

The Impact of COVID-19 on Freelancing as a Career

Sharmin Sultana Koly
Department of Computer Science and
Engineering
East West University
Dhaka, Bangladesh
2015-3-65-010@std.ewubd.edu

Sheikh Aminul Islam
Department of Computer Science and
Engineering
East West University
Dhaka, Bangladesh
2015-3-65-013@std.ewubd.edu

T. M. Sazzad Hossain
Department of Computer Science and
Engineering
East West University
Dhaka, Bangladesh
2015-1-60-152@std.ewubd.edu

K.H. Rifat Alam Akash
Department of Computer Science and
Engineering
East West University
Dhaka, Bangladesh
2015-2-60-099@std.ewubd.edu

Abstract—Freelancing is a growing business sector all over the world, especially in developing countries. In this modern technological era, many people are employing themselves and earning their living by freelancing. In 2020, the COVID-19 pandemic is causing a worldwide disturbance in the economy. This disturbance in the world economy is an increasing concern in the freelancing community especially for those who have taken freelancing as a career. The purpose of this study is to determine the effects of COVID-19 on freelancing as a career for Bangladeshi freelancers. This study focuses to identify the key factors which are affecting the freelancing career in Bangladesh. In this study, various surveys have been taken from several freelancers. Using representative sampling, this study collected and analyzed those data of this pandemic economy to understand the impacts of the COVID-19 pandemic in the freelancing career concerning previous years. The result of this study shows a significant increase in job facilities in the freelancing marketplace. It can be concluded that due to this pandemic situation, freelancers are getting more job facilities and the freelancing market is flourishing. The theoretical consequences of this study are to predict the economic aspect of freelancing careers in the future for newcomers. From this study, the newcomers in the freelancing market can be benefited by understanding the present market situation and the future consequences of choosing freelancing as a career.

Keywords—Freelancing, COVID-19, Online Labour Market, Upwork.

I. INTRODUCTION

A. Background

COVID-19 pandemic has a big impact on businesses all over the world. From small to giant, all businesses are affected by this pandemic situation. Some businesses are struggling to survive, some are closing, some are adjusting with the situation and providing new services/products and some are taking this situation as an opportunity for their business. A huge number of people lost their job. This uncertainty in businesses has also affected online job marketplaces.

In 2014, it was estimated that 25% of the total manpower in the United States was involved in freelancing. There are many freelancing platforms. On the largest freelancing platforms Upwork, about 3 million jobs are posted annually. That is worth \$1 billion [1]. The online

freelancing platforms have created many freelancer's quality measuring factors that help organizations to find the best person for their project. Besides top-rated freelancers with 100% job, success score holders attract the clients/organizations. On those freelancers, clients/organizations get a guarantee of project success and greater reliability. So organizations are moving to hire freelancers instead of recruiting an employee. Freelancing opportunities are growing rapidly [1]. In the past 3 years the online labour market has globally grown approximately 50% [2].

Because of COVID-19 pandemic workers who switched to working from home is about 35.2% till May 2020 [3]. These factors can be encouraging to hire freelancers. It can also be an opportunity for freelancers. But many newspapers are claiming a large number of freelancers are losing their jobs. There is a lack of knowledge about the effect of the COVID-19 pandemic on online job marketplaces. Also there is no research about how the COVID-19 pandemic is affecting the freelancing career for Bangladeshi freelancers.

B. Research Objectives

Aim of this study:

- This study evaluates the impacts of COVID-19 on freelancing as a career.

The objectives of this study are:

- To determine the effects of the COVID-19 pandemic situation on jobs of the freelancers of Bangladesh.
- To analyze the impacts of COVID-19 on three popular freelancing platforms (Upwork, Freelancer, PeoplePerHour).

C. Research Questions

Main question:

- What are the effects of COVID-19 on freelancing as a career for Bangladeshi freelancers?

Sub questions:

- What are the key factors affecting the freelancing career in Bangladesh?
- How does the COVID-19 pandemic situation affect the three freelancing marketplaces?

D. Literature Study

A survey was conducted using Google Consumer Surveys (GCS) in two waves, one in April and the other in May of the US population during the COVID-19 pandemic. About half employed are working from home including 35.2% of workers switched to working from home. Also, 15.0% had already started working from home. But 10.1% recently started working from home. The younger people were most likely in remote work. Whereas professionals of information work related occupations were more likely to start working from home [3].

A study found that customers of the freelancing platforms have a preference or loyalty to it, and the resulting allocation maximizes the aggregate utility of the users. The customers have the freedom to choose the best fit for their project. Besides, freelancers also have the freedom to choose or apply to jobs. But the key challenges are pricing sometimes. Pricing set by one affects others. Freelance marketplaces are competing with each other. The marketplaces are growing rapidly. The freelancing platform Upwork had 2.5 million workers. The number of transactions made on Upwork was nearly 0.5 million [4].

Another research study was conducted on the challenge and opportunities of freelancing in Arab and foreign freelancing platforms. According to that study, there are about 21.1 million independent workers, 14.3 million moonlighters, and 5.1 million temporary workers. About 40% of them are independent workers. About 18%, that is nearly 9.3 million workers are dissatisfied with freelancing [5]. But professionals in developing countries are getting more success in freelancing platforms. The concept of hiring highly skilled and flexible workers who work without any obligations is highlighted to the customers/clients [5].

In the freelance platform, crowdsourcing of jobs is rapidly gaining. As a result, unskilled jobs with no specific quality requirements are getting uncontrolled. The capacity of regulated freelance systems with a maximum of job requests is determined. However, a scheme was proposed in declining jobs fair and optimal without the wait to control the capacity of job requests and ensure the number of job requests satisfaction [6]. This work does not require specification as focused on different issues.

The World Wide Web is a huge platform for information and communication. A new growing and thriving field is freelancing which enables people around the world to share skills, expertise, ideas, and talent of any freelancer to any particular contractor or buyer. This particular paper they developed a novel approach to recommending expert freelancers to any buyer. They worked with a formula to evaluate the weight of the skills and expertise of any freelancer. Their approach of recommending expert freelancers to buyers not only save time for both freelancers and buyers but also reduce overload [1]. However, in our study, we take their approach to understand the marketplace and use that understanding to evaluate further the impacts of COVID-19 on freelancing as a carrier.

II. METHODOLOGY

A. Data Collection Methods

We have focused our study on measuring the impacts of COVID-19 on freelancing as a carrier, factors that affect the

freelancers during COVID-19, and way of the effect of COVID-19 on the freelancing market. We needed the data on freelancing jobs and market conditions. We needed data on freelancer's experience such as their jobs, job invitations, client satisfaction on the task that has been completed, work pricing, market condition, etc. We could collect data through interviews and questionnaires [7, p. 26].

The interview could give us the opportunity of the primary understanding of the effects of the pandemic on freelancing as a carrier, detailed information market condition, the job being done, and experiences with clients. Through Interviews, we would be able to ask complex information to understand our main aim and answer the main questions. But we were bound in limitation of the number of interviews and as there was complex and variation of data, it was difficult for us to analyze those data as they were not in the same category. And it can take a lot of time to take a lot of interviews and can be expensive for us [7, p. 193]. Also interviewing during this COVID-19 pandemic can be difficult.

On The other hand, the survey method is more appropriate for collecting large amounts of data [8, p. 28]. Through the Survey method, we have a decent amount of data on their experience before and during the pandemic. This kind of survey can be done by mail, phone, internet, or mobile. That is why we face less complex data in a short amount of time.

For our research purpose, we have considered surveys a better option because surveys are more reliable when working with large populations, surveys are more dependable for collecting anonymous data and surveys are inexpensive [7, p. 49].

B. Participants / Sampling

The participants in our research are freelancers. We used representative sampling as our research is based on quantitative data and we do not need to go to the depth of the research to discover new. We chose random sampling as we had limited access and limited time. As a representative sample usually needs a large scale of sampling, we used a bias-free sampling frame as directly linked to the research topic.

In Bangladesh there are about 6,50,000 registered freelancers [9]. So for our study the total population is 6,50,000. We took the confidence interval 8.16 and and 95% confidence level. So the required sample is 144.

C. Data Analysis

For quantitative analysis we used maximum ordinal type data. We used some nominal type data too. After collecting the data, we converted the collected data to numeric data. The analysis of this data was done in Jupyter Notebook (Python 3) using the Matplotlib and the Seaborn python module.

D. Research Ethics

The ethical issues are described in the consent form. The respondent must agree before participating in this study. This was conducted using Google Form where the respondent was able to participate anonymously. The name,

email address, or identity of the respondent was not collected.

E. Data Collection Strategy

In order to collect as much as data, our attempt was covering as much as possible. We approached representative sampling. Because it gave us all points of view as our data is quantitative data. As we did not need to go into the depth of the data and collect a large number of samples that is why we did not approach exploratory sampling [7, p. 41].

We preferred Comprehensive sampling. But we chose Random sampling because we have limited access to all data and limited time [7, p. 27]. In this sampling, all the population had an equal chance of being selected. As we took a large number of populations Random sampling helped us remove bias and other disturbance data as much as possible.

We chose a large scale of sampling because we needed Quantitative data. Collecting Qualitative data is not possible in this short amount of time and limited cost. For empirical research, some need less variance and large amounts of data. That is why we chose Quantitative data.

We chose social media for sampling. Social media is the best source for finding freelancers at this moment. We ensured their data privacy maintenance protocol so that they can participate fearlessly and deliberately. It helped us to convince them for more participation.

III. RESULTS

A. Data Collection and Analysis

After collecting the raw data, it needed to be processed and analyzed. The raw data was not in the number form, it needed to be converted in a suitable format for quantitative data which is the only number [7, p. 245]. Our data was ordinal and nominal type, so we had to convert them into numeric form for further analysis of data. Coding was needed for analyzing the data. The collected data was analyzed in five steps.

1. *Data Preparation:* The collected raw data from the questionnaires survey needed to be processed for further analysis. For processing, the data was transformed, cleaned, and reduced if necessary. Coding was necessary for quantitative data analysis. After processing the data, using the Jupyter Notebook (Python 3), the processed data was prepared for further research.

2. *Initial Exploration:* After completing the data preparation, the next stage was data exploration. The exploration was mainly for the similarities and the connection between the relation of the collected data with the pattern of questionnaires. The data needed to be presented in the form of graphical representation for better understanding.

3. *Analysis Plan:* The raw data collected from the survey was categorized and simplified to check whether the collected data is credible, dependable, and conformable to do the case study or not.

4. *Presentation Plan:* The analyzed data is represented with various charts. Simple bar chart, scatter plot, and the pie chart can be used to simplify the findings visually [7, pp.

261–266]. We used bar charts, pie charts and heat maps to visualize the findings.

5. *Tools:* The analysis was done in Jupyter Notebook. Matplotlib, Pandas, and Scikit-learn python modules were used for the analysis in Jupyter Notebook.

B. Results

There were 16 questions in the survey. 146 freelancers participated in the survey. There were 9 ordinal questions. The answer of those questions described the effect of COVID-19 on freelancing career and marketplace.

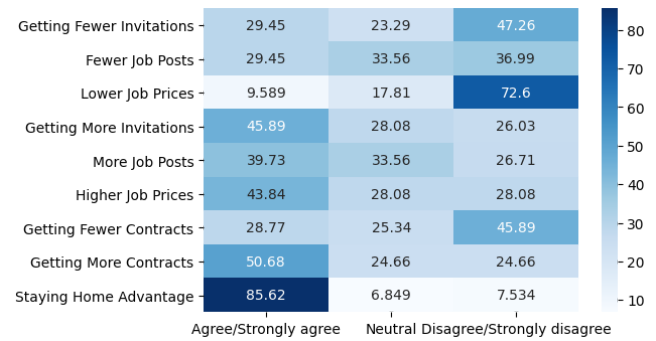


Fig. 1: Heatmap of the responses of the ordinal questions

Figure 1 shows the responses (percentage) of the ordinal questions.

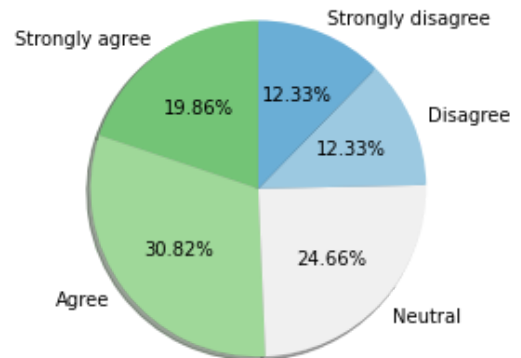


Fig. 2: In the past eight months, freelancers have got more contracts than in previous years.

From those 146 freelancers, 27.40% strongly agreed, during the COVID-19 pandemic, freelancers are getting more job invitations than before and 18.49% agreed. 28.08% of the responses were neutral. Where only 16.44% disagreed and 9.59% strongly disagreed. From their responses we can see that during the COVID-19 pandemic, freelancers are getting more job invitations than before.

39.73% freelancers agreed or strongly agreed that there are more job posts during the COVID-19 pandemic than before. Where only 26.71% disagreed or strongly disagreed. 43.84% freelancers agreed or strongly agreed that during the COVID-19 pandemic, clients are offering higher prices for work than before. Where only 28.08% disagreed or strongly disagreed. 50.68% freelancers agreed or strongly agreed that in the past eight months, freelancers got more contracts than in previous years. Where only 24.66% disagreed or strongly disagreed. 86.62 freelancers think staying home is an advantage for their freelancing career.

There were 3 nominal questions. The answer of those questions describes the effects on their work that affect their jobs. Figure 6 shows the responses (percentage) of the nominal questions.

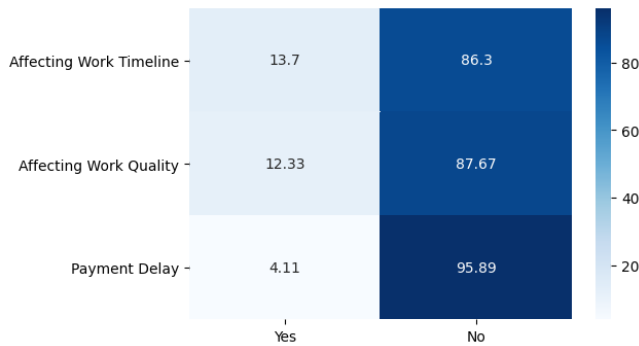


Fig. 3: Heatmap of the responses of the nominal questions.

From their experience 86% freelancers do not think COVID-19 has any effect on their work timeline, 87.6% do not think COVID-19 has any effect on the quality of their work. This is resulting in a positive impact on their career. 95.89% freelancers said their clients are not delaying in releasing funds (payment).

110 freelancers from Upwork, 31 freelancers from Freelancer and 5 freelancers from PeoplePerHour rated the present situation of the freelancing marketplaces.

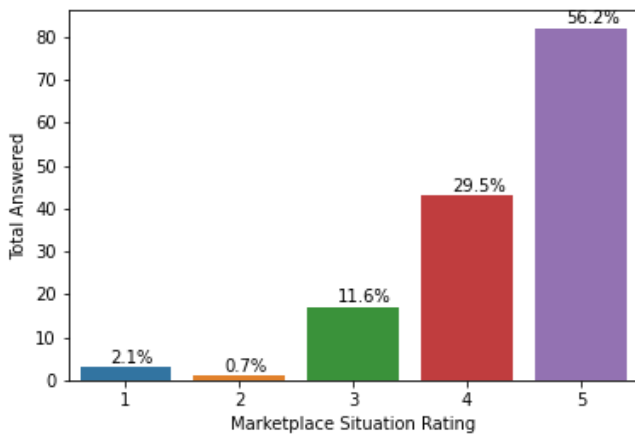


Fig. 4: the present situation of the freelancing marketplaces.

56.2% rated 5, 29.5% rated 4, 11.6% rated 3, 0.7% rated 2 and 2.1% rated 1. Majority rated the marketplace situation is very good.

74 freelancers responded, they think during COVID-19 pandemic they are getting more contracts. They were asked the reason for this increment.

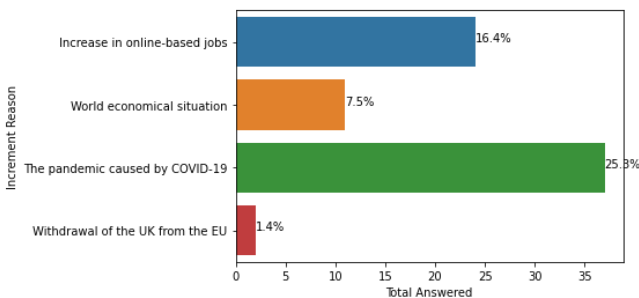


Fig. 5: Reason of job increment.

25.3% think the reason for this increment is the pandemic caused by COVID-19. 16% think the reason is an increase in online based jobs. Majority thinks the reason for this increment is the pandemic caused by COVID-19.

IV. DISCUSSION

A. Result and Analysis

This research study was set out to describe the impacts of COVID-19 on freelancing as a career and determine the effect of COVID-19 on popular marketplaces and jobs of the freelancers of Bangladesh. Data was collected using questionnaires in Google forms through social media and personal effort. Regarding the first research question “What are the key factors affecting the freelancing career in Bangladesh?”, the result shows that during the COVID-19 pandemic the pandemic situation was the key factor for the changes. Concerning the 2nd research question “How does the COVID-19 pandemic situation affect the three freelancing marketplaces?” the majority of participants in the research feel that during the pandemic freelancers were more job posts in the freelancing platforms. Regarding the main question “What are the effects of COVID-19 on freelancing as a career for Bangladeshi freelancers?” It is clear that the COVID-19 pandemic has no negative impact on work timeline, work quality, and payment but the positive impacts are increase in job invitations, number of job posts and job opportunities. As they are staying home, this has a positive impact on their freelancing career, they are taking this an advantage for their career.

B. Limitations

This study is limited to Bangladeshi freelancers and 3 freelancing marketplaces (Upwork, Freelancer, PeoplePerHour). The absence of qualitative data also constrained the knowledge of other pinpoint factors.

C. Ethical Consequences

This study does not have any ethical consequences over anyone because for security reasons freelancers contributed to this study anonymously. That is why freelancer’s personal information can not be leaked or they can not be harmed.

D. Recommended Future Works

- Covid-19 pandemic effect on local freelancers and local marketplaces.
- Covid-19 pandemic effect on other online freelancer’s market places.
- Covid-19 pandemic effect on any specific country freelancers.
- Covid-19 pandemic effect on freelancers and marketplaces with qualitative data.

V. CONCLUSION

The result suggested that the COVID-19 pandemic was the reason that freelancers can stay at home more than other normal times. Because of this pandemic, people had to work from home. This resulted in more jobs in the online labor markets. It did not have any negative effect on the freelancer’s work quality, timeline, and payment schedules. This is what was found that COVID-19 has a positive impact on freelancing as a career for Bangladeshi freelancers.

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Appendix 1: Informed Consent Form

Informed Consent Form

Sharmin Sultana Koly, Sheikh Aminul Islam, T. M. Sazzad Hossain, K. H. Rifat Alam Akash
2015-3-65-010@std.ewubd.edu, 2015-3-65-013@std.ewubd.edu, 2015-1-60-152@std.ewubd.edu,
2015-2-60-099@std.ewubd.edu
Undergraduate students in Computer Science and Engineering
East West University, Dhaka, Bangladesh.

We are students at East West University asking for your voluntary participation in our small-scale research project regarding the impact of COVID-19 on freelancing as a carrier. Please read the following information about the project. If you would like to participate, please sign in the appropriate space below. If you have any further questions about this study, please feel free to contact us at the given mail addresses.

Information about the research:

The purpose of this research study is to evaluate the impact of COVID-19 on freelancing marketplaces and freelancers. Also to analyze the sustainability of freelancing as a career. This will do an analysis of your experience in online job/freelancing marketplaces.

Participating in the study:

If you participate, you will be asked to:	Provide answers to some questions that are based on your works and experience on freelancing marketplaces.
Potential risks of this study:	As we will ensure the anonymity of your data so the risk is minimal here.
The time required for participation:	Approximately 10-15 minutes.
Data usage:	The data you will provide will be used to evaluate the impact of COVID-19 on freelancing marketplaces and freelancers.
Data protection:	We will provide the anonymity and safety of your data.
How confidentiality will be maintained:	Your provided data will be kept confidential. Your signed consent form or any identifiable information will be added to your data. We will ensure the anonymity of your data.
Opt-out policy:	Data will be collected anonymously. So I can not opt-out of this study at any time.

Voluntary Participation:

Participation in this study is completely voluntary. If you decide not to participate there will not be any negative consequences. Please be aware that if you decide to participate, you may stop participating at any time and you may decide not to answer any specific question.

By clicking on the "Next" button, I am attesting that I have read and understood the details provided for me about this research, and agree to participate in the project freely.

Appendix 2: Data Collection Protocol

Data Collection Protocol

In this questionnaire, there are 16 questions with predefined answers. The respondent will have to choose the best match or a suitable option for him/her.

Survey Questions:

1. Which freelancing platform do you work on?

Upwork	Freelancer	PeoplePerHour
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2. During the COVID-19 pandemic, you are getting fewer job invitations than before.

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
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3. In the freelancing platform where you work, there are fewer job posts during the COVID-19 pandemic than before.

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
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4. During the COVID-19 pandemic, clients are offering lower prices for work than before.

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
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5. During the COVID-19 pandemic, you are getting more job invitations than before.

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
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6. In the freelancing platform where you work, there are more job posts during the COVID-19 pandemic than before.

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
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7. During the COVID-19 pandemic, clients are offering higher prices for work than before.

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
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8. Would you agree or disagree with the following statement?

“Those past eight months have been hard for you to get new contracts as a freelancer for the COVID-19 pandemic.”

Agree	Disagree
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9. Would you agree or disagree with the following statement?

“In the past eight months, you have got more contracts than in previous years.”

Agree	Disagree
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10. What do you think about the reason for this increment?

- a) Increase in online-based jobs.
- b) World economical situation.
- c) The pandemic caused by COVID-19.
- d) Withdrawal of the United Kingdom from the European Union
- e) Other: _____

11. What do you think about the reason for this decrement?

- a) COVID-19 pandemic.
- b) Black lives matter movement in the US.
- c) Australian bushfire.
- d) Gold prices fell for the 4th for 4th straight day in the global market.
- e) Other: _____

12. Staying home during the COVID-19 pandemic is an advantage for your freelancing career.

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
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13. During the COVID-19 pandemic are you facing difficulties in delivering works in time?

Yes	No
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14. During the COVID-19 pandemic are you facing difficulties in delivering quality work?

Yes	No
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15. Based on your experience do you think during the COVID-19 pandemic your clients are delaying in releasing the funds?

Yes	No
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16. Rate the present situation of the freelancing marketplace you work in.

Very Bad	1	2	3	4	5	Very Good
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Form Response Sheet: https://docs.google.com/spreadsheets/d/1sXRXWt9P8r3ocGOB0_Y7GPpNkHKHiDwr-r20MaAHfvs/