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2020

Online at <https://mpra.ub.uni-muenchen.de/103566/>  
MPRA Paper No. 103566, posted 21 Oct 2020 06:56 UTC

# **The COVID-19 Pandemic Impacts on Manpower Export: An Econometric Analysis of Survival Strategies of Recruiting Agencies in Bangladesh**

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## **Abstract**

The COVID-19 outbreak led the governments of many countries to impose restrictions on non-essential travel to countries affected by coronavirus, indefinitely suspending tourism travel, work visas and immigrant visas. Some countries placed a complete travel ban on all forms of inward or outward travel, shutting down all airports in the country. In this context, the main purpose of this study is to review the survival strategies by the international recruiting agencies in the country both triggered and prolonged the recession while trying to save the lives of citizens. In this regards, in the random sample selection process 291 recruiting agents were selected out of total 1,189 active members of Bangladesh Association of International Recruiting Agencies (BAIRA). The econometric model developed is used to assess the relationships between COVID-19 sustainability and the exploratory determinant variables. The results delve out that the only five variables out of twenty-four to survive are owner (s) personal reserve fund, shark loan, sale of other assets and properties, probability of bankruptcy and probably closing business soon. This paper contributes to the literature by showing that financial factors and/or non-economic factors can trigger both a financial and economic meltdown in unprecedented ways. This study also propose a model for investigating sustainability of other business sectors in the same way. Finally, it suggest that in order to protect manpower export sector, the Government of Bangladesh needs to bring under a special program and provide financial and strategic assistance to recruiting agencies in overall market research, exploration and creation.

**Keywords:** COVID-19, Pandemic, Sustainability, Labor, Market, Impacts, Manpower, Migration

## 1.1 Background of the Study

Due to COVID-19 pandemic, initially, as estimated, amid slump with a loss of about \$6 billion in export earnings primarily through RMG, the next big shock for the economy of Bangladesh will be its remittance inflow, which is considered as the life-line for many rural families (Rashid 2020). According to the Bangladesh Bank recent data on March 2020 Remittance Inflow, shows a clear significant downturn. It is 11.83% less than the March 2019 (Bangladesh Bank 2020). It is to be noted that it is already informed that many of our workers in different countries have started losing their jobs, and more people will lose their jobs in the coming months. Along with the documented labors, there are also a large number of undocumented laborers in Europe and other regions, which will be severely impacted due to COVID-19 pandemic. The most affected industry of this crisis would be the service sector of those countries, where Bangladeshi migrant workers are mostly engaged.

The COVID-19 outbreak led the governments of many countries to impose restrictions on non-essential travel to countries affected by coronavirus, indefinitely suspending tourism travel, work visas and immigrant visas. Some countries placed a complete travel ban on all forms of inward or outward travel, shutting down all airports in the country. At the height of the COVID-19 pandemic, most airplanes flew almost empty due to mass passenger cancellations. The travel restrictions imposed by governments subsequently led to the reduction in the demand for all forms of travel which forced some airlines to temporarily suspend operations such as Air Baltic, LOT Polish Airlines, La Compagnie, and Scandinavian Airlines. Such travel restrictions cost the tourism industry alone a loss of over \$200 billion globally, excluding other loss of revenue for tourism travel, and were forecast to cost the aviation industry a total loss of \$113 billion according to IATA (2020). US airlines sought a \$50bn bailout fund for the US Airline industry alone.

We know that remittance, as a tangible outcome of overseas employment, has positioned it as the second-highest foreign exchange earning source which almost estimated 40% after the garments sector in Bangladesh (Mannan 2015). The remittance inflow hits a record \$18.32 billion in the just concluded year of 2019 amid devaluation of the taka and the government move to provide incentives against remittance and it grew by 17.89 per cent against \$15.54 billion in 2018

(Bangladesh Bank 2020). It contributes around 6-8% of the country's GDP, and renders a sizable contribution to national income, macroeconomic stability and poverty reduction (Mannan 2017). Recent survey shows that at least around one-third of the country's new labor force take overseas employment each year which has become a 'safety valve' for millions of Bangladeshi migrant workers and their families (BBS 2019). The emergence of such a vital socio-economic sector in Bangladesh is due to the role of about 1,200 manpower export companies in the private sector, although Bangladesh Overseas Employment and Services Ltd (BOESL), a state-owned company, has not been able to play a significant role in market expansion.

In this paper, we show how the coronavirus outbreak led to spillovers into manpower export sector of Bangladesh, and how the survival strategies by the international recruiting agencies in the country both triggered and prolonged the recession while trying to save the lives of citizens. We also propose a model for investigating of other business sectors in the same way. The discussion in this paper contributes to the financial crisis literature. This paper contributes to the literature by showing that financial factors and/or non-economic factors can trigger both a financial and economic meltdown in unprecedented ways.

## 1.2 Research objectives

The main purpose of this study is to review the capacity of organizations in the manpower export sector in Bangladesh to deal with such situations. Specifically

What are the survival strategies during the COVID-19 pandemic period of manpower exporter agencies in Bangladesh?

## 2.1 Literature Review

According to BMET, around 60,000 Bangladeshis go abroad for occupation every month, the process of starting the epidemic has stopped completely. In addition, if the COVID-19 pandemic lingers, queues of those waiting to join overseas will grow further and also there is no guarantee that all these migrants who returned in the last three months, can go back to their respective countries or not. According to BAIRA, about 1.5-2 lakh migrant workers had completed the

process for overseas jobs in the last three months and were waiting to leave the country. However, not only this, the COVID-19 crisis in the wealthier economies will also restrict our future international labor markets. Recently, IOM (2020) explore that with migrant workers highly concentrated in occupations and sectors expected to be particularly hard hit by the economic consequences of the COVID-19 crisis, inevitably, remittances will also take a hit. According to the World Bank (2020) global remittances are projected to decline sharply by about 20 percent in 2020 due to the economic crisis induced by the COVID-19 pandemic and shutdown. The projected fall, which would be the sharpest decline in recent history, is largely due to a fall in the wages and employment of migrant workers, who tend to be more vulnerable to loss of employment and wages during an economic crisis in a host country. Remittances to low and middle-income countries (LMICs) are projected to fall by 19.7 percent to \$445 billion, representing a loss of a crucial financing lifeline for many vulnerable households (Ratha et al 2020). The situation will be more vulnerable for those countries which particularly dependent on remittances. The World Bank report further stated that the countries and communities including Bangladesh that reliant on labor migration and remittances will in fact see a double impact from this crisis as, in addition to declining remittances, these communities will need to absorb an increasing number of returning labor migrants, unable to find work in countries of destination (World Bank 2020).

The literature on the cause of recessions is vast (see Bentolila et al 2018; Jagannathan et al 2013; Gaiotti 2013; Bagliano & Morana 2012; Bezemer 2011; Stiglitz 2010; Mian & Sufi 2010). But the cause and consequence of the 2020 global recession was novel in modern history. The COVID-19 triggered a new type of recession that was different from the past triggers of a recession. For instance, the 2016 recession in Nigeria was caused by the fall in the price of crude oil, balance of payment deficit, adoption of a fixed-float exchange rate regime, an increase in the pump price of petrol, activities of pipeline vandals and infrastructure weaknesses. The 2010 recession in Greece was caused by the after-effect of the global financial crisis, structural weaknesses in the Greek economy, and lack of monetary policy flexibility as a member of the Eurozone (Rady 2012). The 2008 global financial crisis, which translated to a recession, was caused by loose monetary policy which created a bubble, followed by subprime mortgages, weak regulatory

structures, and high leverage in the banking sector (Allen & Carletti 2010). The Asian debt crisis of 1997 was caused by the collapse of the Thai baht in July 1997, which created panic that caused a region-wide financial crisis and economic recession in Asia (Radelet & Sachs 1998).

Initially, the perception was that the COVID-19 pandemic would be localized in China only. It later spread across the world through the movement of people. The economic pain became severe as people were asked to stay at home, and the severity was felt in various sectors of the economy with travel bans affecting the aviation industry, sporting event cancellations affecting the sports industry, the prohibition of mass gatherings affecting the events and entertainment industries (Horowitz 2020). There are parallels between the COVID-19 crisis and the events of 2007-2008: as in 2020, many people in the earlier recession assumed the impacts would largely be localized (Larry 2020). The sudden economic disruption caused by COVID-19 is not only destructive but also has spillover implications because it created demand and supply shocks in almost every area of human endeavor (El-Erian 2020).<sup>7</sup> Recent study shows that there is considerable indifference among the general people of Bangladesh about this epidemic which may take a terrible turn in the future (Farhana & Mannan 2020). We do not yet know when and how this epidemic will end and how much damage will be done to trade and the economy. The review of the national- and international-level literature on recession and pandemic and of the literature on the macro and micro-level socio-economic impacts, revealed a gap in the understanding of significant relationships between the COVID-19 sustainability and survival strategies of manpower exporter agencies in Bangladesh.

## 2.2 Research Ethics

The study asked for consent from participants where we explained the motivation of study to the participated respondents. They had the freedom to leave the study at any time or may remain silent to specific questions if they were not comfortable. User data was anonymized. All our collected data are securely stored in a locked drive, and only researchers have access to it.

### 3.1 Methodology

#### 3.2 Overview

This study is a cross sectional design with quantitative approach. The study approach is descriptive in nature, and primary data has been used in this study.

#### 3.2 Sample Size and Sampling Techniques

The recommendation of Krejcie and Morgan (1970) was followed in selecting a representative sample size for this research. In the random sample selection process 291 recruiting agents were selected out of total 1,189 active members of Bangladesh Association of International Recruiting Agencies (BAIRA). The survey was conducted during the period of March-April, 2020. The data was collected over smart phone and internet supportive apps and devices. Questions were pre-coded during the survey questionnaire, data processing and analysis. The data were subsequently entered into SPSS version 20.0 for analysis. The definition of variables in the regression equation operationalize is given in Appendix A.

#### 3.3 Construction COVID-19 sustainability variable

The measuring instrument for COVID-19 sustainability consisted of questions answered by the questionnaire. The COVID-19 sustainability variable comprises more than one item and various respondent categories. From the descriptive or univariate analysis, each statement is observed by tabulating a frequency table and computing the percentages of the respondents' answers that were in each category. In bivariate analysis, every single item in the matrix question is cross-tabulated with the respective answer variable which may be long and not significant. To overcome these challenges, an index variable is commonly created to study the associated outcomes of whole statements in forecasting the answer variable. In this context, all answers in the matrix questions are compiled simultaneously to construct the index variable.

As the index variable is developed, consistency within all the items in the question matrix has to be ascertained by a reliability check using Cronbach's Alpha, obtainable using SPSS 20.0. As long as the value of Cronbach's Alpha is between 0.7 and 1.0, all of the statements in the question matrix can be used to

create the index variable, while statements with a value below 0.7 are discarded. Once the exercise is satisfactorily completed, the maximum and minimum outputs are ascertained by sub-menu descriptive statistics together with their respective frequencies. The minimum scores are deducted from the maximum scores, and the residuals are divided by the number of categories in the index variable. A reliability test provided the value of Cronbach's Alpha (0.842) that confirmed the availability of consistency components in all the statements. Descriptive statistics were used to ascertain the mean score and the standard deviation, which were 11.0933 and 2.46676 respectively.

#### 3.4 Econometric model building and multivariate analysis

The econometric model developed is used to assess the relationships between COVID-19 sustainability and the exploratory determinant variables. To enable a best fit regressions model, variable reduction was undertaken following a method of 'backward elimination' that begins with the inclusion of all expected independent variables, measuring their statistical significance individually and discarding those which are highly non-significant. The backward regression method was conducted in three steps to establish a good fit model that assesses the most influential factors related to COVID-19 sustainability and to examine the hypothesised relationships in this study. This complies with the explanation of data analysis of Slatten, Svensson and Svaeri (2011) and Juhdia, Pa'wanb and Hansaramb (2013).

Before beginning the 'backward elimination' steps, the collected data must be checked to test for certain basic statistical considerations to account for the implementation of the good fit regression model (Hocking 1976). In this study, there were three major considerations: the data normality test multicollinearity and autocorrelation as Gujarati (2003) suggests that it is not necessary to carry out all the available assumption tests as some were not relevant to this study. To build up a best fit regression model, twenty four potential explanatory variables were selected for the piloted model given in Equation (i) as follows:

$$\begin{aligned}
\text{COVID-19suS} = & \beta_1 + \beta_2 \text{CsS} + \beta_3 \text{CreF} + \beta_4 \text{CriF} + \beta_5 \text{CpI} + \beta_6 \text{CpA} + \beta_7 \text{OpreF} + \beta_8 \text{OpriF} + \beta_9 \text{GgR} \\
& + \beta_{10} \text{GiN} + \beta_{11} \text{GIO} + \beta_{12} \text{GrE} + \beta_{13} \text{CbF} + \beta_{14} \text{OfiF} + \beta_{15} \text{SIO} + \beta_{16} \text{IoG} + \beta_{17} \text{IoI} \\
& + \beta_{18} \text{FsfsC} + \beta_{19} \text{FsoB} + \beta_{20} \text{FsfM} + \beta_{21} \text{FsfR} + \beta_{22} \text{MoaP} + \beta_{23} \text{SoaP} + \beta_{24} \text{PoB} \\
& + \beta_{25} \text{PcbS} + e_1 \dots\dots\dots(i)
\end{aligned}$$

For the first regression (Equation i), outcomes of the full model are provided in Table 1.1. The empirical results indicate that some of the potential variables are statistically non-significant. For the equation taken as a whole, the  $R^2$  (0.623), F value (12.943) and a 'p' value nearest to zero. Thus, the results postulate that all independent (explanatory) variables in aggregate affect the COVID-19 sustainability (the dependent variable) by the organization.

In the statistical assumption, multicollinearity provides a condition of linear relationships among either all predictor variables or few of them in the regressions equation. The whole procedure usually appears when either all or few of the explanatory variables in the regressions model are strongly significant to each other. As a consequence, the multicollinearity test is very important for selecting the best fit model of regression. Hence, the study used the multicollinearity test for the present analysis.

**Table 1.1: Regression results of the full model**

Sources of finance	Dependent variable				Collinearity statistics		
	COVID-19 sustainability (COVID-19suS)						
	Unstandardized Coefficients	Standardized Coefficients	t-value	p-value	Tolerance	VIF	
CsS	-.488	.148	-.310	-3.331	.001	.247	4.020
CreF	.048	.167	.018	.296	.003	.757	1.987
CriF	-.566	.257	-.420	-4.221	.001	.348	5.020
CpI	-.820	.472	-.073	-1.670	.085	.808	1.237
CpA	-2.710	.561	-.089	-2.550	.066	.701	2.468
OpreF	-4.033	.345	.027	.896	.002	.857	3.987
OpriF	2.546	.238	-.520	-3.201	.001	.448	6.220
GgR	-.720	.542	-.173	-2.680	.064	.728	7.247
GiN	-3.710	.461	-.077	-3.450	.276	.712	4.487
GIO	-1.820	.572	-.273	-2.670	.185	.628	2.637
GrE	-1.576	.357	-.220	-3.241	.002	.448	6.920
CbF	-2.624	.552	-.877	-6.450	.876	.912	5.467
OfiF	-5.820	.772	-.573	-3.681	.275	.858	1.648
SIO	-.476	.247	-.121	-1.232	.001	.456	5.821
IoG	-.625	.451	-.867	-4.431	.966	.822	3.487
IoI	-5.820	.772	-.573	-3.681	.275	.858	2.657
FsfsC	-1.559	.482	-.321	-2.442	.002	.348	5.121
FsoB	.148	.567	.218	.195	.001	.765	2.087
FsfM	-.436	.357	-.521	-3.918	.004	.547	8.121
FsfR	-2.476	.241	-.321	-1.231	.001	.347	10.120
MoaP	.648	.267	.118	.396	.002	.657	5.687
SoaP	-.266	.958	-.720	-2.251	.003	.548	9.120
PoB	-.338	.459	-.625	-4.917	.001	.442	7.133
PcbS	-3.270	.347	-.821	-7.231	.002	.557	3.921
Intercept							-38.236
R <sup>2</sup>							0.623
Adjusted R <sup>2</sup>							0.573
F-statistics							12.943
Sum squared residuals							435.253
Durbin-Watson statistics (d)							1.780



The regression results are shown in Table 1.1. The multicollinearity for the high  $R^2 = 0.623$  and nine variables CpI, CpA, GgR, GiN, GIO, CbF, OfiF, IoG and IoI are not statistically significant in the initial regressions model of 13 variables. Since the classical symptoms of multicollinearity – high  $R^2$  but few significant t ratios – are found in the first model, clarification is needed of the statistical problem by observing the variance and covariance of the regression estimators. As Gujarati (2003, p.350) states, ‘the OLS estimators and standard error can be sensitive to even the smallest change in the data’. The increase of variance and covariance of coefficients are falsified and this can be observed with ‘variance-inflating factor (VIF)’ and ‘tolerance (TOL)’ also in Table 1.1.

The rule-of-thumb states that the closer the value of TOL and VIF is to 1, the greater the evidence that one explanatory variable is not collinear with the other

explanatory variable (Gujarati 2003). The values of Tolerance (TOL) and VIF in Table 1.2 indicate that there is no multicollinearity existing among the explanatory variables.

As stated earlier, the variables are considered for removal sequentially based on their statistically non-significant ‘p’ value in the equations. For instance, the regression outcomes of the first model (Equation i: long regression) in Table 1.1 shows that  $R^2 = 0.623$ , and adjusted  $R^2 = 0.573$  with an acceptable value of  $d = 1.780$ . The elimination process was begun by discarding the variable IoG which had the highest p value (0.966), from the first model. This procedure was continued until a best fit model for the explanatory variables was found. The result of the whole backward elimination process is given in Table 1.3. The ultimate outcome is the first best fit model as represented in the following equation:

$$\begin{aligned} \text{COVID-19suS} = & \beta_1 + \beta_2 \text{CsS} + \beta_3 \text{CreF} + \beta_4 \text{CriF} + \beta_7 \text{OpreF} + \beta_8 \text{OpriF} + \beta_{12} \text{GrE} + \beta_{15} \text{SIO} \\ & + \beta_{18} \text{FsfsC} + \beta_{19} \text{FsoB} + \beta_{20} \text{FsfM} + \beta_{21} \text{FsfR} + \beta_{22} \text{MoaP} + \beta_{23} \text{SoaP} + \beta_{24} \text{PoB} \\ & + \beta_{25} \text{PcbS} + e_1 \dots\dots\dots \text{(ii)} \end{aligned}$$

**Table 1.2: Regression results of the second stage**

Sources of finance	Dependent variable					Collinearity statistics	
	COVID-19 sustainability (COVID-19suS)						
	Unstandardized Coefficients		Standardized Coefficients	t- value	p- value	Tolerance	VIF
CsS	-.566	.549	-.211	-2.231	.911	.348	3.120
CreF	.246	.256	.115	.695	.063	.856	.787
CriF	-1.266	.958	-.521	-3.520	.172	.547	4.131
OpreF	-3.153	.421	.135	.785	.001	.746	5.264
OpriF	1.234	.127	-.413	-5.132	.271	.556	3.331
GrE	-2.465	.446	-.333	-2.331	.062	.338	1.821
SIO	-.351	.536	-.225	-.939	.002	.945	6.723
FsfsC	-5.552	.381	-.420	-6.413	.068	.446	6.220
FsoB	.247	.460	.267	.997	.025	.664	1.187
FsfM	-1.436	.155	-.623	-3.210	.064	.743	7.221
FsfR	-3.475	.741	-.720	-2.132	.157	.545	11.130
MoaP	.547	.366	.212	.896	.422	.950	3.689
SoaP	-.365	.857	-.621	-1.450	.004	.437	8.222
PoB	-.437	.358	-.524	-3.816	.003	.541	6.434
PcbS	-2.371	.246	-.720	-6.933	.001	.458	2.820
Intercept							-29.284
R <sup>2</sup>							.540
Adjusted R <sup>2</sup>							.623
F-statistics							39.722
Sum squared residuals							716.225
Durbin-Watson statistics (d)							1.044

However, the results obtained using Equation (ii) are shown in Table 1.2. They show that R<sup>2</sup> is slightly decreased (0.540) compared to the first model (0.623) with fifteen explanatory variables. This was expected as increasing the number of variables increases the value of R<sup>2</sup> and vice versa. In this stage, the ‘p’ value of the ten explanatory variables CsS, CreF, CriF, OpriF, GrE, FsfS, FsoB, FsfM, FsfR and MoaP were statistically insignificant. Therefore, a further

backward elimination process was taken to arrive at the best fit model.

This procedure was continued until a best fit model for the explanatory variables was obtained. The results of the whole backward elimination process are given in Table 1.3. The ultimate outcome of the best fit model is represented in the following equation:

$$\text{COVID-19suS} = \beta_1 + \beta_7 \text{OpreF} + \beta_{15} \text{SIO} + \beta_{23} \text{SoaP} + \beta_{24} \text{PoB} + \beta_{25} \text{PcbS} + e_1 \dots\dots\dots(\text{iii})$$

**Table 1.3: Best fit model results**

Sources of finance	Dependent variable				Collinearity statistics		
	COVID-19 sustainability (COVID-19suS)						
	Unstandardized Coefficients	Standardized Coefficients	t-value	p-value	Tolerance	VIF	
OpreF	-2.251	.520	.331	.684	.002	.647	4.153
SIO	-.240	.425	-.114	-.828	.001	.834	5.612
SoaP	-.254	.746	-.510	-2.341	.001	.327	7.321
PoB	-.538	.457	-.623	-1.705	.004	.621	3.321
PcbS	-3.472	.155	-.611	-5.843	.003	.647	6.711
Intercept							-30.652
R <sup>2</sup>							.535
Adjusted R <sup>2</sup>							.598
F-statistics							47.035
Sum squared residuals							721.220
Durbin-Watson statistics (d)							1.038

The best fit model shown Table 1.3 has only five explanatory variables with statistical significance levels in the range of 1 per cent to 5 per cent. Both regressions, long and short, provide the degree of the direction and strength of causality between the dependent and explanatory variables, which are the OpreF, SIO, SoaP, PoB and PcbS.

#### 4.1 Discussion

In the above model, a total of 24 independent variables have been taken which have been considered as the possible sources of those engaged in this sector. As a result of applying the complete model, the nine variables that are initially insignificant are the following corporate pandemic insurance, corporate pandemic assurance, government grants, government incentives, government loan, commercial bank finance, other financial institute finance, international organization grants and international organization incentives. This means that these companies were not

covered by the insurance policies for such adversity from the very beginning. At the beginning of the epidemic, the government of Bangladesh announced special incentives in the readymade garment sector and later came forward for financial assistance in various sectors including agriculture, but no such financial incentives were provided in this sector. Although there are various financial incentives for migrants under the auspices of the United Nations, there is no financial assistance for those providing services in this sector.

In the second step, the ten variables namely corporate self-sufficiency, corporate reserve fund, corporate risk fund, owner(s) personal risk fund, government refund, financial support from sister concerns, financial support from other business, financial support from family members, financial support from friends and relatives and mortgage of other assets and properties are insignificant. Perhaps the variables that have been



omitted in this stage are initially somewhat helpful, but are no longer viable due to the prolongation of the epidemic. For instance, as the Bangladesh government has already announced, the agencies will be able to withdraw half of the savings certificates deposited as collateral at the time of obtaining their licenses. Therefore, probably all these variables give us a direction that they continue to try to survive by collecting money from various sources to survive.

The last five variables to survive are owner (s) personal reserve fund, shark loan, sale of other assets and properties, probability of bankruptcy and probably closing business soon. It is worth mentioning here that these five variables are entrepreneurial which we can easily understand. A service provider in this sector is trying to sustain its response life savings. Some are getting into debt at high interest rates. In the struggle to survive if necessary, all individuals are preparing to sell all their assets. Even after all this, if this epidemic lasts for a long time, the organization may lose everything at one time and may even go bankrupt. The long-term situation of service providers in this sector is probably due to their current investment uncertainty and struggling to meet current expenditures. Although very few companies are financially strong in this sector, the results show that the overall situation of most companies is like this.

## 5.1 Conclusion

The study found that before the outbreak of the epidemic in Bangladesh, all activities in the manpower export sector were suspended, resulting in uncertainty for their current investment as well as indefinite frustration for service providers. However, this uncertainty and frustration has had some negative effects not only in this one sector but in almost all sectors. However, the situation that has arisen in manpower export has probably not happened in any other sector. The activities of this sector have been completely stopped since the beginning of the epidemic. As the epidemic spreads around the world, economies in almost every country in the world are being severely damaged. Bangladesh's largest destination in the international labor market is the Middle East. While the current epidemic is seriously affected the largest economic sector in the Middle East, because the fuel market collapse has already broken previous records. In this situation, the process of sending back the workers working there is going on in Bangladesh on various pretexts, in which case the possibility of recruitment there in a new way is

uncertain. Therefore, this study feels that in order to protect this sector, the Government of Bangladesh needs to bring this sector under a special crush program and provide overall assistance to recruiting agencies in overall market research, exploration and creation.

## Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

Funded by COVID-19 Pandemic: Ethnography, Observation and Survey for Internal and International Migration Project, Migration Research Development and Society of Bangladesh (MRDSB)

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## Appendix A: Specification of variables for multivariate analysis

Group variables	Name of variables
Dependent variable	COVID-19 sustainability (COVID-19suS)
Independent variables	Corporate self-sufficiency (CsS) Corporate reserve fund (CreF) Corporate risk fund (CriF) Corporate pandemic insurance (Cpl) Corporate pandemic assurance (CpA) Owner(s) personal reserve fund (OpreF) Owner(s) personal risk fund (OpriF) Government grants (GgR) Government incentives (GiN) Government loan (GIO) Government refund (GrE) Commercial bank finance (CbF) Other financial institute finance (OfiF) Shark loan (SIO) International organization grants (IoG) International organization incentives (IoI) Financial support from sister concerns (FsfsC) Financial support from other business (FsoB) Financial support from family members (FsfM) Financial support from friends and relatives (FsIR) Mortgage of other assets and properties (MoaP) Sale of other assets and properties (SoaP) Probability of bankruptcy (PoB) Probably closing business soon (PcbS)

## Appendix-B

### Sample of Research Questionnaire

Dear Respondent,

I am presently working as an Adjunct Professor at the Green University of Bangladesh, Dhaka. The title of our proposed research is “The COVID-19 pandemic impacts on manpower export: An econometric analysis of survival strategies of recruiting agencies in Bangladesh” funded by COVID-19 Pandemic: Ethnography, Observation and Survey for Internal and International Migration Project, Migration Research Development and Society of Bangladesh (MRDSB). The purpose of this study is to review the capacity of organizations in the manpower export sector in Bangladesh to deal with such situations.. For conducting the study, your cordial help is necessary. It is assured that all the data supplied shall be used solely for the purpose of academic research and will be treated with utmost confidentiality.

Sincerely yours

Dr Kazi Abdul Mannan

Adjunct Professor

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#### Section A: General Information

1. Name of the respondent:
2. Name of the organization:
3. Designation and department:
4. Number of working years with the current organization:  
1-3yrs / 4-6yrs/7-9yrs/more than 10yrs
5. Highest qualification: Secondary / Graduation / Masters / Others.
- Date of interview:

#### Section B

6. Has COVID-19 affected your business?

6.1 If yes please specify

Positive or Negative impact.

7. If COVID-19 is long overdue then how you think that your business will survive, if your answer is related to the list below, please tick the right place

Statement	Yes	No
Corporate is self-sufficient		
Corporate has reserve fund		
Corporate has risk fund		
Corporate has pandemic insurance		
Corporate has pandemic assurance		
From owner(s) personal reserve fund		
From owner(s) personal risk fund		
From government grants		
From government incentives		
From government loan		
From government refund on our security deposit		
Finance from Commercial bank		
Finance from other financial institute finance		
Arrange shark loan		
Funding from international organization grants		
Funding from international organization incentives		
Financial support from sister concerns		
Financial support from other business		
Financial support from family members		
Financial support from friends and relatives		
Mortgage of other assets and properties		
Sale of other assets and properties		
Probability of bankruptcy		
Probably closing business soon		