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Determinants of Digital Freelancing Outcomes in Bangladesh: An Empirical Study

Abstract

Digital freelancing has emerged as an important avenue for employment generation, income diversification, and digital economic development in Bangladesh. However, limited empirical evidence exists regarding the factors that shape freelancing outcomes in the country's growing digital labor market. This study aims to examine the influence of economic factors, flexibility factors, motivational factors, infrastructure and institutional support, and social factors on digital freelancing outcomes in Bangladesh. A quantitative, cross-sectional research design was employed using a structured questionnaire to collect data from 250 digital freelancers. The data were analyzed using SPSS through descriptive statistics, reliability analysis, exploratory factor analysis, correlation analysis, and multiple regression analysis. The findings reveal that all five factors have significant positive effects on digital freelancing outcomes, with infrastructure and institutional support emerging as the most influential predictor, followed by economic factors. The results further suggest that successful digital freelancing is driven by a combination of economic opportunities, flexible work arrangements, individual motivation, institutional and technological support, and social influences. This study contributes to existing literature by providing empirical evidence on the multidimensional determinants of digital freelancing outcomes in the context of a developing economy. The findings offer practical implications for policymakers, platform providers, educational institutions, and other stakeholders in designing policies and support mechanisms to strengthen Bangladesh's digital freelancing ecosystem and promote sustainable participation in the digital workforce.

Cite as:

1. Introduction

Digital freelancing means a type of autonomous work where freelancer provide servicer through virtual platforms (Kässi & Lehdonvirta, 2018). Digital freelancing means technology-based working for various corporations on an

agreement basis rather than working as an employee for a specific company (Business Dictionary, 2019). On the other hand, a freelancer or freelance worker is a term commonly used for a self-employed person. A Digital freelancer is an employee who works on a contractual basis with different organizations for any

specific task or time from anywhere in the world by using the Internet. A freelancer can show his creativity and talent in this task. Robert Benchley states, “A freelance writer is a man who is paid per piece or word or perhaps.” Many young people engage in this sector due to high-income opportunities and flexible working facilities. They mainly do software development, web development, writing, data entry, accounting, tax-related tasks, mobile app development, blogging, search engine optimization, translations, graphic design, etc. (Marshall & Samantha, 2007).

The Internet was introduced on June 4, 1996. Since then, Internet has been growing continuously (Hamidur, 2009). Nowadays, the government of Bangladesh has taken all necessary initiatives to transform this country into Digital Bangladesh to fulfill the country’s vision. According to BTRC, total 123.82 million people are using the Internet in Bangladesh. Among them, 113.73 million are mobile internet users, and the remaining 10.09 million are using ISP and PSTN (BTRC, 2021). With the help of the Internet, thousands of young people are doing Digital freelancing work and adding millions of dollars to national income. Every year more than 500,000 university students graduate in Bangladesh. But there are insufficient jobs for this massive number of university graduates (World Economic Forum, 2019). So, Digital freelancing can be the next leading industry for Bangladesh. Though the number of registered freelancers is as high as 6.5 lacs, only five lacs work continuously (Dhaka Tribune, 2017).

The unemployment rate is rising from the previous year and is 4.37 %, according to the Bangladesh Bureau of Statistics (BBS) record. And this is also an alarming issue, that 46% of the unemployed are university

graduates. The CPD identified that the unemployment rate is rising seriously among the more educated labor force (Dhaka Tribune, 2019) . Nowadays, it’s become common among youth university graduates to sit for Bangladesh Civil Service (BCS) exams or other govt. Job and losing valuable 3 to 5 years from life though the number of govt. Job posts are very slight compared to the total number of job-seeking candidates. Besides this, thousands of young guys choose their careers as Digital freelancers who work flexibly and earn millions of dollars in foreign remittances. The Bangladesh government has realized this sector’s importance and has taken the necessary steps to accelerate this booming sector.

Like one of the most attractive programs in the Learning and Earning Development Project conducted by the ICT Division of Bangladesh. Through this project, thousands of youths have become a valuable resource for the country. Another great initiative is establishing a Hi-Tech Park and incubation center to enable Bangladesh to be an IT-competent country. Government already approved 12 IT and hi-tech parks in numerous districts at the cost of Taka 1,796.40 crore. The 12 High-Tech parks / IT parks will be constructed in Barisal, Natore, Cumilla, Cox’s Bazar, Jamalpur, Gopalganj, Dhaka, Sylhet, Khulna, Chittagong, Mymensingh, and Rangpur. And the authority estimated that it would help to earn \$5 billion from the IT sector by creating 20 lakh jobs among the youth.

The Kaliakoir Hi-Tech Park is a full-grown distinct economic zone for IT/ IT-enabled services and the hi-tech industry located at kaliakoir in Gazipur. All the Hi-tech parks are conducted by the Hi-tech park authority, which was formed in 2010 for

establishment, supervision, operation, and expansion. According to the announcement of the top management of the hi-tech park, the total number of government hi-tech, software, and IT parks will rise to 33 (The Daily Star, 2018).

Bangladesh Association of Software & Information Services (BASIS) has taken many initiatives to support the freelancers of Bangladesh in various ways. The main purpose of its award-giving initiative is to motivate youth to join and promote the IT industry. It also encourages females to involve in this potential freelancing career. Its target is to provide Digital training to 1 million youth to make them IT-skilled professionals. And BASIS also believes that 100 million youth will work in this sector to make Bangladesh a high-income country within the next ten years. The Dhaka Chamber of Commerce and Industry chairman has said that people who want to start their business or career as Digital freelancers will get all support from DCCI (BASIS, 2013).

Freelancing is becoming an attractive occupation choice for numerous Bangladeshi youths, both male and female. They are working and adding a considerable amount of money to the national income. Out of 163 million people, 65% are within 25. So, it's a prodigious opportunity for Bangladeshi youths to benefit from this thriving industry. Though thousands of young people have chosen their careers as a freelancer, they have lots of lacking in knowledge to prosper in the competitive global marketplace. They need proper training and the government have already taken many necessary steps to overcome this problem, like learning and earning projects through the ICT division, Hi-Tech parks, and IT incubation centers. Many developed nations like the USA,

UK, and Australia are outsourcing their tasks from Bangladesh, mainly including Web design, Software development, tax preparation, SEO, content writing, data entry, etc. In the current booming situation of Freelancing, Asia has turned into the best place for delivering outsourcing services around the world. Currently, Bangladesh is scurrying the 2nd position in terms of providing freelancing services. India is the largest supplier of freelancing works, holding 24% of the market share, next Bangladesh 16%, and then the USA 12%. And Bangladeshi freelancers' main focus is on sales and marketing support services (The Independent, 2019).

The Digital freelancing sector in Bangladesh has seen remarkable growth in recent years. In 2008, the sector's export revenue was a mere \$26 million, but by 2021, it had reached an impressive \$1.4 billion. The industry had only 300 software companies and 50,000 employees in 2008, but now, over a million people are working in the sector. The Bangladesh Association of Software and Information Services (BASIS) oversees more than 1,700 companies, a number that has nearly doubled in the last five years. Additionally, the country has seen the rise of numerous startups, call centers, e-commerce platforms, as well as digital device manufacturing and assembling companies. These developments have established Bangladesh as a thriving hub for the digital freelancing ecosystem (Kabir, 2022).

The number of freelancing service providers is not very small in Bangladesh, but there is a serious problem that is our women's participation in this sector is increasing but gradually. To turn Bangladesh into Digital Bangladesh Government is already focusing on the

Digital Economy and mainly through IT products exports, by engaging both male and female youth of Bangladesh (YouthLead, 2019). According to the Oxford Internet Institute (OII, 2017) Bangladesh is the 2nd largest digital freelancing service provider country and India holds the top position.

Bangladesh is one of the most densely populated countries in the world, and its majority are youth. According to the World Population Review, Bangladesh has a population of 163.6 million, with youth constituting the country's main strength (world population review, 2019). The majority of Bangladesh's youth are between 15 and 29 years of age.

According to the youth labor force survey of (Bangladesh Bureau of Statistics, 2017) that 41.639 million are youth, where 20.798 million are in the Labor force, 18.989 million are employed, 1.809 million are unemployed, and 20.841 million are not in the Labor force. Though this statistic is not satisfactory in terms of economic perspective, on the other hand, this may be the opportunity for the country to turn this youth into resources through Digital freelancing. If it's possible to provide proper training and guidance to this youth, Bangladesh will turn the center of the digital freelancing industry and top leading digital freelancing service provider in the world. It is expected that the IT and Hi-Tech parks, IT incubation centers, and learning and earning projects of the ICT division will turn this youth into technically knowledgeable resources, and earnings from this industry will reach billions of dollars.

Although digital freelancing is a booming sector and is highly important for Bangladesh, only a few researchers

have studied this area. In some research, there may be a general discussion about digital freelancing, its problems, and its prospects, but there is no profound research that shows the proper factors that may influence digital freelancing outcomes in Bangladesh. So, the primary purpose of this study is to determine the factors influencing digital freelancing outcomes. In this study, the researchers have tried to explore the present scenario of digital freelancing industry, especially the factors that influencing digital freelancing outcomes in Bangladesh. The researcher believed that the findings would help the policy maker, government and all other stakeholders to take the necessary steps to overcome the current impediments of this booming industry.

2. Literature Review and Hypotheses

According to (Bose et al., 2013) Bangladesh is a prominent freelancing workplace because of its human resources, financial and infrastructural conditions. They mainly studied the prospects of Bangladesh in the IT sector, especially in the outsourcing sector. The researchers tried to identify the potential of freelancing work through 9 variables: Human resource condition, Bangladesh as a freelancing place, infrastructure condition, supporting industry, Security and Law, political situation, environmental condition, educational institution, and professional degree. Through these variables, they have explored the prospects of this attractive freelancing industry. They also provided some suggestions like earnestly implementing intellectual property rights because of software piracy, capability planning, proper marketing knowledge, removing negative perceptions, and infrastructure development in remote areas. But in their

study, they did not mention any initiatives that the Bangladesh government has taken to clasp the opportunities. In addition, there were no findings like which factors may influence people to be involved in this promising digital industry.

(Rahman & Rahman, 2017) conducted research on the freelancing context of Bangladesh, and they have tried to show the scenario of freelancing in Bangladesh. They mainly focused on factors that affect the freelancer's income; they especially considered factors named freelancing experience, time spent, freelance earnings, educational level, and science background. And they found that there is no relationship between freelancing incomes with science background studies and a strong relationship of freelancing income with expertise and the number of hours freelancer's work. Though their studies were in the Bangladesh context, they didn't show the government's projects, and initiatives were taken to accelerate IT freelancing works. And they didn't mention any factors that may drive the success of Digital Freelancing.

According to (Rahman et al., 2012) thousands of youths are choosing freelancing as their career because of some advantages like their flexibility to work, accessibility, choice of freedom, and work hour freedom. Besides these positive points, they may also suffer from problems like uninterrupted power supply in remote areas, higher broadband costs, lack of easy payment systems, lack of internet banking, etc., which is the primary need for this fast-growing industry. This study also focusses only on problems and prospects.

(Gorp et al., 2015) They have conducted qualitative research to assess the

attractiveness of the IT freelancing condition in Bangladesh. They mainly used the Kotlarsky model to complete their study. Kotharsky's model is a well-established model that was first used to assess the attractiveness of IT offshoring in Russia (Kotlarsky, 2013). In this model, there were seven factors Kotharsky used: cost, skills, environment, potential marketplace, risk, country infrastructure, and culture. Though it was a qualitative study, their major outputs are that Bangladesh is suitable for IT freelancing works. Bangladesh's favorable position in Freelancing is due to available youth human resources, high-quality services, and competitive prices (Freund, 2016). In addition, the Bangladesh government supports flourishing prospective sectors through infrastructure development, ensuring property rights. These initiatives may help Bangladesh to hold the top position in the IT freelancing industry across the world.

A Study conducted by the Bangladesh Tariff commission titled "Problems and Prospects of IT and IT Enabled Services Outsourcing in Bangladesh." In this study, the researchers identified the problems that freelancers are facing and detailed analysis of tax on IT products and services. According to BASIS more than thousands of registered IT service providers are in Bangladesh. Bangladesh is waiting to enter a billion dollars IT product and service market. Besides this, the domestic IT service provider's organization should focus on skills and quality because thousands of companies operating in Bangladesh are taking their services from IT service-providing companies (Askari et al., 2015).

According to (Hong et al., 2016) in the online freelancing market place the buyer

chooses service providers, but there were problems a few years ago, and it was a drought in service providers' quality (Yoganarasimhan, 2012). The dynamic structural framework has been used to measure the reputation of online service providers, which helps to identify suitable service providers. The compensation of the freelancers mainly depends on their past performance, and this past performance also has an impact on buyers' award decisions (BANKER & HWANG, 2008). Though reputation and past performance are often prophetic about a buyer's future satisfaction, past performance may not always provide an accurate signal of future performance. To overcome this problem, Marios Kokkodis and Panagiotis G. Ipeiritis developed a model based on prior and category-specific feedback. Their research claims it provides 25% better accuracy than the commonly practiced collaborative filtering method (Kokkodis & Ipeiritis, 2015). Eli M. Snir and Lorin M. Hitt have conducted a study titled "Costly Bidding in Online Markets for IT Services," In their research, they said that large projects draw more bids, which increases the cost of bidding to all participants (Snir & Hitt, 2003).

A World Bank report titled "The Global opportunity in online outsourcing" stated that traditional employment has changed due to online freelancing opportunities. It helps the employer to find suitable service providers in a faster way with 24-hour productivity. And service providers may participate in this global market from anywhere at any time with the help of computer and internet access. The developing countries like Bangladesh, this opportunity will help to enrich the socioeconomic development of the country because of having enormous

youth. The report also mentioned that proper tax considerations, minimum wage rates, and part-time employment laws are required for this industry. (Kuek et al., 2015). From the literature review it is clear that the existing literature mainly focuses on importances, challenges, prospectives, and initiatives of Digital freelancing, but there is no robust paper found that showed the main factors that mainly influence digital freelancing outcomes, for this reason this study is conducted to overcome this gap. Based on some previous studies the following factors are considered for this research.

Economic Factors and Digital Freelancing Outcomes

Economic incentives are considered one of the primary motivations for digital freelancing. Earlier studies indicate that foreign remittance earnings, income, and financial independence strongly encourage individuals to be involved in digital freelancing. The research on gig economy emphasizes that potential income and value creation are the main determinants of freelancer's engagement in digital platforms (Muzanenhano, 2026). In Bangladesh for last couple of years freelancing has become one of the important income sources for thousands of youth people and they are contributing national income significantly (Islam). So economic benefits are anticipated to positively influence freelancing outcomes.

H1: Economic factors have a significant positive effect on digital freelancing outcomes.

Flexibility Factors and Digital Freelancing Outcomes

Digital freelancing is always considered

one of the most flexible works. Freelancing is well accepted across the globally due to its flexible working hours and work from anywhere facilities. Digital freelancers work remotely and maintain their own working schedule which increases their job satisfaction and performance as well (Muzanenhano, 2026). Systematic reviews ensure that the self-rule of the freelancers and working flexibility are key motivation for the freelancers to enter this industry (Billah & Khan, 2026). Therefore, flexibility is presumed to have a positive impact on digital freelancing outcomes.

H2: Flexibility factors have a significant positive effect on digital freelancing outcomes.

Motivational Factors and Digital Freelancing Outcomes

Motivational factors like financial solvency, skill development opportunity, professional independence always influence freelancing works. In Bangladesh many youths often chose freelancing works due to lack of opportunity of conventional job and their desire for self-employment (Jahan, et al., 2025). Besides self-rule work environment, autonomous work is considered as main motivational charioteers in gig economy literature (Muzanenhano, 2026). Thus, we may say that motivational factors are positively affect the digital freelancing outcomes of Bangladesh.

H3: Motivational factors have a significant positive effect on digital freelancing outcomes.

Infrastructure & Institutional Support and Outcomes

Technological infrastructure and institutional support are the fundamentals

elements to becoming successful in freelancing industry. Smooth and fast internet, various initiatives by government, training opportunities all are necessary for digital freelancing industry. Studies found that insufficient infrastructure and low support are the main limitations for freelancing industry in developing countries, including Bangladesh. On the other hand, enhanced technological infrastructure and government level policy support are very much needed to increase the growth of digital freelancing activities (Alauddin et al., 2025). Hence, infrastructure is assumed to deeply influence freelancing outcomes.

H4: Infrastructure & Institutional Support have a significant positive effect on digital freelancing outcomes.

Social Factors and Digital Freelancing Outcomes

Social acceptance and gender norms substantially impact involvement in freelancing. Digital platforms are considere3d as more inclusive labor market but in different studies show that discrimination and unfair means even exist in digital freelancing industry (Munoz et al., 2023). Some researchers suggest in their study to build up trust and cooperation among freelancers. To achieve a sustainable digital freelancing industry, it is necessary to ensure social acceptance and discrimination in a free work environment (Fulker & Riedl, 2024). Then, social factors are anticipated to progressively influence outcomes.

H5: Social factors have a significant positive effect on digital freelancing outcomes.

Overall Model (Joint Effect of All Factors)

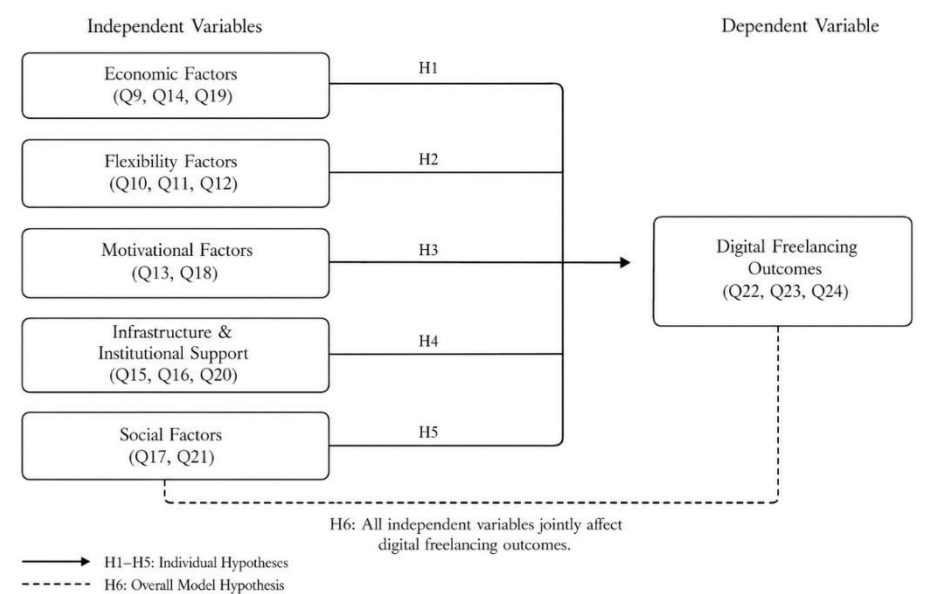
Digital freelancing outcomes are not possible to measure by a single circumstance. Considerably, they result from the collective influence of economic benefits, working flexibility, motivational issues, infrastructure and institutional support and social acceptance (Wood, Lehdonvirta, & Graham, 2018). Based on the proposed theoretical framework and

previous experimental outcomes these factors jointly justify variations in digital freelancing outcomes among freelancers in Bangladesh.

H6: All independent variables together influence Digital Freelancing Outcomes.

This conceptual framework guided the overall research and shows the relationship between all independent variables with dependent variable.

Figure 1. Conceptual Framework of the Study



Source: Developed by the authors
Note: The conceptual framework depicts the proposed relationship among independent and dependent variables that were developed by the authors based on prior literature.

3. Methodology of the study

This research study is quantitative and cross sectional in nature, examine the determinates of digital freelancing outcomes in Bangladesh. A structured questionnaire was used for data collection where eight demographic and professional questions and rest are 5-point Likert scale questions from strongly disagree

to strongly agree. A purposive sampling technique was used to collect the response for those who engage in freelancing works. More than 400 questionnaires were distributed through different channels, and 250 respondents were considered appropriate to confirm statistical validity for multivariate analysis.

The target population of this study is active freelancers in Bangladesh, according to Bangladesh Investment Development Authority (BIDA, 2026) there are 650,000 active digital freelancers in Bangladesh. Though the estimated population is large, according to (Hair et al., 2019) and (Tabachnick and Fidell, 2019) sample size of 250 were considered adequate for Exploratory Factor Analysis (EFA). A minimum ratio of 5:1 and a preferable ratio of 10:1 are recommended. With 16 Likert-scale items, the required sample size ranges from 80 (16×5) to 160 (16×10) respondents. Since this study obtained 250 valid responses, the sample size is adequate for EFA. For multiple regression analysis, (Green, 1991) guideline was applied: $N \geq 50 + 8m$, where m represents the number of predictors. With five independent variables, the minimum required sample size is $N \geq 50 + 8(5) = 90$. Since the study obtained **250 valid responses (250 > 90)**,

the sample size is adequate for multiple regression analysis.

The study also includes reliability tests, exploratory factor analysis, correlation and multiple regression. The SPSS software was used to data input and data analysis. The demographic and occupational data were mainly present by using descriptive statistics. To check the internal consistency of measurement scales Cronbach's Alpha was applied. Exploratory Factor Analysis (EFA) was conducted to examine construct validity using KMO and Bartlett's Test, followed by principal component analysis with varimax rotation. The study also showed the relationship among variables through Pearson correlation while multiple regression analysis also used as the main analysis to find the impact of independent variables on digital freelancing outcomes. A 5% level of significance was considered for all statistical tests.

Table 1. Measurement of Variables and Questionnaire Items

Demographic variables (Q1–Q8)				
SL	Response Items	Variable type	Measurement Scale	Response pattern
1	Gender	Categorical	Nominal	Male/Female/other
2	Age	Categorical	Ordinal	Below 18, 18–24, 25–34, 35–44, 45–54, 55+
3	Profession	Categorical	Nominal	Student/Digital Freelancer/Teacher/Service Holder / Employee/Business Owner/ Homemaker/Other
4	Educational Qualification	Categorical	Ordinal	Secondary/Higher Secondary Graduation/Post-Graduation / Others
5	Duration of freelancing work weekly	Categorical	Ordinal	Less than 10, 10–20, 21–30, 31–40, More than 40 hours

6	Monthly income	Categorical	Ordinal	Less than BDT 10,000, BDT 10,000–25,000, BDT 25,001–50,000, BDT 50,001–100,000, More than BDT 100,000
7	Freelancing Work experiences	Categorical	Ordinal	Less than 1 year, 1–2 years, 3–5 years, 6–10 years, more than 10 years
8	Types of Freelancing works	Categorical	Nominal	Graphic Design /Web Development Digital Marketing/WordPress Development /Data Entry & Virtual Assistance /Content Writing /Video Editing /UI UX Design / Mobile App Development/Others
Likert-scale measurement items (Q9–Q24)				
9-24	Perception toward Digital Freelancing	5-point Likert Scale	Ordinal	1 =Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Source: Developed by the authors based on the study questionnaire.
Note: Q1–Q8 represent the demographic characteristics of respondents, while Q9–Q24 measure respondents’ perceptions toward digital freelancing using a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

4. Results and Analysis

This section presents the result and analysis of this study based on 250 valid responses. Both descriptive and inferential statistics procedures were applied. The section starts with demographic profile of the respondents. Then, descriptive statistics of the research variables, reliability and validity analysis, including Cronbach’s Alpha, Item-Total Statistics,

KMO and Bartlett’s Test, and Exploratory Factor Analysis (EFA) are presented. Additionally, Pearson correlation analysis and multiple regression analysis are conducted to test the proposed hypotheses. At last, the regression model, including R², ANOVA, and coefficients, are presented to reveal the significance of associations among the variables.

Table 2. Demographic Profile of Respondents: Gender, Age, and Profession

Variable	Category	Frequency	Percent	Cumulative Percent
Gender	Male	155	62.0	62.0
	Female	92	36.8	98.8
	Other	3	1.2	100.0
Age	Below 18	20	8.0	8.0
	18–24	112	44.8	52.8
	25–34	88	35.2	88.0

	35–44	20	8.0	96.0
	45–54	8	3.2	99.2
	55+	2	0.8	100.0
Profession	Student	100	40.0	40.0
	Digital Freelancer	75	30.0	70.0
	Service Holder	38	15.2	85.2
	Business Owner	20	8.0	93.2
	Homemaker	10	4.0	97.2
	Other	7	2.8	100.0
Total		250	100.0	100.0

Source: Authors' calculation based on survey data analyzed using SPSS Version 26.

Note: The table presents the frequency, percentage distribution, and cumulative percentage of respondents based on gender, age, and profession.

Table 2 exhibits the gender, age, and profession of the respondents. It shows that most of the respondents are male (62%), where females constitute only 36.8%. Most of the respondents (44.8%) fall into the 18–24 age group, while 35.2% belong to the 25–34 age group. It indicates that most digital freelancing tasks are

done by the youth of the country, and they are mainly students (40%), professional freelancers (30%), and service holders (15.2%) only. Based on the professional responses, it is evident that freelancing is considered a supplementary source of income across the country.

Table 3. Educational Qualification, Working Hours, and Freelancing Experience of Respondents

Variable	Category	Frequency	Percent	Cumulative Percent
Education	Secondary	35	14.0	14.0
	Higher Secondary	70	28.0	42.0
	Graduation	95	38.0	80.0
	Post-Graduation	40	16.0	96.0
	Others	10	4.0	100.0
Weekly Hours	<10 hours	60	24.0	24.0
	10–20 hours	85	34.0	58.0
	21–30 hours	55	22.0	80.0
	31–40 hours	30	12.0	92.0
	>40 hours	20	8.0	100.0
Experience	<1 year	65	26.0	26.0

1–2 years	90	36.0	62.0
3–5 years	60	24.0	86.0
6–10 years	25	10.0	96.0
>10 years	10	4.0	100.0
Total	250	100.0	100.0

Source: Authors’ calculation based on survey data analyzed using SPSS Version 26.
Note: The table presents the frequency, percentage, and cumulative percentage of respondents by educational qualification, working hours, and freelancing experience.

Table 3 represents the respondents’ data on education, working hours and experience variables. 38% of respondents are graduates, 16% have post-graduation, 28% completed their HSC where only 14% are SSC passed. 34% of the respondents work between 10 and 20 hours per week, 24% work less than 10 hours, while only 8% work more than 40 hours per week. Among the respondents 36% have 1 to 2 years’ experience, 26% have less than one year’s experience, 24% have 3 to 5 years’ experience and only 4% have more than 10 years’ experience.

Table 4. Monthly Income and Type of Freelancing Work of Respondents

Variable	Category	Frequency	Percent	Cumulative Percent
Monthly Income (BDT)	<10,000	80	32.0	32.0
	10,000–25,000	90	36.0	68.0
	25,001–50,000	50	20.0	88.0
	50,001–100,000	20	8.0	96.0
	>100,000	10	4.0	100.0
Type of Work	Graphic Design	55	22.0	22.0
	Web Development	45	18.0	40.0
	Digital Marketing	50	20.0	60.0
	Data Entry	40	16.0	76.0
	Content Writing	30	12.0	88.0
	Video Editing	20	8.0	96.0
	Others	10	4.0	100.0
Total		250	100.0	100.0

Source: Authors’ calculation based on survey data analyzed using SPSS Version 26.
Note: The table presents the frequency, percentage, and cumulative percentage of respondents by income level and type of freelancing work.

Table 4 denotes monthly income and type of services that freelancers provide, where it is seen that 36% of respondents’ income are between 10,000 to 25,000, 32% earn less than 10,000, and only 4% earn more than 100,000 BDT. And majority (22%) of service providers are involved in graphic design tasks, then digital marketing 20%, web development 18%, data entry 16%, content writing 12% and others are 4%.

Table 5. Reliability Analysis of Research Constructs

Construct Measurement	Cronbach's Alpha	Number of Items
Overall Scale	0.833	16

Source: Authors' calculation based on survey data analyzed using IBM SPSS Statistics Version 26.
 Note: Cronbach's alpha was used to assess the internal consistency and reliability of the Likert-scale measurement items.

There is total 16 Likert scale items used in this research, and their Cronbach's alpha coefficient value is .833, which indicates strong internal consistence. The threshold accepted limit is 0.70 and result value is more than that, so the measurement instrument is judged as substantially reliable for further analysis, like factor analysis, correlation analysis, and multiple regression analysis.

Table 6. KMO and Bartlett's Test for Sampling Adequacy

Test	Measure	Value
Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy	—	0.867
Bartlett's Test of Sphericity	Approx. Chi-Square	1638.524
	Degrees of Freedom (df)	120
	Significance Level (p-value)	<0.001

Source: Authors' calculation based on survey data analyzed using SPSS Statistics Version 26.
 Note: The KMO value indicates sampling adequacy, while Bartlett's Test of Sphericity confirms the suitability of the correlation matrix for exploratory factor analysis.

In this study, to measure the sampling adequacy the kaiser-Meyer-Olkin test is conducted, and it shows that the sampling adequacy is outstanding with a value of 0.867, so from this sampling adequacy, it ensures that the appropriate factor analysis is possible in this study. The result of Bartlett's Test of Sphericity is statistically significant (Approx. $\chi^2 = 1638.524$, $df = 120$, $p < .001$), and this result says that the correlation matrix is not an identity matrix. So, this result suggested that we may conduct Exploratory factor analysis (EFA) which is statistically appropriate.

Table 7. Total Variance Explained by Extracted Components

Component	Initial Eigenvalue	% of Variance	Cumulative %	Rotated Sum of Squared Loadings (% of Variance)
1	4.215	26.34	26.34	17.21
2	2.384	14.90	41.24	15.38
3	1.624	10.15	51.39	13.43
4	1.382	8.64	60.03	11.98
5	1.126	7.04	67.07	9.15
6	1.014	6.34	73.41	6.26
Total	—	—	73.41	73.41

Source: Authors' calculation based on survey data analyzed using IBM SPSS Statistics Version 26.
 Note: Principal Component Analysis (PCA) with Varimax rotation was applied. Six components with eigenvalues greater than 1 were extracted, explaining 73.41% of the total variance.

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

From the above Table 7, it is found that there are six components whose eigenvalues are greater than 1.0, and all the components jointly explaining 73.41% of

the total variance. It is also found that the variance was more evenly distributed after applying the varimax rotation through the six factors while the cumulative variance stayed at 73.41%. The normal accepted threshold variance is 60% in social science research which is attained in this result. So, it says that the model supports the adequate construct validity and six factors.

Table 8. Rotated Component Matrix of Exploratory Factor Analysis

Items	E c o n o m i c Factors	F l e x i b i l - i t y F a c - t o r s	M o t i v a t i o n - a l F a c t o r s	I n f r a s t r u c t u r e & I n s t i t u t i o n - a l S u p p o r t	S o c i a l Factors	D i g i t a l l a n c i n g O u t - c o m e s	F r e e - O u t - c o m e s
Q9	.814						
Q14	.792						
Q19	.768						
Q10		.824					
Q11		.853					
Q12		.794					
Q13			.782				
Q18			.756				
Q15				.834			
Q16				.861			
Q20				.781			
Q17					.801		
Q21					.822		
Q22						.864	
Q23						.887	
Q24						.858	

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

Source: Authors’ calculation based on survey data analyzed using IBM SPSS Statistics Version 26.

Note: Principal Component Analysis (PCA) with Varimax rotation was applied. Factor loadings above 0.50 were considered significant. The rotation converged after six iterations.

In this study the exploratory Factor Analysis wrested total six certain components which have full relevancy with anticipated conceptual framework. In table 8 it is stated that all factor loadings

are more than 0.75, that represents intense construct validity of the factors. There are no debatable cross-loadings witnessed, and this result support both convergent and discriminant validity.

Table 9. Descriptive Statistics and Correlation Matrix of Study Variables

Variables	Mean	Std. Deviation	1	2	3	4	5	6
1. Economic Factors	3.98	0.67	1					
2. Flexibility Factors	4.18	0.59	.601**	1				
3. Motivational Factors	3.74	0.73	.522**	.488**	1			
4. Infrastructure & Institutional Support	3.89	0.71	.638**	.617**	.571**	1		
5. Social Factors	3.78	0.74	.462**	.438**	.471**	.518**	1	
6. Digital Freelancing Outcomes	4.14	0.63	.671**	.624**	.541**	.703**	.516**	1

Source: Authors’ calculation based on survey data analyzed using SPSS Statistics Version 26.

Note: Correlation is significant at the 0.01 level (2-tailed). N = 250.

Table 9 stated both descriptive statistics and correlation matrix of this study. From the descriptive statistics it is found that the respondents normally consider positive perceptions regarding digital freelancing. All construct variables’ mean values surpass the midpoint value of five-point Likert scale. Among them the flexibility construct carries the height mean value (4.18) that means respondents give high priority to this variable. And the mean value of dependent variable is 4.14 that means respondents are satisfied with their task, they have intention to continue this task and are interested in suggesting

digital freelancing as a Carrer. From the correlation part it is indicated that all independent variables are positively and significantly correlated with the dependent variable named digital freelancing outcomes ($p<0.1$). Among these all-independent variables, the infrastructure and institutional support variable shows the maximum value with the dependent variable outcome ($r =.703$), then the second position held by economic factors ($r =.671$). and the lowest value carries by social factors ($r =.516$). From these findings it can be said that the results support the proposed hypothesis.

Table 10. Model Summary of Multiple Regression Analysis

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate
1	0.789	0.622	0.614	0.469

Description	Details
Dependent Variable	Digital Freelancing Outcomes
Predictors	Economic Factors, Flexibility Factors, Motivational Factors, Infrastructure & Institutional Support, and Social Factors

Source: Authors’ calculation based on survey data analyzed using SPSS Statistics Version 26.

Table 10 stated that the R square value is .622 which indicates that this model explains 62.2% of the variation of digital freelancing outcomes (dependent

variable). The adjusted R square value is .614, that means after adjusting number of predictors and sample size the model can explain 61.4% of the variance, so it can

be said all independent variables together provide significant expounding power and constrained overfitting.

Table 11. Analysis of Variance (ANOVA) for the Regression Model

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	104.872	5	20.974	80.710	<0.001
Residual	63.415	244	0.260	—	—
Total	168.287	249	—	—	—
Dependent Variable	Digital Freelancing Outcomes				
Predictors	Economic Factors, Flexibility Factors, Motivational Factors, Infrastructure & Institutional Support, and Social Factors				

Source: Authors’ calculation based on survey data analyzed using SPSS Statistics Version 26.

The above ANOVA table’s (11) result indicates that the regression model of this research study is statistically significant (F=80.71, p<.001). The five independent variables of this study have significant impact on dependent variables (digital freelancing outcomes) which supported hypothesis number 6 of this study.

Table 12. Multiple Regression Analysis Results

Variables	B	β	t-value	Sig.	Decision
Constant	0.596** (0.188)	—	3.170	0.002	—
Economic Factors	0.241*** (0.051)	0.261	4.720	<0.001	Supported
Flexibility Factors	0.183*** (0.048)	0.191	3.840	<0.001	Supported
Motivational Factors	0.128** (0.044)	0.142	2.910	0.004	Supported
Infrastructure & Institutional Support	0.302*** (0.051)	0.327	5.940	<0.001	Supported
Social Factors	0.118** (0.045)	0.126	2.620	0.009	Supported

Dependent Variable: Digital Freelancing Outcomes

Source: Authors’ calculation based on survey data analyzed using SPSS Statistics Version 26.

Note: Standard errors are reported in parentheses. ***p < 0.001, **p < 0.01, *p < 0.05.

The coefficient table 12 of multiple regression indicates that all five independent variables have positive and significant impact on dependent variable (digital freelancing outcomes, p<0.5). The Unstandardized Coefficients directs actual effect where the Standardized Coefficients indicates relative importance. So, among five independent constructs the strongest predictor is infrastructure and institutional support (β = 0.327), then the second strongest predictor is economic

factors contains value $\beta = 0.261$, third strongest predictor is flexibility factors holds value $\beta = 0.191$, fourth predictor is motivational factor holds value $\beta = 0.142$ and the last predictor is social factor holds value $\beta = 0.126$. All hypotheses regarding independent variables from H1 to H5 are supported. And overall regression model is also significant and hypothesis 6 (H6) is supported (ANOVA, $p < .001$). So, these results confirm that all independent variables together explain digital freelancing outcomes significantly.

5. Implications

The implications of this study can be divided into three categories: these are theoretical, practical and policy level implications. In theoretical implementations this study encompasses the digital freelancing literature by providing conceptual framework, regression model where model stated that five independent variables and together responsible to explain digital freelancing outcomes. From this study it is found that digital freelancing operation does not depend on a single factor rather it demands a united approach.

Practically it can be said that the success of digital freelancing not only depends on motivation or income opportunities but also depends on some outward situations. The digital infrastructure and institutional support are one of them. So, to support this booming industry the government should ensure some facilities like high-speed internet access, necessary freelancing training, required payment methods and a dedicated supporting body. Besides traditional study the education institutions can upgrade curricula by incorporating freelancing skills.

The findings of this study are coherent with previous literature that digital freelancing outcomes are shaped by integration of technological, economical, individual, and social factors. The important influence of infrastructure and institutional support ensures former research that digital infrastructure, virtual platforms, and institutional ecosystems play a vital role in empowering involvement and triumph in global digital labor markets (Graham et al., 2017; Wood et al., 2019). Where traditional jobs are not available, online freelancing stipulates new income prospects and employment opportunities especially in developing countries (Kuek et al., 2015). The flexibility factors associate with previous work, recognizing self-rule, work-time control, and location independence as key motivations for engaging in platform-based work (Wood et al., 2019). The role of motivational and social factors is also proven by earlier study emphasizing skill development, career growth, and social support as influential drivers of sustainable involvement in digital work environments (Huws et al., 2017). this study extends the existing literature of digital labor market and gig economy by analytically confirming a multidimensional framework of digital freelancing outcomes in Bangladesh.

For policy makers and stakeholders, the result of the study indicates that the availability of friendly ecosystems is required for this booming industry. For this they should support the laws that accelerate flexibility, nondiscriminatory work environment and social respect. To become a successful freelancer technological readiness and infrastructural support are inevitable. So largely it can be said that the result of this study strengthening the field of digital economy

which is very necessary for Bangladesh as a developing country.

6. Conclusion

This study mainly determines the factors that influence freelancing outcomes, and the result states that all independent factors are significantly influenced by the dependent variable. All factors are economic, flexibility, motivational, infrastructure, and social factors.

The observed results confirm that all proposed hypotheses (H1 to H5) are accepted and the overall model (hypothesis) exhibits strong expounding power. Among all independents construct the infrastructure and institutional support appear as the most influential determinants, then the economic factor and then flexibility factors. These findings indicate that though financial motivations and flexible work environments are important but infrastructure and institutional support performs as a more compelling role in digital freelancing industry. The study also ensures that most of the freelancers are youth-driven, students and holds early career stage. Although the average income of the freelancers is not good enough, they are very much interested in continuing this work and motivated to engage others in this industry. And another important finding is experienced freelancers earn more than early-stage freelancers. So, it may be said that digital freelancing is a multidimensional phenomenon where various factors influence the ultimate outcomes. Development of infrastructure, supportive policies, proper training and smooth internet are essential for the growth of this sector, and these facilities will help to ensure the freelancing ecosystem in the long run. So undoubtedly this study contributes to both academic literature

and stakeholders of digital freelancing industry.

7. Limitations and Future Research Directions

Besides some significant findings of this study there are some limitations also. Firstly, this research is based on cross-sectional data only which limits causal analysis. Secondly, A purposive sampling method has been used and only 250 responses were used for analysis, which is not true representation of all freelancers across the country. Thirdly the self-reported data always indicates response basis. So, to overcome these limitations in future, the researchers may use longitudinal data to explore the changes in freelancers' behavior across time. More large and distinct samples from different regions may improve the generalizability. In addition, qualitative approaches may be used with quantitative approaches which may help to discover more hidden behavioral and psychological traits of the freelancers. And researchers also may consider different platforms specific attributes to understand outcomes.

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