannot demand protection from government and lose some benefits as redundancy. Despite the uncertainty and not feeling under protection day by day demand to temporary employment and the number of workers increase in a considerably big amount.

Gig economy workers

Individual workers are considering self-employment and it has formally 2 forms: Entrepreneurs in the scale of little amount and practitioners who are professionally engaged in work. Actually, self-employed people are doing jobs that require low skills. Workers on their own account were dominant among women, however nowadays are famous in both genders. The ideal form of individual working is Gig economy, despite the challenges The Gig get the fame and support by its special offer and contract, also sustained a guaranteed place on the heart of economy.

Illegal job 'holders' in shadow economy

The dark side of economy is about illegal workers, which are considered shadow economy. Being in the illegal part of economy usually means participating in illegal activities and it is very hard to imagine or calculate those workers. Despite huge involvement to the shadow economy, productivity is not in a high level. New version of economy has a lot of job opportunities with previous sections, so although estimating shadow economy is hard, it is in a decline last years.

A general image about shifts in economy

That is not a conservative thinking that whole economy should include to standard employment. From past time, generally trend of precarious works diminished, because of modernization of agricultural, other forms of individual works. In comparison, involuntary,

part-time or temporary and Gig works increased. Those, updated forms of work status protect people from insecure, unstable works and a guarantee for their family. The Gig economy mostly rises in heterogenous economy.

In the time of free economy, government's dilemma is about 2 versions of economy, keeping balance traditional employment and Gig economy is a main purpose. Support and protect people more and give them right or make a few restrictions on unfamiliar type of economy, for example, The Gig. The other point is in what extend these economies should develop and how much interaction of them is possible. On the other hand, if gig economy proceeds and be the dominant in economy, is it a threat or prosperity for whole economy in future?!

1.5 REPRESENTATION OF GIG ECONOMY AND HOW IT PROSPERED

The gig economy is not as simple as seen, that is not only intermediary between purchaser and supplier. There are lots of new factors that change structure of economy. The gig economy differs from unstable works, that offers hotly demanded and secured jobs. This is still hard to measure the scale of Gig, however day by day it is more imaginable. It is not a coincidence that in the US, independent work or standard employment contracts is not famous and demandable as before. The reason is in the greatness of the Gig, this economy is a great tool to change sculpt of economy. According to Hermann¹¹, in his survey of the year 2019, 1.3% of people earns their income from platforms, for those countries that should be considered good enough. There are new thoughts about applying Gig to every side of economy, that is very time consuming and mind blowing, in next chapters it will deeply investigated and results will be discussed.

Till there lots of themes talked about platforms of Gig that operates whole system. Platform concept for the Gig economy is very different, this is not only a bridge, but also as a typical firm make possibilities for different parties. The digital platform helps to bring together suppliers, buyers and also the labour. The platform geographically is not limited, has

¹¹ Hermann (2021). Measuring financial inclusion in African Countries, https://www.researchgate.net/publication/353348292_Measuring_financial_inclusion_in_African_Countries

an access for all people, who even works full time in their jobs. The contracts are not strict as normal employment contracts, regulation of rules is not obviously sensible and employee preference over the jobs are volatile, also minimum employment rights for workers are considered and applied.

UBER, in London is a platform that connects people of 30000¹² on demand a great indicator. The availability of online working platform covered the city about offering taxis. Spatially controlling over the system and monitoring employees is a good advantage, also prices, rates are determined by looking at the market and settled. Bonus, reward also given by system for performance and users are informed when they get it. Digitally all information needs about buyer and seller collected and gathered, then connection is creating, the process is constructed as that.

Being part of gig economy is more than being a worker of a firm, structure of Gig can be reconstructed by employees and employers considering the state regulation. In the system of Gig economy workers actively participate in organizing and help to find any missing issues. The idea is that workers are as front officer and interact with purchaser, also they are able to collect data, preference, needs of buyers and of course this can be a factor to push the Gig in its greatest efficiency.

Illusion of control is core for companies about their management strategy. Some workers resist to high commissions or losing bonuses and depending on the number of resistances some regulations applied, the positive side of Gig is through the process workers are not even sure to whom they are against and interaction or spoil of relationship is not a problem.

'Cloud' work concept

The probability about employees to do same work or to work for same customers and not informed about it. Individualizing is not an accident; freelancing is also completely being single in the process. Collectively gathering and ruling is a purpose in Gig economy, however the platform is interested in self-engagement for evaluating. Cloud work is right now is the

¹² Dinah Rose (2017). Employment appeal tribunal, https://assets.publishing.service.gov.uk/media/5a046b06e5274a0ee5a1f171/Uber_B.V._and_Others_v_Mr_Y_Aslam_and_Others_UKEAT_0056_17_DA.pdf

most famous in educational programs and apps which get the importance specially after pandemic.

Trade union

That is not a secret in its early times there has been a great pressure against system of Gig and success of workers were limited. Struggles not only happens in the local system, it happens also outside about sanctions, even to structure of network. Selection process of Gig economy workers are always debatable, some thoughts is about that they are unorganisable. Despite the organisation workers always will have a power, the core idea to build a strong relationship despite the challenges.

Gig economy as a new perception

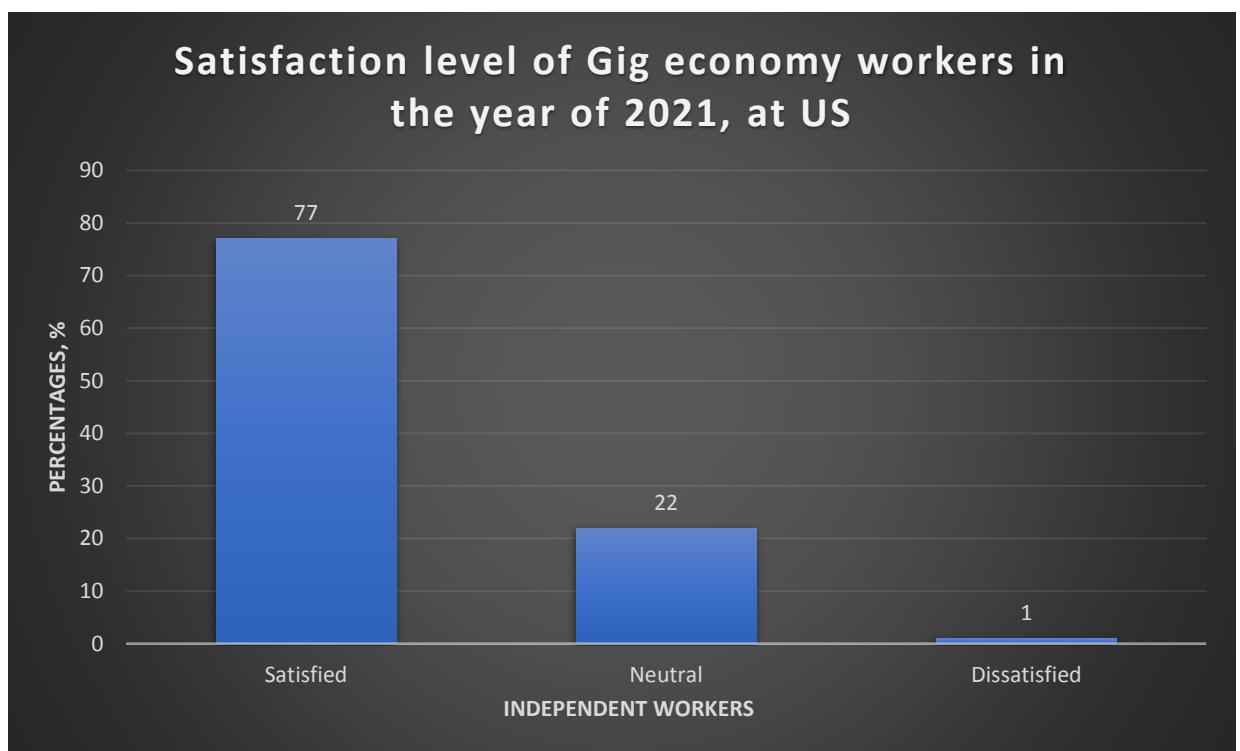
Gig economy is a new conception, truly coming from temporary jobs, freelance and has interconnection of clients with sellers within a digital platform. Gig economy has gained a lot of flexibility and make condition of freedom with a security which grows day by day. The name of gig is taken from world of music, with meaning of short-time performance at venue. The gig economy stabilises and adapts current needs of market also attempt to build stronger relationship between parties. People, who do not want lag behind technological advancement uses advantages of internet and get positive results. Richness in Gig economy from driving to delivery, from delivery to coding is in a high level and for future it is estimated to increase in a big number.

Post covid term teaches people how to work from home, nowadays freelancer mostly stay at home and get their money, the Gig's other purpose is to make possible this and let people more freedom. This phenomenon does not appear by chance, people's desires, needs discussed and applied. The gig makes it possible to recruiters that cost of recruiting is low and more flexibility get the process easier, but some experts consider that dangerous for full time workers, who dedicate their education and skills in to the field and stayed loyal there a lot of years. The other argument is that Gig economy can unbalance work and life, also unemployment insurance now cannot be compared with Gig economy's income, people rethink about Gig and the benefit after retirement lost its value while looking at this economy.

Those with a strike against strongly-build customer relationship, practice make it dangerous, so they show Gig as a threat, however this new standard does not count on to spoil other workers, this just attempts to create people a new, special place for improving their other skills and gain more.

The Gig economy works such as being tutor, trainer in fitness and freelancing are a hobby or extra works that enrich people, also support economy from other side. Companies does not lose anything much risky as before, they are free from compensations, health insurance and other bonuses. There is a statistic in 2021 say that 77%¹³Gig economy workers satisfied from their jobs which should be considered a great number, 22% of them was neutral, only 1%of them dissatisfied.

Figure 1.2 Satisfaction level of Gig economy workers in the year of 2021, at US



Source: Statista, <https://www.statista.com/statistics/916294/gig-economy-satisfaction-workers-current-job/> (2021)

Those days workers are in the advantage of to have a personal computer into pocket, today's technology helps people to have a part of workforce by clicking a smartphone. On

¹³ Statista, <https://www.statista.com/statistics/916294/gig-economy-satisfaction-workers-current-job/> (2021)

average Gig's recruiting process holds approximately 1-3 days, traditionally it was close up to 40-45 days. As an estimation The Gig economy planned to spread different parts of economy, for example freelancing as a gig work still has lots of sections and vary from each other deeply being part of it.

IT services
Financial analysis and accounting
Public relations
Software apps developer
Medical services
Management of enormous projects
Research and development
Designing

The term of your contract is merely depended on your own, taxes are not deducted from your income and the work is project based and you do not have an exact boss. Professional career does not count on years or sustainability anymore, it depends on choices and preferences of people about different industries. The question is not same now, why we choose you shifted and been why you choose us.

The only thing you should be very careful about Gig is do not be trapped in these apps. For more income you can increase your working time, but be careful about your limitations. The gig's structure is not a game that for every new element you should care, preferences should be determined and for purposes some steps should apply. This is a digital resource, you can use it as a tool, just your resume can be updated and ready ton the current requirements and that is enough.

The Gig economy is full of new opportunities, from different tasks you acquire new talents, work experience in different sides of economy. Socially active, skilful workers get more attention, because diversity of works based on these features. Your time management skill is a key about deadlines, plan your assignment, create a checklist and try to adapt it, as a boss of yourself you should monitor your own alarm. Those breaks are a key of success and a great access to new world of Gig and focus on your work by blocking distracter as social media, all of them applied together can prevent you being burn out.

There is a need to make attention about boundaries of people, with the help of technology it is possible to find some contact information of people, even whenever customer

is late, that is not appropriate to call him or her over messenger or write messages, private life is untouchable.

Retirement plans after Gig is not a consideration, traditional benefit packages are in the shadow of Gig, by its features that keep people far away from stress. Uberization is a new term and reduce level of temporary system by increasing rights of workers in their job and also on their own. This process require ability to work with clients, to feel their needs and users should attempt to collect good reviews being promoted, advertise yourself is also very important point in Gig. Constructing a professional LinkedIn profile is better than have a time in Snapchat. Repetition on work is inevitable, however customers want more, being open to other type of contracts should be in interest. To gain more time creating automated response system is a better and link for more information can seem more attractive.

Clients bring more clients, resistance level differs, building a strong relationship helps to involve them again and then their recommendation is also a newly born customer, also these have their other friends to talk. Power of relationships always does not work for you, several type of people will be in the experience, being psychologically stable person and having analysing skills are key factors. Improvement process should be a vital, so in future there can be a chance shifting to traditional employment. Prosperity of Gig economy is with an interconnection of standard employment and Gig's perspective.

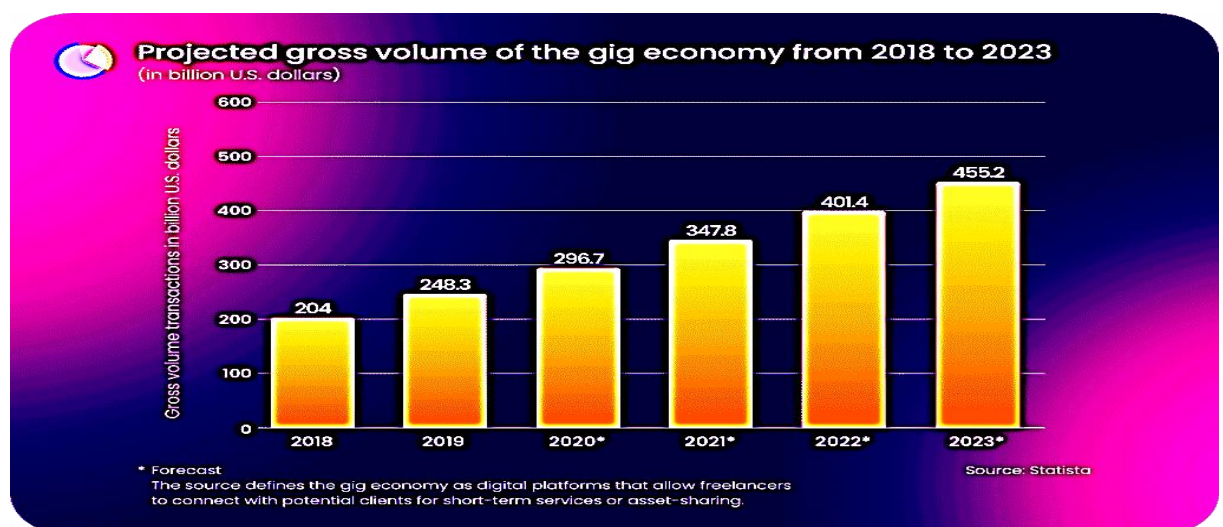
CHAPTER 2. POST PANDEMIC EFFECT AND FLOURISH OF GIG ECONOMY AFTER COVID-19 IN THE WORLD AND US

2.1 GIG ECONOMY WITH ITS EYE-CATCHING STATISTICS AND PROMINENCE IN US

The gig economy is a future job and future is in safe hands with Gig by considering very striking statistics. Digital platform's growth speed carry Gig economy to supersede other standard jobs. As a prediction it is estimated that till 2023 the number of freelancers is going to be 73.3 million and in 2024 76.4 million of their participation is expected.¹⁴ Total share of US workers' attendance in Gig economy have been increased 15% in last decade. The Gig is incredibly fast, as an example its growth 8.25 times faster than US economy a whole. Freelancers in territory of US has had an addition of 1.21\$ trillion to US economy in the only year, 2020.

There is also big income earner inside the system of Gig economy, 40% of big income earners represent the Gig economy. From a report of European commission, more than 28 million people now works within digital apps. Even a fantastic statistic says that 300% of people in UK rise up during Covid-19 incidence. A survey of Mastercard reports that Gig economy has 204 000 000 \$ gross volume in 2018.

Figure 1.3: Gross Volume of Gig economy in the period from 2018 to 2023



Source: Statista, <https://www.statista.com/> (2023)

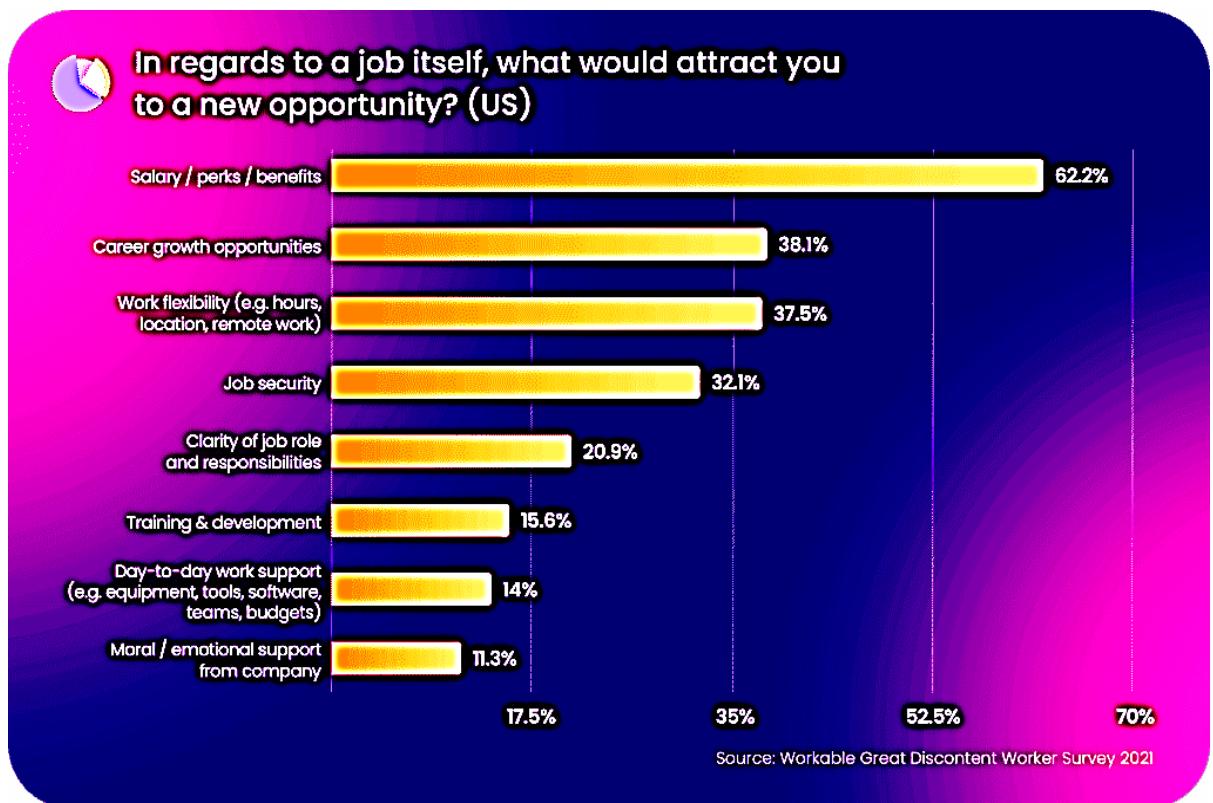
¹⁴ Statista, <https://www.statista.com/> (2023)

These are an outcome of transactions happen in Gig economy. Till the pandemic Gig economy's fame was not that much and after Covid-19 it boosted, a proof is on the above, the chart shows how the Gig is up, trendline is about growing and reach very big number. In the year of 2022 with the number of 401 400 000 \$ ¹⁵gross volume amount it performed being approximately double of 2018th year. In 2023 it is still growing and rising tendency itself is in growing trend.

The theory has a sign for hope for next generations, so now employees who work independently is the age between 21 and 38 and the gap between men and women day by day decrease, women involve also in Gig and try to catch level of men. According to Team Stage, 48% women and 52% of men shares the stage of Gig jobs.

Gig economy is interested in to be in the middle of the frame that covers business and workers. Companies with a great experience and success are interested in sharing, borrowing and catching talents with flexibility in special projects. Flexibility of workers are very enormous factor and with Gig economy its importance came to another level.

Figure 1.4: Survey in US about people's desire to new opportunities



Source: Workable great disconnect worker survey, <https://resources.workable.com/backstage-at-workable/announcing-the-great-discontent-2021-worker-survey> (2021)

¹⁵ Workable great disconnect worker survey, <https://resources.workable.com/backstage-at-workable/announcing-the-great-discontent-2021-worker-survey> (2021)

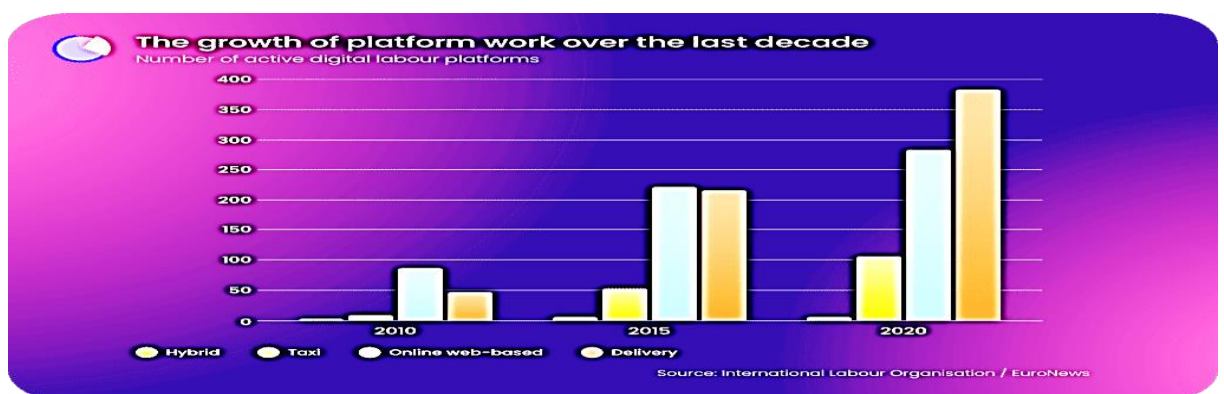
The image in above represents which factors make you think about an opportunity about jobs most and they are formulated after a survey conducted in US and in the year of 2021 by Workable great disconnect worker in 2021. The workers in Gig economy feels very satisfied and happy, even if some of their wages are not good enough, they are still in the interest of being part of Gig economy.

Salaries with key benefits stand as the major element with 62.2% of great indicator. People are keen to get their motivation from high salary and being evaluated due to their all effort. Some gig works lose the rivalry against traditional jobs, but a very new type of economy cannot be in the same level with many times practised way. However, that is not superior being alone and other factors also is an element to impact the whole. Career opportunities are very key point being 38.1% of whole and in workplaces in comparison with standard employment contracts the Gig economy’s variety and career chance is unlimited and very hopeful.

Then, the most powerful factor of Gig economy comes with flexibility in jobs. Working hours, work place and chance for remote is a beneficial fact in Gig, 37.5% of results itself is a reason to think and open up a space for an opportunity for the future. Job security is considered a problem of Gig economy, however with an updating version of its contracts it is going to be more secure. This is also very important variable, 32.1% of people realize its cruciality in their jobs.

Role and responsibility in the jobs are important specially for professionals, 20.9% of people are also evidence for this category. In Gig economy roles may not be fixed and some well skilled people can feel comfort, others may become and think a little bit unsecure. Training and development are a requirement by people to maintain their dominance on jobs and update their knowledge. 15.6% of people are aware of it, Gig’s training and development programs with technological advancements are a sign of quality. Support from companies within the possibility of budget in teams are considered remarkable, Gig’s flexibility reduce need to that, 14% of people also considers it very substantial. 11.3% of people wait being emotionally sustainable by the decision of organizations. Gig with its AI support also reduce level of emotional damage with the help of platforms. Now, it is time to look at how platforms impacted through years.

Figure 1.5: The growth of platform jobs over the last decade



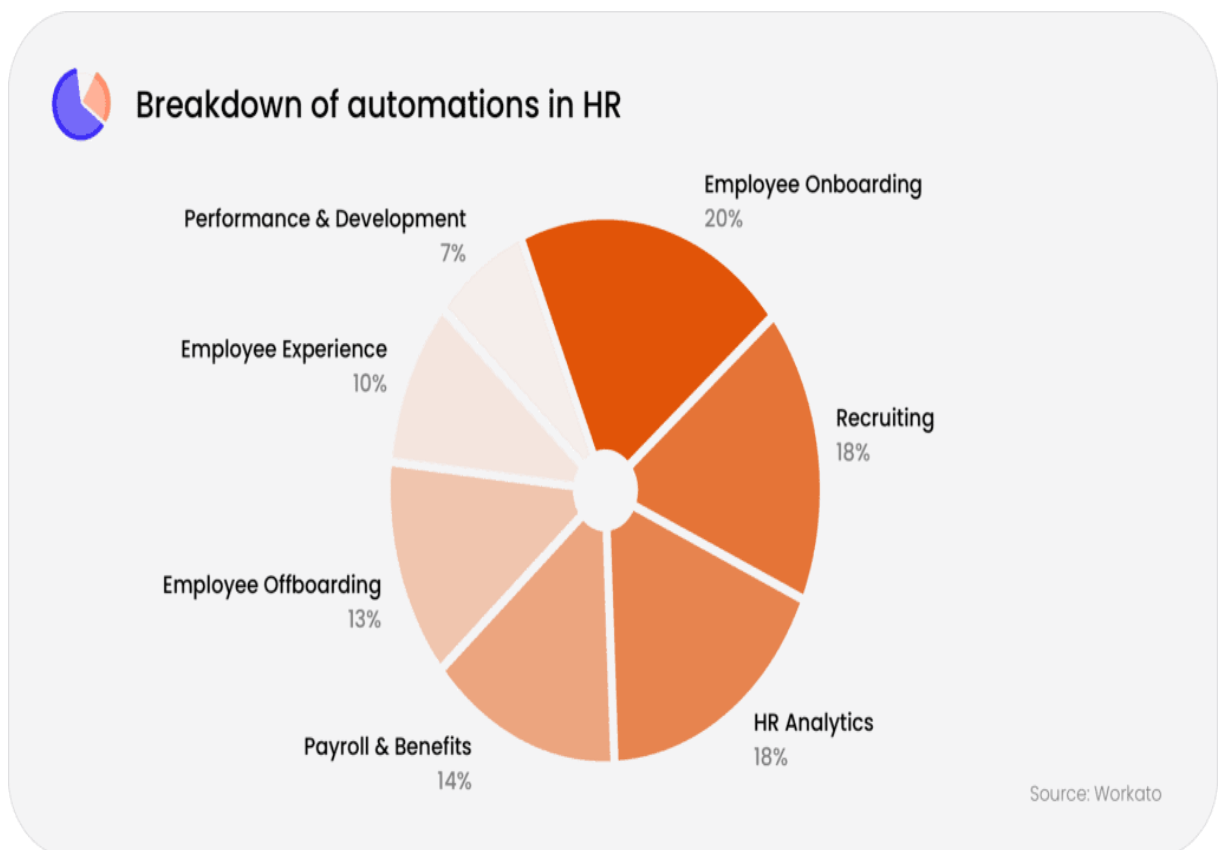
Source: International labour organization / Euro News

https://www.ilo.org/global/research/global-reports/weso/2021/WCMS_771749/lang--en/index.htm

In previous chapter there has been talked about platform jobs and rising trend of it created differences among people, for international labour organization platforms' developing tendency nearly doubled over after every 5 years, within the period from 2010 to 2020. The chart above shows 4 type of platforms and generally the most famous and useful ones. The other visible fact is about that hybrid and taxi apps are in the shadow of online and delivery apps. Number of active digital platforms or apps in 2021 was 777 ¹⁶and it means in just one year from 2020 to 2021 the number approximately doubled, after Covid-19 process has been boosted up.

Automation process covered all types of works and even includes HR's recruiting steps. Technology makes find the right person for your job, especially in hiring process that make easier the process. Repetitive tasks and same process makes employees annoy. Onboarding and offboarding tasks are now seen as a new and very effective way of recruiting process. Also, offboarding with remoting employees can be very stressful, however within the system AI can help reduce time and cost longevity. The new era helps HR to find better solutions and rule company with less effort and stress, by clicking and selecting a department employee can easily connect to new team and enjoy benefits of new place which he or she suit the most. That formal processes with AI let companies do their most important works as performance development, employee's payroll, benefit and HR's recruiting, analytics, they all are increase worker's experience.

Diagram 1.2: Breakdown of automations in HR

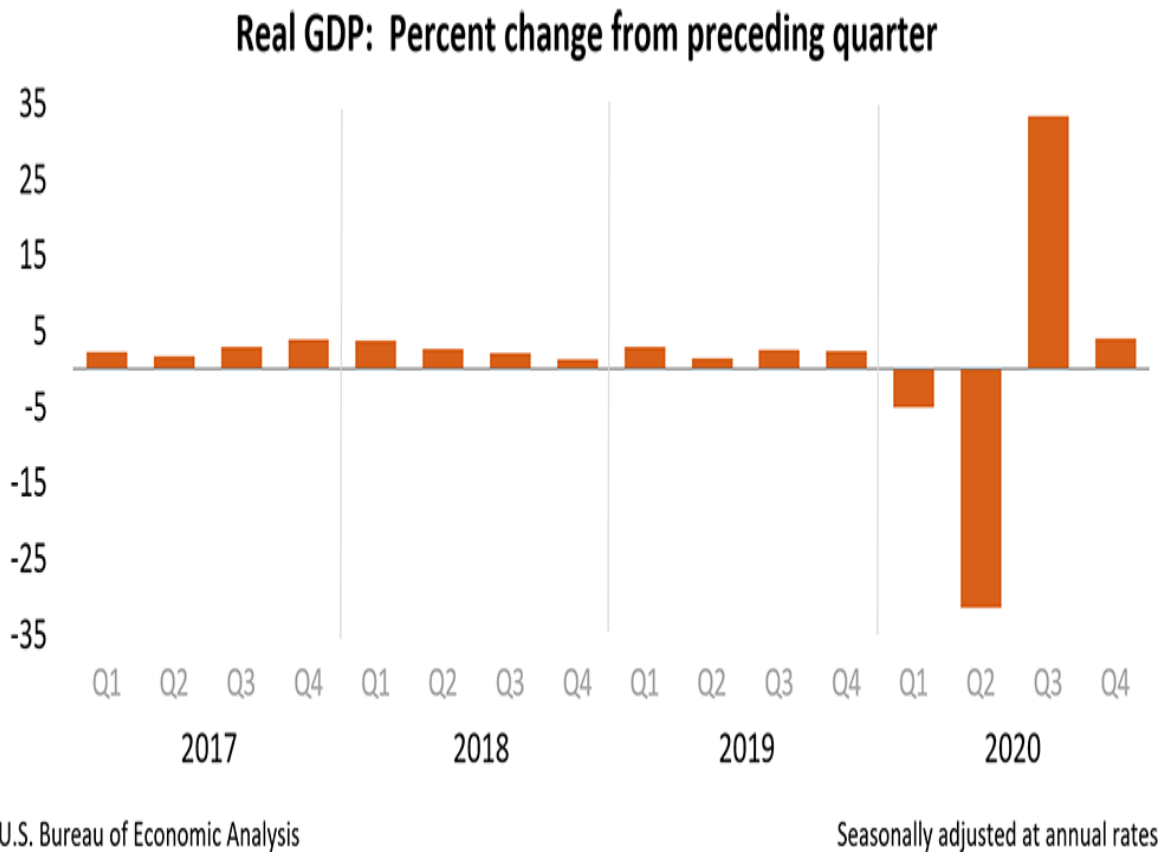


Source: WORKATO, [https://www.workato.com/the-connector/hr-automation-trends/\(2022\)](https://www.workato.com/the-connector/hr-automation-trends/(2022))

¹⁶ WORKATO, [https://www.workato.com/the-connector/hr-automation-trends/\(2022\)](https://www.workato.com/the-connector/hr-automation-trends/(2022))

Covid-19's one of the main problems in economy is considered unemployment, a lot of stimulus payments have been paid to people for their needs and demand. Spending also decreased during pandemic and there appeared a very important desire in economy to earn more. Also, GDP of US has been affected very much, as an example there is a data shows real GDP of us in the years of 2017-2020.

Figure 1.6: Real GDP of US from 2017 to 2020 quarterly



Source: International financial law profblog (30.04.2021), <https://lawprofessors.typepad.com/intfinlaw/2021/04/gdp-increased-at-an-annual-rate-of-64-percent-first-quarter-2021.html>

Covid-19¹⁷ impact on US economy has been seen mainly in the last quarter of 2020. After economic recovery, Covid-19 still continued and due to severe condition of pandemic government is obliged to set strict rules, hard restrictions, legislation to country. Full effect of Covid does not always impact the result, after a certain period its effect spread and seen more clearly. Spending on goods decreased enormously, also retail trade slowed a lot. From another perspective, in a very risky situation dollar was very attractive for investors and still was very desirable currency. Volatility during 2020 as seen I graph was because of pandemic and in this period Gig economy and its workers prospered.

¹⁷ International financial law (30.04.2021), <https://lawprofessors.typepad.com/intfinlaw/2021/04/gdp-increased-at-an-annual-rate-of-64-percent-first-quarter-2021.html>

2.2 US GIG ECONOMY AND ITS CHALLENGES BEFORE AND AFTER PANDEMIC

US economy also feel the challenges of Covid-19 recent years, unexpected attack of coronavirus affected daily routine of people and changed behavior of all parties inside whole economy. Gig platforms shifted some strategies and make people think how they construct their career by using benefits of Gig economy. During a very wonderful period Gig economy grew in great numbers because of a substantial need to the services that is very on demand and important as a life saver.

Pressures have been increased about life and people's desire and view to world shifted from angle. Life has been a challenge and competition to be survive in those times. Health gained its actuality and gathered attention rather than other traditional jobs. All type of people, mothers, fathers, university students, old understand the value of time and appreciate by focusing on other activities by creating their extra skills to make more money, that is good for paying costs.

Priorities differed in comparison with old times, being more flexible and dominant stayed as one of the most important factors these years. Before, low level of retention and part-time jobs' superiority is considered a problem about the Gig, after Covid-19 full-time jobs increased and turnover was done to minimum level, companies with their employees and their connection reached to another level.

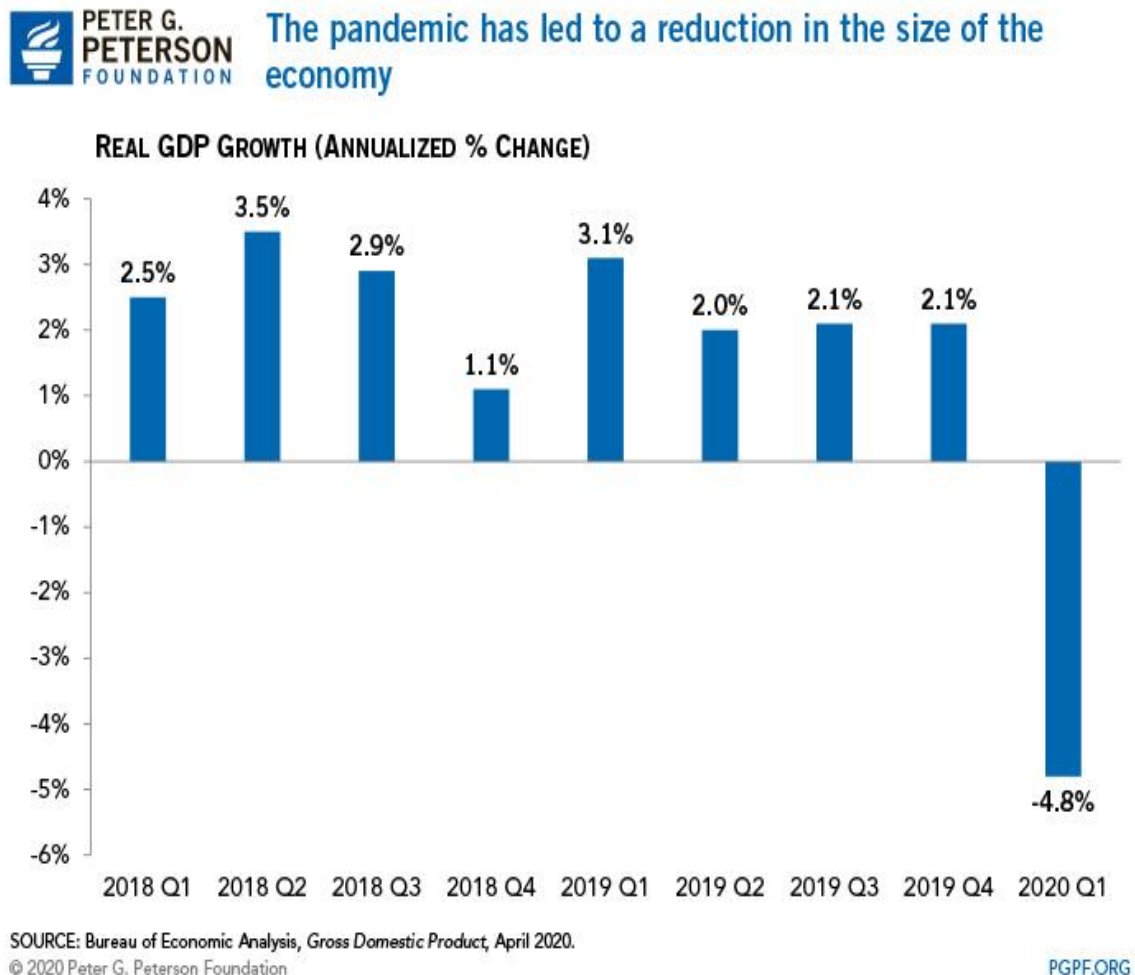
To give workers more power and authority makes Gig very strong, before in traditional jobs by taking into account synergy individuals could not see enough attention by their company. Culture ¹⁸of organizations is not only inside the company; it covers outside of the company and expand borders. Personal life challenges are not brought to workplaces anymore. People with their own interests are in the center of the value of companies by purpose.

The pandemic is not only about discovering Gig economy, that is inventing a life more deeply and understanding its value, people should work as a principle of eating to live, it is a part of life and that is lifestyle, it does not cover concept of world. The gig economy consists a lot of factors that motivate people to be part of it and use its advanced features applying them into their life. Pandemic teaches people all over the world that it is easy to disconnect people from one another and care only about their health, so workplaces and workmates are physically can be not obvious and you still can work and gain money for your needs. Emotionally depending on somewhere, something or someone too much is not a good idea and considered normal for professionals, a real worker should be ready to every situation and improve skills to work from everywhere despite challenges. No one has been guaranteed from adverse events, not being available and work with presence, idea is simple, to implement and finish the tasks appropriately without looking at what happens. The more emotionally stable you are, the more productive job you give.

¹⁸ Smith, Covid-19 And The Gig Economy: What To Anticipate When The World Returns To 'Normal', <https://www.forbes.com/sites/forbesbusinesscouncil/2021/09/10/covid-19-and-the-gig-economy-what-to-anticipate-when-the-world-returns-to-normal/?sh=5254f1494dd8>, (10.09.2021).

In the first quarter of the year 2020 Real GDP has fallen to 4.8% and BEA's these reports really shocked people and that make politicians to think about future. This diminishing result mostly seen from the month of January to March and that was most severe months of pandemic. All of these together has led to shutdown of economy and that also continued in the second quarter of 2020. Main reason of this down were low level of consumption and investment.

Figure 1.7: Real GDP of US immediately before and after coronavirus



Source: Bureau of Economic Analysis, GDP, April, 2020.

The figure 1.7 above shows how an economy slowed and after then it started to go up slightly again, in 2021 it increased 2.8¹⁹ percent. It was too hard to estimate and predict longevity of Covid-19, however recovery of economy itself corrected situation and the whole recovery of economy of course would take a little bit more than that. Initial picture and general overview are about how Covid-19 affected whole economy and mostly focusing in the case of US.

¹⁹ Peterson foundation (29.04.2020). First Economic Growth Report Under Coronavirus: Real GDP Falls 4.8% In First Quarter, <https://www.pgpf.org/blog/2020/04/first-economic-growth-report-under-coronavirus-real-gdp-falls-in-first-quarter>

Due to completed survey in the year of 2022 peoples in US ²⁰engaged in contract jobs as gigging, freelance are 26 million people. Nearly sixteen percentage of American people got their money from online Gig apps and also nine per cent of them obtained income from Gig jobs in 2021. In the period of coronavirus, the number people of US choose freelancing was 12%. One of the most surprising statistics about US is that designing and art are the most prominent ones including as Gig work, this is not a coincidence that it is expected about 455.2 billion USD gross volume of Gig recorded. Now it is time to look at how Gig work spread by states of US.

Table 1.1: Percentages of Gig workers through states

State Percentage ²¹ of Gig Employees
Florida 22%
California 20%
Illinois 18%
Texas 18%
Massachusetts 16%
New Jersey 16%
New York 16%
Ohio 16%
Pennsylvania 16%

Source: ADP research, millennial money (2023), <https://www.adpri.org/>

Florida has the maximum percentage as seen in the table above is 22%. Other states come with very close percentages, California with 20%, then Illinois with per cent of 18% and others, Massachusetts, New Jersey, New York, Ohio and Pennsylvania all of them is 16% and this balance shows popularity and strength of Gig economy.

²⁰ Lana Rose (20.01.2023). Gig Economy Statistics For 2023 (Number of Workers in the US), <https://www.prosperityforamerica.org/gig-economy-statistics/>

²¹ ADP research, millennial money (2023), <https://www.adpri.org/>

2.3 CORRELATION ANALYSIS BETWEEN COVID-19 AND GIG ECONOMY CONSIDERING NUMEROUS FACTORS AND ITS INTERPRETATION

Gig's growing speed is obvious to the world and its fame and stability even could not be affected adversely by an unexpected pandemic. Gig economy stands very competitive and beneficial with being in large scale, cost decreasing strategy and open to new talents internationally. Not only companies, but also agencies in the benefit of usage of profits and maximum output of this system. The Gig economy's prosperity boosted up during Covid-19 and with the help of graph and correlation analysis.

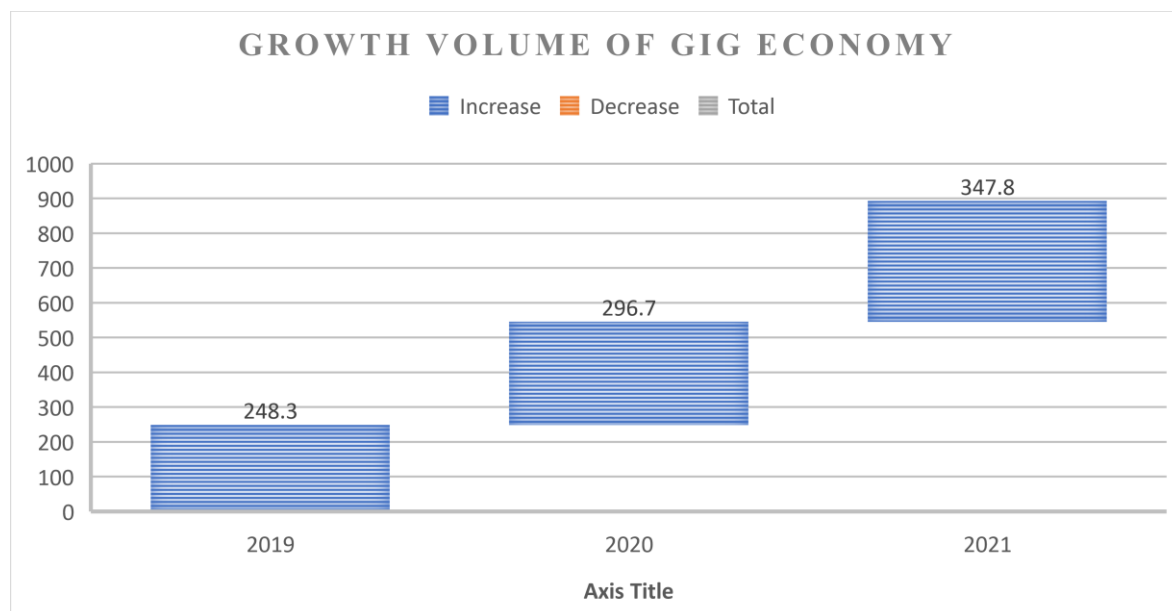
Table 1.2: Growth volume of Gig economy and Covid-19 new ²²cases

Years (December)	2019	2020	2021
Gross volume of Gig economy	248.3	296.7	347.8
Covid-19 new cases	3	4243103	16341262

Source: WHO Coronavirus (COVID-19) Dashboard live, <https://covid19.who.int/?mapFilter=cases>

That is very clear in the table above that during pandemic, mainly focused in the years of 2019, 2020, 2021 there was a great growth about number of new cases. Gross number of Gig economy also in those years boosted despite the global problem and negative trends in economy. Correlation (=CORRELATION (G9:L9, G10:L10)) between these two variables is **0.967651** due to calculations in excel. This is number is too close to 1, so a very strong, positive correlation appears between them. Now, it is time to look at the graph.

Figure 1.8 – Boost in growth volume ²³of Gig economy



Source: GITNUS blog (23.03.2023), Gig Economy Statistics 2023: A Look at the Growing Impact of the On-Demand Workforce, <https://blog.gitnux.com/gig-economy-statistics/>

²² WHO Coronavirus (COVID-19) Dashboard live, <https://covid19.who.int/?mapFilter=cases>

²³ GITNUS blog (23.03.2023), Gig Economy Statistics 2023: A Look at the Growing Impact of the On-Demand Workforce, <https://blog.gitnux.com/gig-economy-statistics/>

In the figure of 1.8 change in gross volume of Gig economy can be seen more exactly and positive trend is very clear and reasonable. From 2019 to 2020 there has been seen 19.49% increase and from the year of 2020 to 2021 17.22% rise happened. Pandemic's effect often talked till today and its negative effects discussed a lot and even some professions are in the danger of disappear due to weak response to the difficulties of this disaster, however the Gig showed that it is very spectacular and modern version of economy that has been constructed being sustainable to every situation even to the things that are very hard to predict and imagine or stop.

There are plenty of wonderful statistics of Gig economy, how it has a positive trend about growing, there should be reason for that, the main idea is Gig is an ideal key element that enhance and motivate employees to be part of it. There is not any extra effort or suggestion, the perfect system should be in the capacity of satisfying itself, may be the perfect system does not exist and probability of being excellent is in a very low level. What makes Gig successful or how it can be regulated in that level? The answer is too simple, human factor is not a key factor that rules everything, "invisible hand" is Gig itself, regulations and laws are formulated due to demand and preferences of people, profit making or revenue maximizing is never a problem with low cost and minimum level of risk that guarantees some enough amount.

US, as a well-developed country, people who is a Gig worker, get salary not more than 500\$ are 85 per cent. Full time Gig economy workers now are 58%. That is a great information for US that with 78% of potential US ²⁴stands in the first place, UK is in the second place with 59% and Brazil with 48% is in the 3rd place, these countries are considered more available and their resources and people's thoughts support their success in those new fields.

There are some jobs have really very high earnings and related to the Gig economy, those jobs are in the heart of modern economy. Machine learning is a great understanding in a new job condition, they get approximately 115\$ per hour, that is incredibly good. Blockchain is in progress and responds opportunities and chances of recent job places. Robots are not rarely used as before, that is not a trend, it is a job itself and per hour 77\$ earning should be considered great. Ethical ²⁵hacking is legal and very denuded, life saver activity for current version of the world. Countries with its usage gets a very impressive results in a globalized world. Information has never been in that importance and valuable, so the world is now organized to reach out data and use them effectively and create differences. Every vulnerable system should close the gaps of their own platform should be able to respond and defend to attackers. 66\$ per hour is well deserved amount for specialists of this great technology. Cryptocurrency is one of the most debatable and modern versions of all transaction, with Gig everything is clearer and more relevant, employees get 65\$ and this amount is considered enough for this risky, unstable work. This is a proof of Gig's perspective and potential for future.

²⁴ Team stage (2023), Demographics and Trends in 2023, <https://teamstage.io/gig-economy>

²⁵ A cloud guru, Certified Ethical Hacker (CEH) - Linux Academy's Prep Course, https://acloudguru.com/course/certified-ethical-hacker-ceh-linux-academys-prep-course?s_kwid=AL!16036!10!79439877063434!2331239529188028&utm_source=bing&utm_medium=paid-search&utm_campaign=upskilling-and-reskilling&utm_term=ssi-global-bing-acg-core-dsa&utm_content=free-trial&msclkid=5746fd91711b171ef18d99dc51893bf2

To analyze more deeply and prove how strongly they are related to look at Covid-19's effect on US freelancers is enough. During pandemic, especially in the period of very severe period freelancing considered a solution to earn money and develop new skills to adapt to urgent cases in economy. It is obvious that number of freelancers increase through the world, now focusing on US the data will be more understandable.

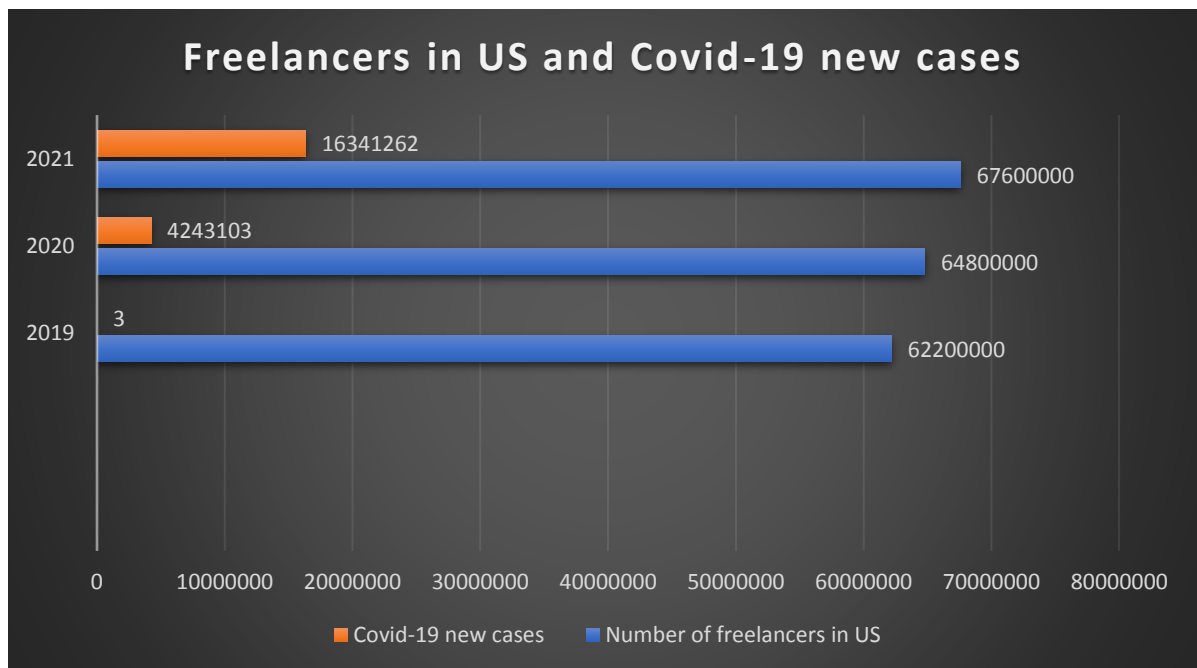
Table 1.3: Number of US freelancers and Covid-19 new cases

Years	2019	2020	2021
Number of freelancers in US	62200000	64800000	67600000
Covid-19 new cases	3	4243103	16341262

Source: Statista (2023), <https://www.statista.com/statistics/921593/gig-economy-number-of-freelancers-us/>

Being with great relation with Covid-19's spread speed freelancers' amount increased a lot and in 2019 number of them were 62200000²⁶, in 2020 they were 64800000 and finally in 2021 the number boosted up to 67600000. Correlation coefficient is (=CORRELATION (G6:L6, G7:L7)) **0.969077**, so strong positive correlation is again occurred despite challenges of Covid-19.

Figure 1.9 – Freelancers in US and Covid-19 new cases



From a bar chart that is clear how coefficient is strong and correct, rising trendline of both of them is a good practice and shows importance of freelancers being part of Gig economy. Prominence of freelancing stands one of the primary signs in the structure of Gig economy and a great intensive to push workers to be here.

²⁶ Statista (2023), <https://www.statista.com/statistics/921593/gig-economy-number-of-freelancers-us/>

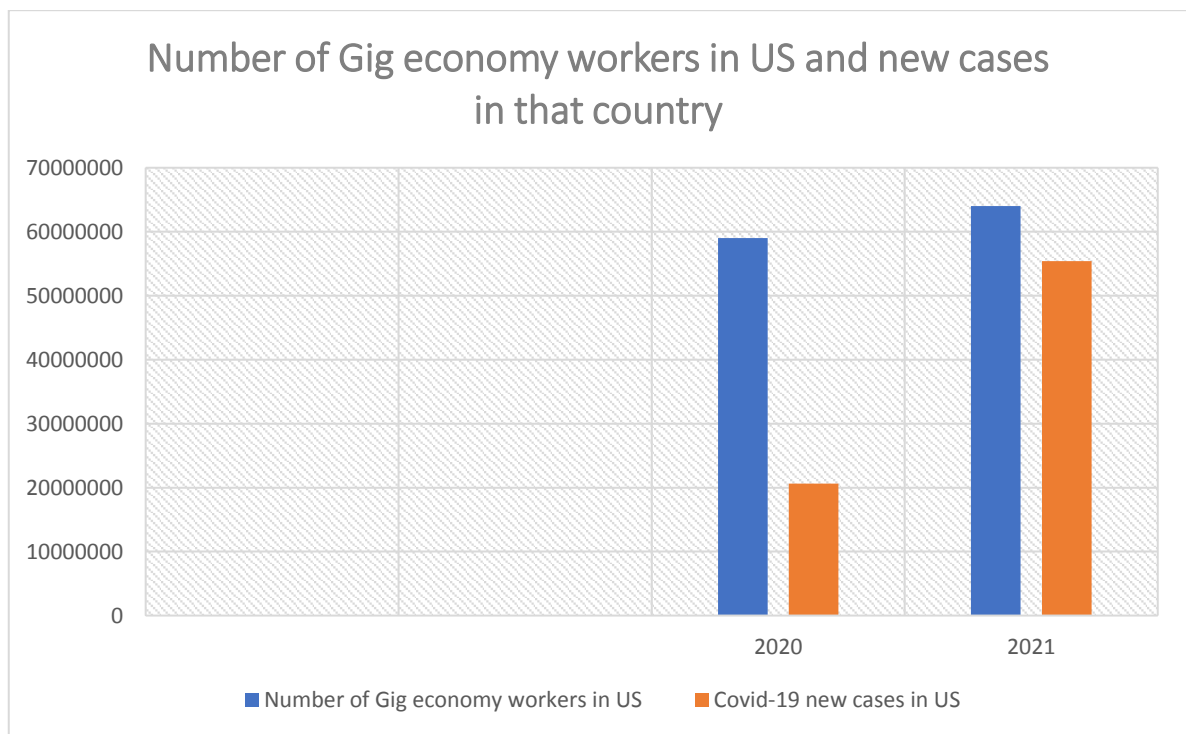
Despite the restrictions and shutdowns during pandemic Gig economy evolved and expanded its features in the case of US. Widespread of a tragedy is not considered has a positive effect on a particular part of economy which is Gig, the most exciting and interesting part of analysis comes and its result is going to be a little bit unexpected and astonishing due to an outcome.

Table 1.4: US Gig economy workers and their Covid-19 new cases

Years	2020	2021
Number of Gig economy workers in US	59000000 ²⁷	64000000 ²⁸
Covid-19 new ²⁹ cases in US	20633472	55391601

Source: Centers for Disease Control and Prevention (2023)
<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

The great relationship is between number of Gig economy employees and new cases of pandemic in that country, so correlation coefficient is exactly **1** (=CORRELATION (F5:J5, F6:J6)), that means perfect positive correlation. In comparison with previous coefficients perfect positive correlation shows the strength of relationship, logically main reason is now focus is US, that is more preciously rather than world data, it is a s a “sample”, not a “population”.



²⁷ Edison trends (2020), <https://www.edisonresearch.com/americans-and-the-gig-economy/>

²⁸ Mastercard (2021),

<https://www.bing.com/search?pglt=41&q=64mln+Gig+economy+workers+Mastercard&cvid=f8fa359343c14a1293fda1fa9bbbeafa&aqs=edge.69i57.12847j0j1&FORM=ANNTA1&PC=U531>

²⁹ Centers for Disease Control and Prevention (2023) <https://www.cdc.gov/coronavirus/2019-ncov/index.html>

In US, during pandemic there has been a tremendous growth in number of Covid-19 new cases. Specially from the year of 2020 to 2021 economy was in shock. There are some very important events that should not be stay out of focus.

- **Losses of jobs:** The pandemic make some workplaces to be closed, so as a result unemployment rate increased
- **Recession in economy:** There were lots of signs of it in US as a decrease in GDP, spending of buyers and also change in behavior of investors, the main reason is it was very sudden and unexpected.
- **Help packages:** Government of US has done some stimulus in the case of packages such as payments to people, they also rise benefits on unemployment, also a loan to professionals.
- **Shifts on purchaser's behavior:** Traveling, service sector, getting rid of expensive activities are all in a decline and that has really affected owners and make them to think about other business.
- **Various impacts:** Segments have been influenced in a different amount, there are some are impacted much and others saw less. As a comparison teaching and e-commerce were in a good shape.

As being out of the world Gig economy responded differently to changes, there are some facts are a proof and show how this sector is in progress and promise a good future for US, some problems also talked and discussed for a whole and comprehensive analysis.

- **Some gigger jobs are boosted up:** People's thoughts changed, distancing and being at home help them to understand importance of some easy segments: Delivery, tutoring online and online shopping take the advantage and modern form is formulated.
- **A very little amount of gigger jobs was in a danger:** Drivers, who engaged in ride-hailing, horse-riding, being guide are not possible in those days and generally it is a reason of less demand to travel.
- **People who lost jobs find themselves in Gigger economy:** For some workers it was inevitable not to lose their jobs because of recession and shutdown. The Gigger is a stable and secure variant for individuals not to be out of work and earn money.
- **Safety or serve:** A dilemma is about Gigger workers were still in touch with consumers and danger to catch coronavirus was in a high level. Some preventions are in use and effective, however the risk is not totally eliminated and people get money despite challenges.
- **Benefits and lack of bonuses, packages:** The pandemic is actually is an event depicts that may be Gigger workers does not get some employment benefits which are in standard employment contracts, however during Covid-19 traditional jobs stopped and Gigger continued, a sustainable or motivational system is worth to work it is debatable and Gigger started to put on a stage very reasonable argument. Recovery of economy is fast or the Gigger improved to be bigger is another topic.

2.4 REPUTATION OF GIG ECONOMY IN US PRE-COVID-19, DURING PANDEMIC AND POSTCOVID PERIOD

The Gig economy dramatically in a very high expanding speed and last year's US has experienced a huge demand as being in a special Covid-19 case. In previous chapters there has been talked a lot about the most famous segments of Gig economy. There are still some underrated jobs which are very suitable to gain extra money were affected by virus throughout that period, with the help of table visually and with proof changes will sum up and help to understand.

Table 1.5: Change in US Gig economy pre-Covid-19 and during Covid-19

Industries	Pre-Covid-19	During Covid-19	Change in %
Ridesharing	1,000,000	600,000	-40%
Food Delivering	400,000	550,000	+37.5%
Freelance Marketplaces	1,200,000	1,300,000	+8.3%
Home Cleaning	250,000	100,000	-60%
Pet Sitting	100,000	50,000	-50%

Source: U.S. BUREAU OF LABOR STATISTICS,
<https://www.bls.gov/careeroutlook/2016/article/what-is-the-gig-economy.htm>

As seen on a table above not all of the Gig economy jobs are positively affected by pandemic. Ridesharing service declined 40³⁰% and it is a vital need for apps to find a more guaranteed consumers with the help of apps and secure their income. AI need is not a saying, that is very hot demand.

Food delivering because of lockdown still on progress, orders were given and deliveries were in a way to reach to clients. People who cannot spend time balanced or afraid to catch virus were a loyal customer.

Freelancing is a job of a modern word, low cost and enough high income motivates every individual to continue their own job and Covid effect could not weaken also this part of Gig.

Home cleaning lost its value by distancing, people even are worried to see their closest people, to clean home is not considered a priority for the people of US and spending more time at home let them do this home task themselves.

Pet sitting was also seemed to be unnecessary during problems of Covid-19, almost half of this sector's significance has gone away. Staying at home make to think and engage in Gig jobs, but also some of them have been diminished or destroyed.

³⁰ U.S. BUREAU OF LABOR STATISTICS, <https://www.bls.gov/careeroutlook/2016/article/what-is-the-gig-economy.htm>

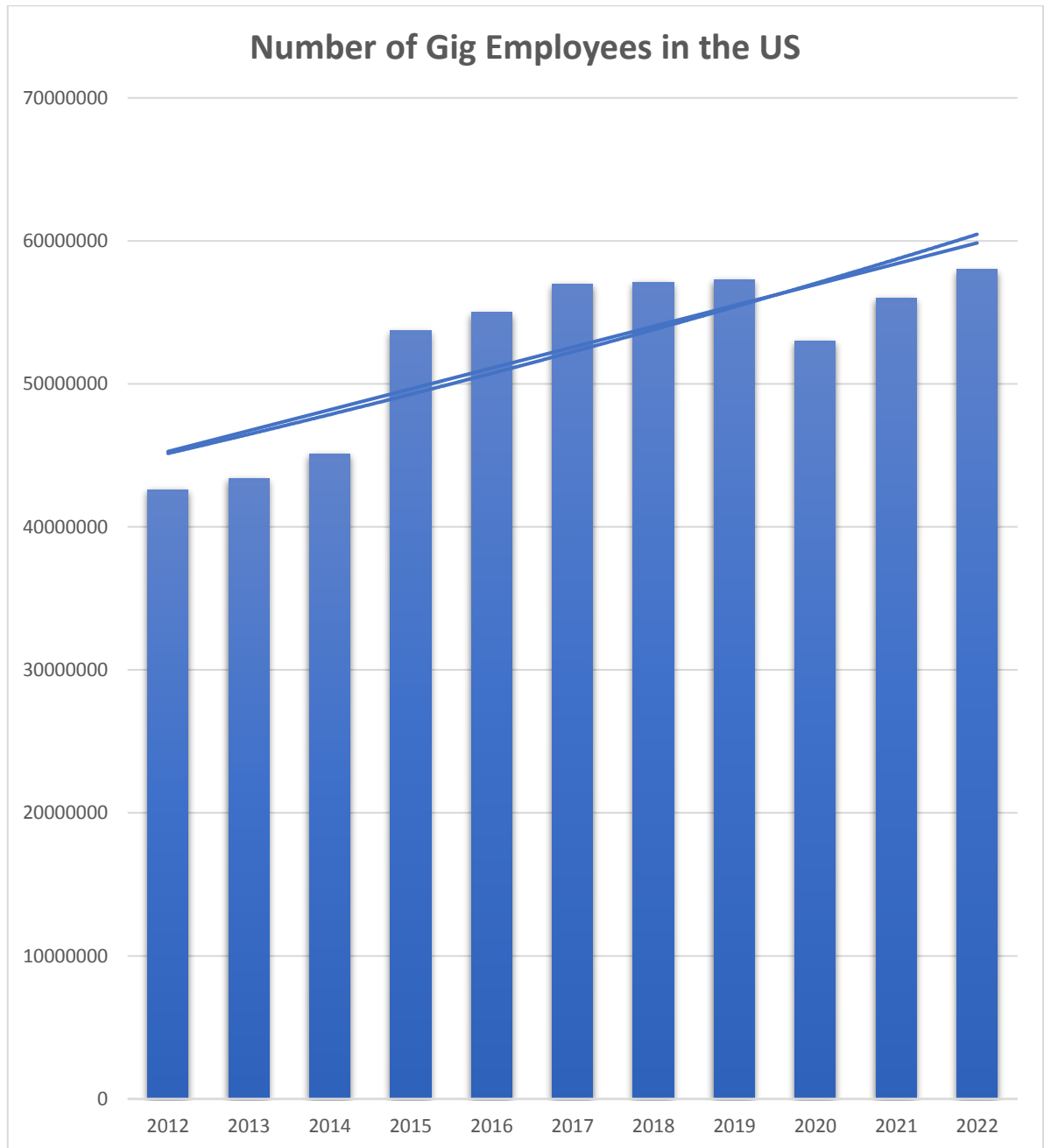
The table below shows number of Gig economy workers from 2012 to 2022 depicting those years with very important political, economic, social factors are taking into account for their impact.

Table 1.6: Prominence of Gig from 2012 to 2022

Year	Number of Gig Employees in the US	Percentage in Total Workforce	Main scenarios
2012	42.6 million	30%	Growth of Gig platforms as Uber, Airbnb, and TaskRabbit
2013	43.4 million	30%	Gig economy becomes more deeply recognized like a legitimate career choose
2014	45.1 million	30%	There has been a great support from media and reached information more people
2015	53.7 million	34%	Regulation created difficulties as gig job apps impacted standard, similar models
2016	55 million	35%	Presidential election brings attention to gig work and its impact on economy
2017	57 million	36%	Gig work go on to grow not considering by law challenges and government debates
2018	57.1 million	35%	Gig work becomes more mainstream as more people turn to freelancing
2019	57.3 million	35%	Gigged jobs become a hot topic to be discussed in democratic level
2020	53 million	34%	Pandemic resulted a very shocking, short-term declining trend in Gig
2021	56 million	36%	Gig economy proceed to bounced at the US whole economy repairs from pandemic
2022	58 million	37%	Gig economy has been very famous and attractive to youngsters of US economy

Source: Statista (2022), <https://www.statista.com/topics/4891/gig-economy-in-the-us>

Figure 1.10: Number of Gig Employees in the US



Source: Compiled by author

From a graph, it is obviously seen how the Gig transformed into a giant throughout the years. During a 10 years period there has been seen approximately 37% increase in the number of workers in US. Trendline explain pattern of data in a positive trend and have relationship events which are mentioned before with the help of table.

From 2012 to 2022 minimum 1% and maximum 2% increase or decrease were popular, however only in 2015 there has been observed a 4% increase in number of employees, that is because of a challenge of that year. Gig platforms as Uber, Lyft, and Airbnb faced a legal dispute in different states including laws as employee classification, minimum wage standard and safety regulations.

58 million ³¹Gig economy employees in 2022 for a country as US should be considered a strict number and could not be out of attention. Workers³², who work independently with their diverse jobs are creative being different sectors such as short-term or long-term agency employees, driving, delivering services with special ³³contracts. They are very motivated and entrusted about their career growth despite challenges ³⁴and they're sure about their future ³⁵with Gig.

³¹ McKinsey & company (2022), <https://www.mckinsey.com/featured-insights/sustainable-inclusive-growth/future-of-america/freelance-side-hustles-and-gigs-many-more-americans-have-become-independent-workers>

³² Career guide (25.06.2022), <https://www.indeed.com/career-advice/career-development/work-independently>

³³ Gray, M.L., Suri, S., Ali, S.S. and Kulkarni, D. (2016), The crowd is a collaborative network. In CSCW'16: Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing, San Francisco, CA, 27 February–2 March. New York: ACM Press, pp. 134–47.

³⁴ Sanyika, J., Lund, S., Boughen, J., Robinson, K., Mischke, J. and Mahajan, D. (2016), Independent work: Choice, necessity, and the gig economy. Available at: <https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Employment%20and%20Growth/Independent%20work%20Choice%20necessity%20and%20the%20gig%20economy/IndependentWork-Choice-necessity-and-the-gig-economy-Full-report.ashx>

³⁵ International Labor Organization (ILO) (2014) Global Dialogue Forum on Employment Relationships in the Media and Culture Sector: Final report of the discussion. Geneva: International Labor Office.

CHAPTER 3. SHORT-TERM EFFECT OF PANDEMIC ON GIG ECONOMY AND WAYS TO AVOID FROM ADVERSE CONSEQUENCES IN EMPLOYMENT DUE TO ANY EPIDEMIC IN FUTURE

3.1 PANDEMIC'S IMPACT ON GIG ECONOMY AND A LESSON FROM SHORT-TERM SHOCK

The pandemic literally has a significantly huge impact on Gig economy of world's countries. The gig economy is talked a lot in previous chapters and that does not only include temporary jobs, short period services and drivers. Home, cleaning services, ridesharing, even pet sittings are covered with the help of Gig economy

Deeply in previous chapter that was obvious inside the Gig economy various sectors are affected differently and reacted in another way to the shifts in globalized world economy. As an example, drivers who used online platforms and find customers over the apps did not feel pandemic and even their demand increased, however drivers who just pick up people on road saw decline. Services have seen a dramatic diminish, delivery and freelancing reach out to another step.

Gig economy should be considered a solution to survive during pandemic and that is a source of income for all types of employees. Reliance to a platform job has never been that important. Online jobs get value it actually deserves while people being on the impact of coronavirus.

In addition to Gig's problem about non-protection of employees there can be said that Covid-19 opened a new mode for giggered workers. People during pandemic when gets cold or being ill the first probability comes to mind was pandemic and not any manager or a director would not to see sick people with a potentially big threat to work, so companies are structures to manage and care about people's health more than before, they start to use from non-contact temperature assessment devices. There was a thought that temperature ³⁶measurement could not find half of people who are injected, that is not a topic which exactly touch Gig, important point is Gig workers easily use benefits of protection for their health when not feeling okay.

The point is Gig economy also feel some problems of Covid-19 in its segments, in a special case, short-term shock had an impact, but this is not an end, that does not fully shut down this economy, with its all-challenges gig can succeed by eliminating its lack and improved as a sign of modern economy. Remote ³⁷jobs are not in need, because they are part of Gig economy.

Gig economy is a typical case of being a short-term remedy, however this practice is very useful and valuable to be used for future works.

³⁶ US food and drug, <https://www.fda.gov/medical-devices/coronavirus-covid-19-and-medical-devices/non-contact-temperature-assessment-devices-during-covid-19-pandemic>

³⁷ Harvard Business school, How Much Will Remote Work Continue After the Pandemic? <https://hbswk.hbs.edu/item/how-much-will-remote-work-continue-after-the-pandemic>

The Gig economy and its one of the mostly affected countries in the world is US, during pandemic priorities in life has been changed, as a whole demand on a workers diminished, not only managers, but also consumers, people with interest to work or to buy is out of interest to business. From another perspective it can be thought that Gig employees were more vulnerable and easier to be used in the time of Covid-19. Importance of platforms are the main factor to maintain Gog's glory, some regulations over or outside the apps helped the Gig to be more superior.

Table 1.7: Impact of Covid-19 on various sectors

<i>Influence</i>	<i>Explanation</i>
<i>Decline in demand</i>	Most of gig employees have experienced a diminish in demand for their services for lockdowns and social distance measures during epidemic.
<i>Less number of protections</i>	Gig workers frequently lacked access to some benefits or government protections which standard employees have, such as insurance for worker's health and unemployment benefits. This has made gig workers more and more vulnerable to the economic influence of the pandemic.
<i>Important services</i>	The gig economy stayed as a critical player to provide key and prominent services during the coronavirus, such as food providing and online purchasing.
<i>Platform help</i>	Some gig economy apps have taken very important moves to support their employees during the pandemic, like to give PPE ³⁸ and financial assistance.
<i>Unemployment benefits</i>	The CARES ³⁹ Act provided gig workers with entrance chance to unemployment benefits. However, this support has been temporary and not available to all gig workers.
<i>Increasing regulation</i>	The pandemic has led to increased scrutiny of the gig economy and calls for greater regulation to protect workers, government cannot be not careful about Gig's perspective.

Source: Safety culture (03.05.2023), PPE

Everything you need to know about Personal Protective Equipment (PPE) and how to keep safe at work, <https://safetyculture.com/topics/ppe-safety/>

³⁸ Safety culture (03.05.2023), PPE

Everything you need to know about Personal Protective Equipment (PPE) and how to keep safe at work, <https://safetyculture.com/topics/ppe-safety/>

³⁹ Congress (2019), <https://www.congress.gov/bill/116th-congress/house-bill/748>

3.2 SOLUTIONS FOR MITIGATING NEGATIVE EFFECTS OF UNEXPECTED EPIDEMICS FOR EMPLOYEES

It is practically very hard to imagine other epidemic's effect and measure it, clearly there is not any guarantee to ensure economy and protect it from all negative possibilities, however there are still some logical strategies to provide a strong guideline to be solution to adverse outcomes.

Table 1.8: Solution to prevent negative outcomes of Covid-19 for Gig workers

Strategy	Interpretation
Variagate services	Gig economy workers can easily diversify economy by spreading various skills and represent their ideas and implement them with earning additional income.
Develop emergency fund	Gig economy employees should create an extra fund to ensure sustainability for securing their income and to use them only in an emergency.
Applying health and security measurement	Through Gig economy platforms that is more convenient to inform people principles of pandemic situation. This should cover to provide personal protective equipment (PPE), clear and control equipment and materials, also by applying social distance protocols.
Give benefits and protections	Gig and its useful platforms can help to get benefits and protections to their workers, such as help to illness, healthcare, and workers' compensation, to assure that they are protected during a crisis.
Endorsement from government	Governments can provide support to gig economy employees during an epidemic, loke a financial assistance, tax breaks, and regulatory changes to protect their employment rights.

Source: Compiled by author

Globally, the world should be ready about epidemics as Covid-19 for security level of employees. That is particularly important to protect workers' health and also their longevity in workplaces, having a specific focus on their psychology and mental condition. So, that is very hard to stop this process totally, however some steps may diminish negative impacts of epidemics.

Figure 1.11: Strategies to reduce effect of epidemics



Source: Compiled by author

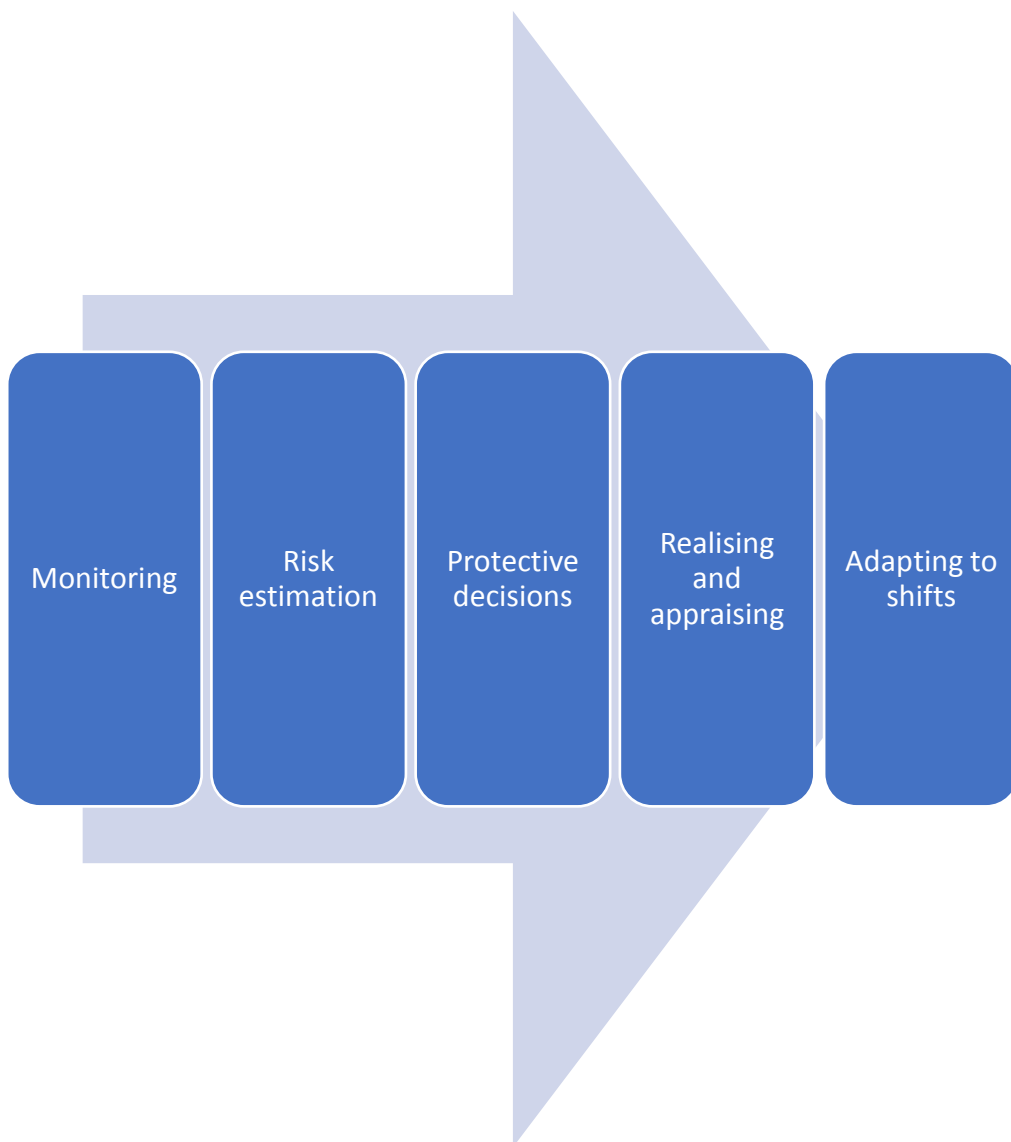
Remote work is in heart of Gig economy and one of the best features as flexible hours, to pay for sick⁴⁰ despite their contract status like temporary or full-time worker and psychological help for a better result, useful equipment for protection, building strong tied communication with assistant programs⁴¹ can be solution.

⁴⁰ OECD, pay sick leave to protect income, health and jobs through the COVID-19 crisis <https://www.oecd.org/coronavirus/policy-responses/paid-sick-leave-to-protect-income-health-and-jobs-through-the-covid-19-crisis-a9e1a154/>

⁴¹ Very well mind, What Is an Employee Assistance Program (EAP)? 14.02.2022, <https://www.verywellmind.com/what-is-an-employee-assistance-program-5217738>

That is very hard to imagine and measure all negative outcomes which can be created after epidemics. Through this complicated process there can be some steps taken and make the process light and expected. Monitoring and observing new cases, understanding reactions of population and following changes, risk evaluation, long-term solvency plans, protective⁴²decisions and their use as distancing or mask, correct evaluation procedure, to adapt⁴³pressure of illness with understanding mutation of viruses and their adaptation to life are good trials.

Figure 1.11 – Strategies to reduce effect of epidemics



Source: Compiled by author

⁴² World Health Organization, Preventing epidemics and pandemics, <https://www.who.int/activities/preventing-epidemics-and-pandemics>

⁴³ National library of medicine, Molecular adaptations during viral epidemics (18.07.2022), <https://pubmed.ncbi.nlm.nih.gov/35848484/>

There is another way to calculate and interpret result of Covid-19 on economy of US and for checking ⁴⁴its unemployment rate formula is a great tool which is **Unemployment Rate** = (Number of Unemployed Individuals / Total Labor Force) x 100. The results from 2016 to 2021 are here.

Table 1.9: Unemployment rate in US from 2016 to 2021

Year	Number of Unemployed Individuals (in millions)	Total Labor Force (in millions)	Unemployment Rate (%)
2016	7.49	159.42	4.7
2017	6.99	160.27	4.4
2018	6.29	161.58	3.9
2019	5.78	163.12	3.5
2020	14.78	156.03	9.5
2021	8.39	159.48	5.3

Source: US Bureau of labor statistics, <https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm>

⁴⁴ Benson, A., Sojourner, A. and Umarov, A. (2015) 'Can reputation discipline the gig economy? Experimental evidence from an online labor market', IZA DP No. 9501. Available at: <http://ftp.iza.org/dp9501.pdf>

⁴⁵ US Bureau of labor statistics, <https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm>

The unemployment rate decline from year of 2016 to 2019 in US and that was very good trend due to right strategy of country till the pandemic with being lowest rate in 2019, 3.5%. After pandemic, unemployment rate reached peak being 9.5%. Some businesses were closed, put off or slowed and people without jobs increased the rate. In 2021 with 5.3% unemployment rate started to decline again, Gig is here below to show its impact these statistics ⁴⁶and from 2016 to 2021 it has slightly increased, only in 2020 diminishing seen due to Covid's effect on some sector of Gig economy which was talked before.

Table 1.10: Gig economy employees in total labor force of US

Year	Number of Gig Economy Employees (in millions)	Total Labor Force (in millions)	Percentage of Gig Economy Employees in total labor force
2016	3.8	159.42	2.4%
2017	3.9	160.27	2.4%
2018	4.3	161.58	2.7%
2019	4.5	163.12	2.8%
2020	4.2	156.03	2.7%
2021	4.6	159.48	2.9%

Source: Statista, Gig economy in the U.S. - Statistics & Facts, <https://www.statista.com/topics/4891/gig-economy-in-the-us/>

⁴⁶ Statista, Gig economy in the U.S. - Statistics & Facts, <https://www.statista.com/topics/4891/gig-economy-in-the-us/>

3.3 GIG ECONOMY AND ITS FUTURE PERSPECTIVES IN US WITH THE ASSISTANCE OF AI

The Gig economy's rise is closely related with rapid growth of online platforms as UBER, Upwork, Airbnb and etcetera. AI helps to minimize cost and effort of individuals and companies with its features as advanced payment structure, digital platforms and even with smartphones. Matching principle of suitable job preferences or from different angles of markets make everyone satisfied and find a right partner. Automated system makes people's work easier. According to McKinsey⁴⁷, the Gig economy is expected to perform 60% of giggered works of total labour force.

Table 1.11: AI and its use in Gig economy

AI platforms in the gig economy	Potential influence on the future of work
To match algorithms that lots of workers with jobs	More effective job matching, has a potential leading to increased job satisfaction and productivity for workers.
Chatbots and virtual assistants for customer service	More efficient and personalized customer service, potentially reducing the need for human customer support staff.
Predictive analytics for demand forecasting	Improved efficiency in matching supply with demand, potentially leading to more stable and predictable work for gig workers.
Machine learning for fraud determination	More accurate and efficient fraud detection, potentially reducing risks for gig workers and improving platform trust and safety, security.
Natural language processing for voice recognition	Improved communication and efficiency for workers who rely on voice commands or speech-to-text applications.
Robotics process automation for administrative tasks	Increased automation of routine administrative tasks, potentially reducing the need for human administrative staff.

⁴⁷ McKinsey, Future of Work, <https://www.mckinsey.com/featured-insights/future-of-work>

AI's role on Gig economy is significantly huge, there can be mentioned a lot of factors that was enabled by AI and helped the Gig being in the heart of modern economy. There are always available job opportunities that stays out of attention and even impossible to reach, AI⁴⁸ as a technological HR helps to find a job and it can make possible jobs to apply transaction over the system.

Figure 1.13: AI in the evolving of Gig economy



Source: Compiled by author

Appropriate skill, creativity, ability to adapt, all are considered and trying to come together by applying AI. For communicate and collaborating that is a great tool, it is a very effective and efficient tool to be ready for every standard and to deliver high, qualitative outcomes. To pay and to make transactions faster has never been that easy and user friendly. Feedback and evaluation and formulating rating in platforms are a final crop of artificial intelligence, that is very crucial to determine all type of actors and evaluating them accurately.

⁴⁸ Badu Tech, AI and the Gig Economy: The Future of Work, <https://badutech.com/ai-and-the-gig-economy-the-future-of-work/#:~:text=One%20of%20the%20most%20significant%20changes%20in%20the,some%20gig%20economy%20jobs%20more%20efficient%20and%20cost-effective.>

While talking about AI usage in Gig economy of US, that is crucially important to talk about advantages ⁴⁹and drawbacks⁵⁰. Every new system contains different features itself, there should be taken lessons to improve whole structure and make drawbacks a benefit.

Table 1.12 – Benefits of AI in Gig economy

Benefits	Explanation
Improved matching	AI algorithms could help match workers with the right jobs.
Increased speed	AI should automate routine tasks, also improve efficiency.
Cost savings	AI is able to reduce the need for human labor by lowering costs.
Fraud determination	AI helps prevent fraudulent acts on gig platforms.
Quality control	AI can assist ensure high-quality services are provided.

Table 1.13 – Drawbacks of AI in Gig economy

Drawback	Explanation
Job displacement	AI could potentially may replace all human workers on gig platforms.
Privacy problems	AI-powered tools may raise concerns about user data privacy.
Bias and fairness	AI algorithms can perpetuate biases and inequalities in hiring.
Lack of transparency	AI decision-making may be opaque, making it hard to understand.

⁴⁹ Forbes, How AI Is making the Gig Economy more fair And reliable for workers, <https://www.forbes.com/sites/anniebrown/2021/09/12/how-ai-is-making-the-gig-economy-more-fair-and-reliable-for-workers/?sh=5fe7d30637e9>

⁵⁰ TS2 space, AI and the Gig Economy: Navigating the Future of Freelancing, <https://ts2.space/en/ai-and-the-gig-economy-navigating-the-future-of-freelancing/#:~:text=The%20primary%20benefit%20of%20AI,focus%20on%20more%20important%20tasks.>

RESULTS AND SUGGESTIONS

Results

- ❖ Decline in whole US economy and rise of Gig economy: The pandemic has a significant diminishing effect on GDP of US, lockdowns, closing of individual business affected economy badly, due to the reports of Statista and its investigations, GDP has seen a great decline, approximately 3.5% ⁵¹in the year of 2022 which covers Covid-19 period. A negative trend only seen in some segments of Gig as delivery of food or ride-sharing, despite those, overall, the Gig economy prospered and take the crisis like an advantage with the help of platforms which are generated and supported by AI.
- ❖ Unemployment, inequality in income level and financial instability were inevitable as more severe than before. Vulnerability level in the meaning of financially were on the top level and being not able to use from benefits of social programs in Gig economy exaggerated, however that is considered better being a standard contract worker and during crisis because of pandemic to become an unemployed.
- ❖ Partnership with platforms and growing awareness of public and understanding value of education: Communication and collaborating over the platforms make life easier and reduced bias and unfairness. Recovery process speed only was fast with the help of high educational standards and availability of advanced technology which practically used enormously in Gig economy
- ❖ Changes in trends in workplaces and digital transformation: Remote work options and availability of data throughout the apps which covers all necessary information about jobs makes the Gig being a solution in very hard days. Legislative supports and change in approach to virtual jobs was stricter and softer than ever.

Suggestions

- ❖ Social security programs for Gig economy employees are the most motivational and important factor to gather them and to show attention by covering unemployment protection, retirement savings and healthcare support more.
- ❖ There still a demand from workers more fair and secure system, flexibility is in the center of Gig and bonus, rewarding system should be improved and be with more performance related.
- ❖ Upskilling and workers' improvement is considered very significant and people are keener about future career in nowadays. Gig workers are ready to shifts from one sector to another and they obtained new skills, in need there

⁵¹ Statista, 29.01.2021, <https://www.statista.com/chart/24056/annual-real-gdp-growth-in-the-united-states/>

should be an incentive to organize educational courses and pay those amounts for them.

- ❖ Creating policies that are more curious about Gig workers are also on demand and very highlighted factor. Employee rights, their health, providing special benefits are gaining new significance to make employees to feel safe and increase their trust to the system.

REFERENCES

1. A cloud guru, Certified Ethical Hacker (CEH) - Linux Academy's Prep Course, https://acloudguru.com/course/certified-ethical-hacker-ceh-linux-academys-prep-course?s_kwcid=AL!16036!10!79439877063434!2331239529188028&utm_source=bing&utm_medium=paid-search&utm_campaign=upskilling-and-reskilling&utm_term=ssi-global-bing-acg-core-dsa&utm_content=free-trial&msclkid=5746fd91711b171ef18d99dc51893bf2
2. ADP research, millennial money (2023), <https://www.adpri.org/>
3. Alois, A. (2018) Dispatch No. 13 – Italy – ‘With great power comes virtual freedom’: A review of the first Italian case holding that(food-delivery) platform workers are not employees. *Comparative Labour Law and Policy Journal*, <https://cllpj.law.illinois.edu/dispatches>
4. Badu Tech, AI and the Gig Economy: The Future of Work, <https://badutech.com/ai-and-the-gig-economy-the-future-of-work/#:~:text=One%20of%20the%20most%20significant%20changes%20in%20the,some%20gig%20economy%20jobs%20more%20efficient%20and%20cost-effective.>
5. Benson, A., Sojourner, A. and Umarov, A. (2015) ‘Can reputation discipline the gig economy? Experimental evidence from an online labour market’, IZA DP No. 9501. Available at: <http://ftp.iza.org/dp9501.pdf>
6. Cambridge university press (20.12.2022). *The Precariat: The New Dangerous Class*. London: Bloomsbury Academic. £19.99, pp. 198. <https://www.cambridge.org/core/journals/journal-of-social-policy/article/abs/guy-standing-2011-the-precariat-the-new-dangerous-class-london-bloomsbury-academic-1999-pp-198-pbk/E57E7B6F364EA19171C6637B63E0109D>
7. Career guide (25.06.2022), <https://www.indeed.com/career-advice/career-development/work-independently>
8. Centres for Disease Control and Prevention (2023) <https://www.cdc.gov/coronavirus/2019-ncov/index.html>
9. Congress (2019), <https://www.congress.gov/bill/116th-congress/house-bill/748>
10. Crouch, Colin (2019). Will the gig economy prevail? 1-10
11. David Harvey (2007). *A Brief History of Neoliberalism*, <https://academic.oup.com/book/40603>

Design by Murad Rashidov

12. Dinah Rose (2017). Employment appeal tribunal,
https://assets.publishing.service.gov.uk/media/5a046b06e5274a0ee5a1f171/Uber_B.V._and_Others_v_Mr_Y_Aslam_and_Others_UKEAT_0056_17_DA.pdf
13. Edison trends (2020), <https://www.edisonresearch.com/americans-and-the-gig-economy/>
14. Forbes, How AI Is making the Gig Economy fairer and reliable for workers,
<https://www.forbes.com/sites/anniebrown/2021/09/12/how-ai-is-making-the-gig-economy-more-fair-and-reliable-for-workers/?sh=5fe7d30637e9>
15. GITNUS blog (23.03.2023), Gig Economy Statistics 2023: A Look at the Growing Impact of the On-Demand Workforce, <https://blog.gitnux.com/gig-economy-statistics/>
16. Graham, M., Hjorth, I. and Leoncita, V. (2017a) Digital labour and development: Impacts of global digital labour platforms and the gig economy on worker livelihoods. *Transfer: European Review of Labour and Research*, 23(2): 135–162.
17. Gray, M.L., Suri, S., Ali, S.S. and Kulkarni, D. (2016), The crowd is a collaborative network. In *CSCW'16: Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing*, San Francisco, CA, 27 February–2 March. New York: ACM Press, pp. 134–47.
18. Harvard Business school, How Much Will Remote Work Continue After the Pandemic? <https://hbswk.hbs.edu/item/how-much-will-remote-work-continue-after-the-pandemic>
19. Hermann (2021). Measuring financial inclusion in African Countries,
https://www.researchgate.net/publication/353348292_Measuring_financial_inclusion_in_African_Countries
<https://www.statista.com/>
20. International financial law (30.04.2021),
<https://lawprofessors.typepad.com/intfinlaw/2021/04/gdp-increased-at-an-annual-rate-of-64-percent-first-quarter-2021.html> US food and drug,
<https://www.fda.gov/medical-devices/coronavirus-covid-19-and-medical-devices/non-contact-temperature-assessment-devices-during-covid-19-pandemic>
21. International Labour Organization (ILO) (2014) Global Dialogue Forum on Employment Relationships in the Media and Culture Sector: Final report of the discussion. Geneva: International Labour Office.

22. International revenue services (02.11.2022). Independent Contractor Defined, <https://www.irs.gov/businesses/small-businesses-self-employed/independent-contractor-defined>
23. Jamie Woodcock, Mark Graham. (2020). The Gig economy, 27
24. Lana Rose (20.01.2023). Gig Economy Statistics For 2023 (Number of Workers in the US), <https://www.prosperityforamerica.org/gig-economy-statistics/>
25. Macrotrends, <https://www.macrotrends.net/countries/USA/united-states/unemployment-rate>
26. Mastercard (2021), <https://www.bing.com/search?pglt=41&q=64mln+Gig+economy+workers+Mastercard&cvid=f8fa359343c14a1293fda1fa9bbbeafa&aqs=edge.69i57.12847j0j1&FORM=ANNTA1&PC=U531>
27. McKinsey & company (2022), <https://www.mckinsey.com/featured-insights/sustainable-inclusive-growth/future-of-america/freelance-side-hustles-and-gigs-many-more-americans-have-become-independent-workers>
28. McKinsey, Future of Work, <https://www.mckinsey.com/featured-insights/future-of-work>
29. Moody's analytics, <https://www.economy.com/united-states/labor-force>
30. National library of medicine, Molecular adaptations during viral epidemics (18.07.2022), <https://pubmed.ncbi.nlm.nih.gov/35848484/>
31. OECD (2021), <https://www.oecd.org/future-of-work/reports-and-data/AI-Employment-brief-2021.pdf>
32. OECD, <https://stat.link/oher2v>, <https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fstat.link%2Ffiles%2Fca401ebd-en%2Foher2v.xlsx&wdOrigin=BROWSELINK>
33. OECD, pay sick leave to protect income, health and jobs through the COVID-19 crisis <https://www.oecd.org/coronavirus/policy-responses/paid-sick-leave-to-protect-income-health-and-jobs-through-the-covid-19-crisis-a9e1a154/>
34. Peterson foundation (29.04.2020). First Economic Growth Report Under Coronavirus: Real GDP Falls 4.8% In First Quarter, <https://www.pgpf.org/blog/2020/04/first-economic-growth-report-under-coronavirus-real-gdp-falls-in-first-quarter>
35. Safety culture (03.05.2023), PPE, everything you need to know about Personal Protective Equipment (PPE) and how to keep safe at work, <https://safetyculture.com/topics/ppe-safety/>

36. Sanyika, J., Lund, S., Boughen, J., Robinson, K., Mischke, J. and Mahajan, D. (2016), Independent work: Choice, necessity, and the gig economy. Available at: <https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/Employment%20and%20Growth/Independent%20work%20Choice%20necessity%20and%20the%20gig%20economy/Independent-Work-Choice-necessity-and-the-gig-economy-Full-report.ashx>
37. Smith, Covid-19 And the Gig Economy: What to Anticipate When the World Returns to ‘Normal’, <https://www.forbes.com/sites/forbesbusinesscouncil/2021/09/10/covid-19-and-the-gig-economy-what-to-anticipate-when-the-world-returns-to-normal/?sh=5254f1494dd8>, (10.09.2021).
38. Statista (2023), data from an official cite
39. Statista (2023), <https://www.statista.com/statistics/921593/gig-economy-number-of-freelancers-us/>
40. Statista, 29.01.2021, <https://www.statista.com/chart/24056/annual-real-gdp-growth-in-the-united-states/>
41. Statista, Gig economy in the U.S. - Statistics & Facts, <https://www.statista.com/topics/4891/gig-economy-in-the-us/>
42. Statista, <https://www.statista.com/statistics/916294/gig-economy-satisfaction-workers-current-job/> (2021)
43. Statista, <https://www.statista.com/statistics/921593/gig-economy-number-of-freelancers-us/>
44. Team stage (2023), Demographics and Trends in 2023, <https://teamstage.io/gig-economy>
45. TJ MS Cue (31.08.2018). 57 million U.S. Workers Are Part of The Gig Economy, <https://www.forbes.com/sites/tjmccue/2018/08/31/57-million-u-s-workers-are-part-of-the-gig-economy/?sh=53dd2f037118>
46. TS2 space, AI and the Gig Economy: Navigating the Future of Freelancing, <https://ts2.space/en/ai-and-the-gig-economy-navigating-the-future-of-freelancing/#:~:text=The%20primary%20benefit%20of%20AI,focus%20on%20more%20important%20tasks.>
47. U.S. BUREAU OF LABOR STATISTICS, <https://www.bls.gov/careeroutlook/2016/article/what-is-the-gig-economy.htm>
48. US Bureau of labour statistics, <https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm>

49. US Bureau of Labour statistics, <https://www.bls.gov/emp/graphics/total-employment.htm>
50. Very well mind, What Is an Employee Assistance Program (EAP)? 14.02.2022, <https://www.verywellmind.com/what-is-an-employee-assistance-program-5217738>
51. WHO Coronavirus (COVID-19) Dashboard live, <https://covid19.who.int/?mapFilter=cases>
52. Woodcock, Mark Graham (2020). The Gig economy, 18
53. Workable great disconnect worker survey, <https://resources.workable.com/backstage-at-workable/announcing-the-great-discontent-2021-worker-survey> (2021)
54. WORKATO, [https://www.workato.com/the-connector/hr-automation-trends/\(2022\)](https://www.workato.com/the-connector/hr-automation-trends/(2022)) year publish
55. World Health Organization, Preventing epidemics and pandemics, <https://www.who.int/activities/preventing-epidemics-and-pandemics>

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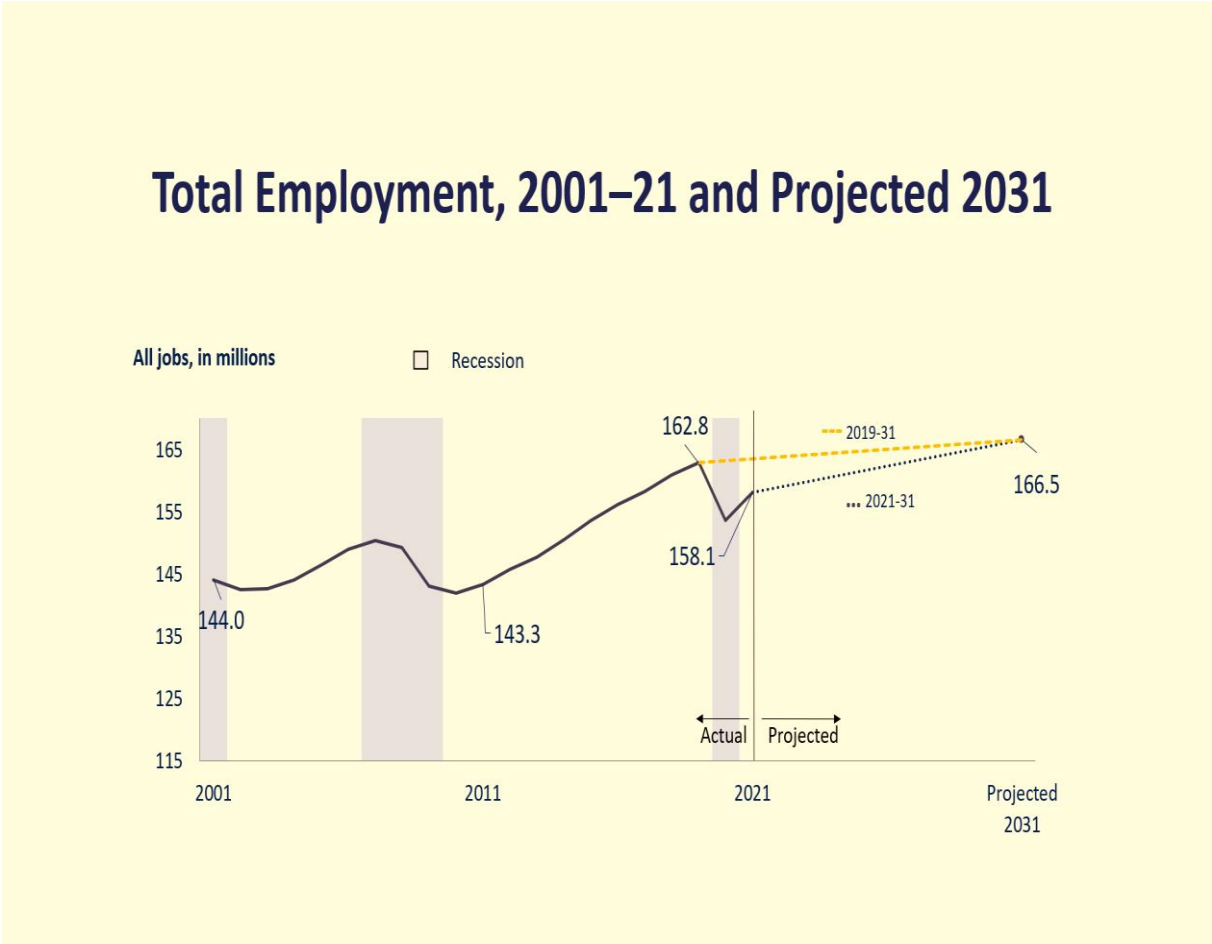
APPENDIX A – Total employment US from 2001 till 2031

APPENDIX B – Number of freelancers in US from 2017 to 2028

APPENDIX C – Unemployment rate of US from 1990 to the year of 2020

APPENDIX D – AI considering various job fields

APPENDIX A



Source⁵²: US Bureau of Labor statistics, <https://www.bls.gov/emp/graphics/total-employment.htm>

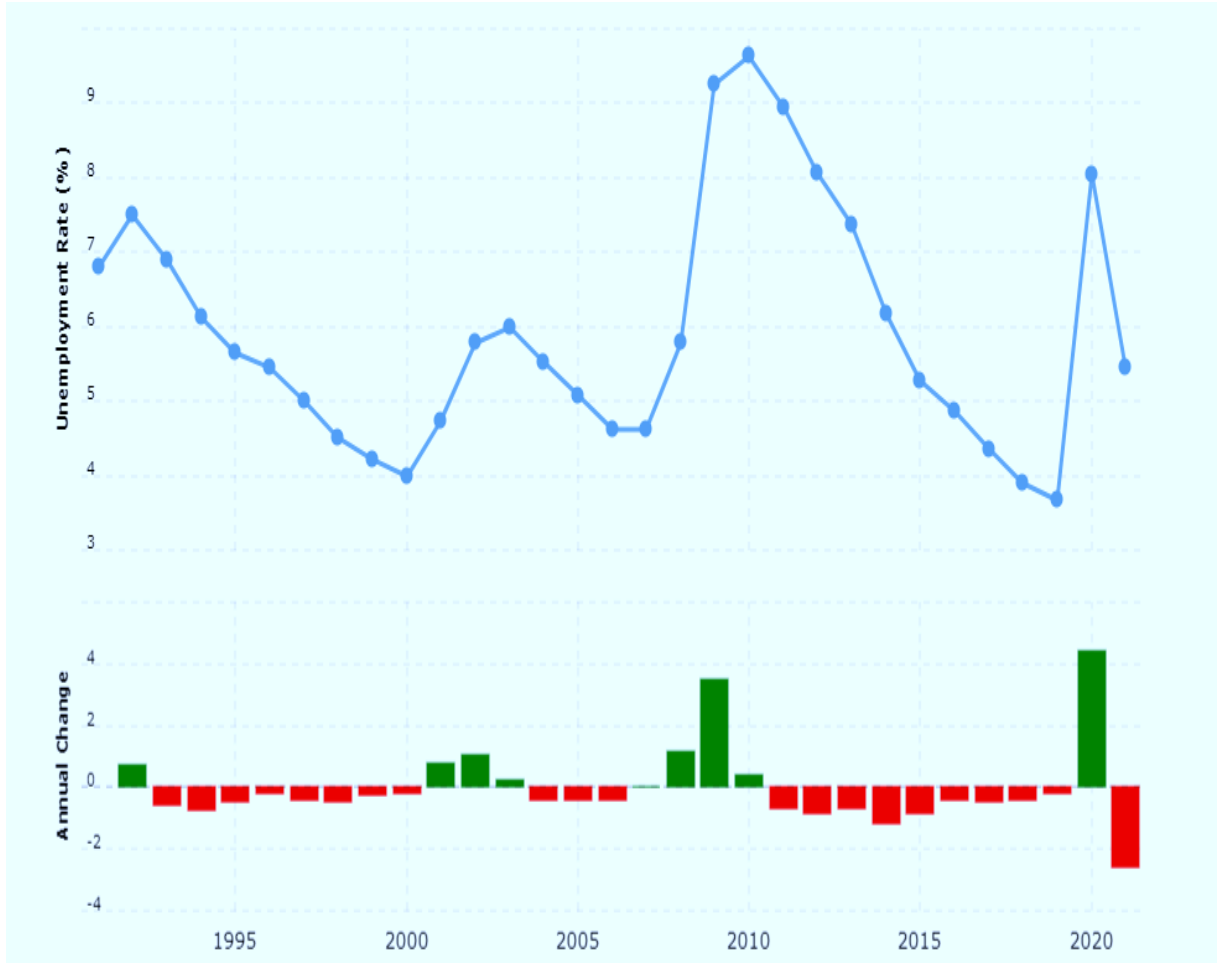
⁵² US Bureau of Labor statistics, <https://www.bls.gov/emp/graphics/total-employment.htm>

APPENDIX B

Year	Number ⁵³ of freelancers
2017	57.3 million
2018	59.7 million
2019	62.2 million
2020	64.8 million
2021	67.4 million
2022	70.4 million
2023	73.3 million
2024*	76.4 million
2025*	79.6 million
2026*	83 million
2027*	86.5 million
2028*	90.1 million

⁵³ Statista, <https://www.statista.com/statistics/921593/gig-economy-number-of-freelancers-us/>

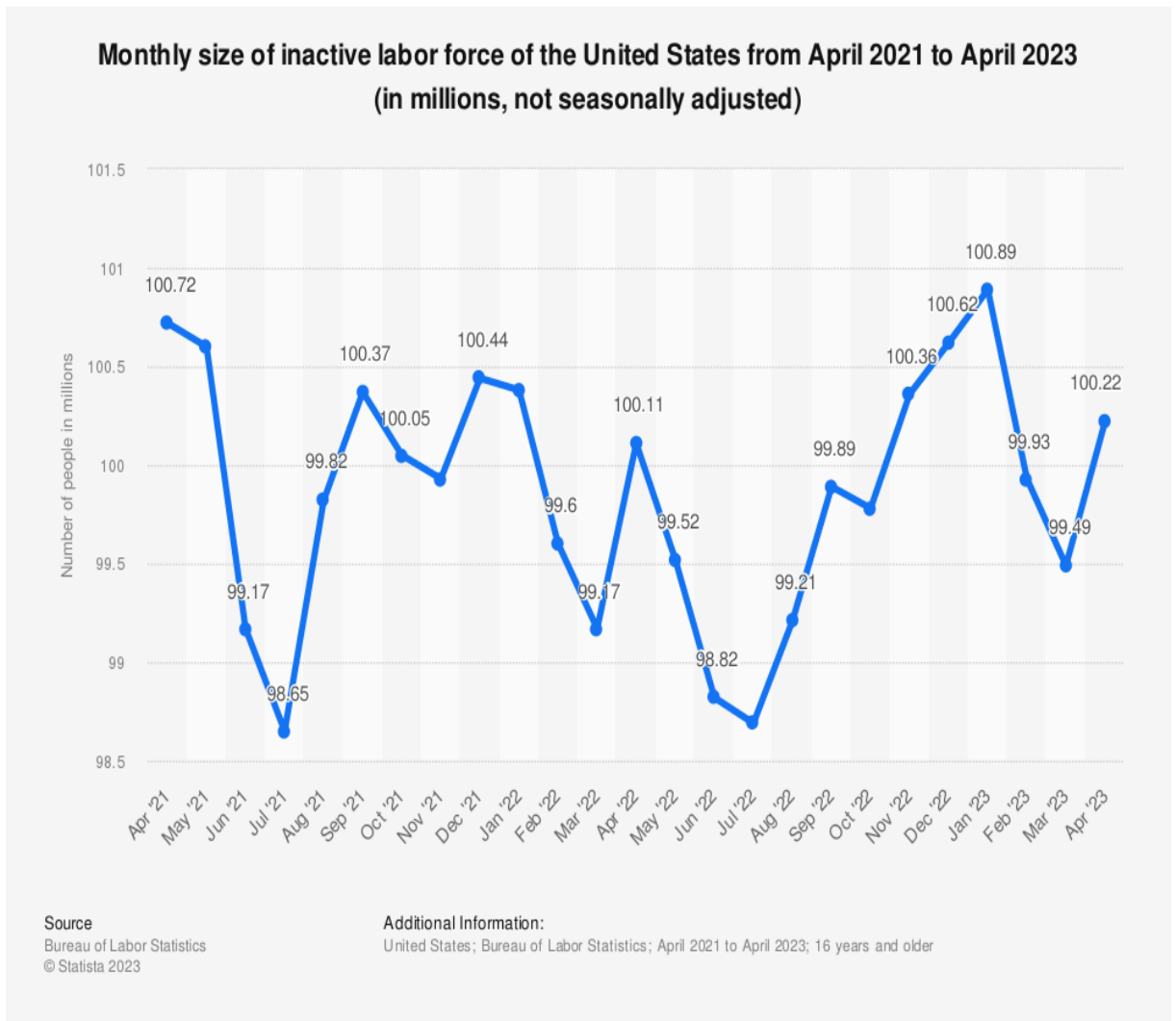
APPENDIX C



Source: Macrotrends⁵⁴, <https://www.macrotrends.net/countries/USA/united-states/unemployment-rate>

⁵⁴ Macrotrends, <https://www.macrotrends.net/countries/USA/united-states/unemployment-rate>

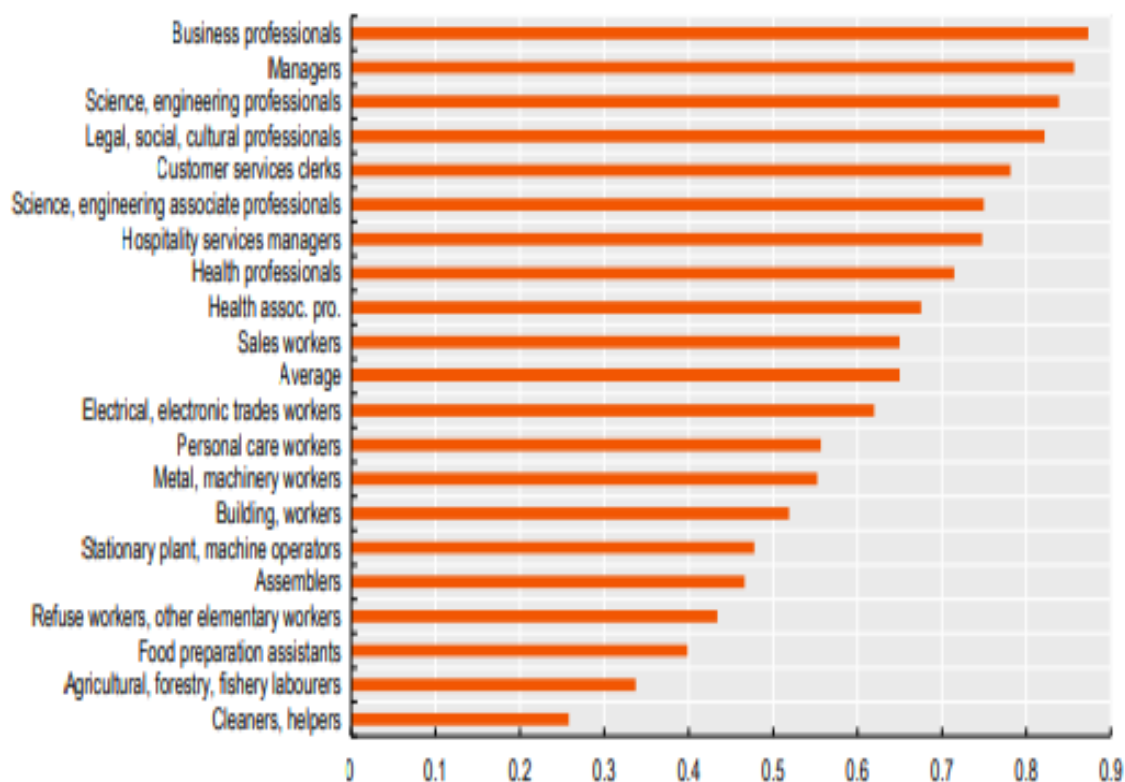
APPENDIX D



Source: ⁵⁵Moody's analytics, <https://www.economy.com/united-states/labor-force>

⁵⁵ Moody's analytics, <https://www.economy.com/united-states/labor-force>

APPENDIX E



Source: OECD ⁵⁶(2021), <https://www.oecd.org/future-of-work/reports-and-data/AI-Employment-brief-2021.pdf>

⁵⁶ OECD (2021), <https://www.oecd.org/future-of-work/reports-and-data/AI-Employment-brief-2021.pdf>