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Socio-Economic Impact on the Working-Class during Covid-19: A Comparative Study between Kolkata and Dhaka Cities

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Abstract **- This study compares the socio-economic impact on the working-class between Kolkata (West Bengal, India) and Dhaka (Bangladesh) Cities during the period of Covid-19 because the socio-economic characteristics are comparatively similar in nature. Workers in diverse sectors have undergone by reason of the closure of businesses, manufacturing and service sectors, and other sectors. This study is based on primary data collected from two cities of two countries using the structured questionnaire. During analysis, exploratory factor analysis and structural equation modeling have been used. Exploratory factor analysis shows that five latent variables in terms of one economic factor, three societal factors and one working-class factor from Kolkata city and six latent variables in terms of two economic factors, three societal factors and one working-class factor from Dhaka city have been identified. The structural equation model demonstrates that both economic and societal factors/variables influence the working class in Kolkata and Dhaka cities during the pandemic situation.**
Keywords: **Covid-19, Socio-Economic Impact, India, Bangladesh, Structural Equation Modeling**

I. INTRODUCTION

The world now is facing reality through a pandemic situation as the Covid-19 damage the entire world unexpectedly (Ozili & Arun, 2020). Various socio-economic challenges are continuing and will influence the major migration to various developing countries around the world. The Covid-19 pandemic is causing financial difficulties for people in India and Bangladesh whose lives have been disrupted by lockdown (Banna, 2020) because several sectors including MSME, hospitality, civil aviation, agriculture, and fisheries, chemical, and allied sector (Kumar *et al.,* 2020; Market Watch, 2020; Moore, 2020). Hence, businesses are grappling with tremendous uncertainty about their future. The Covid-19 is having a deep impact on businesses, over the jobs are at high risk. Further, it is added that the Covid-19 crisis has caused an unprecedented collapse in economic activities over the last few weeks (Goyal, 2020). India and Bangladesh are not that prepared to rescue their healthcare system (Gilbert *et al.,* 2020). In view of the innumerable conditions, financial challenges become exposed due to the Covid-19 restrictive contagion policy followed some sort of social crisis (Tsai and Tsai, 2020; Chen *et al.,* 2020). Lockdowns measures, travel restrictions, and quarantine subsequently led the economy to fall (Loeb *et al.,* 2020; Sumner *et al.,* 2020). It has been observed that due to the pandemic situation, workers in different sectors have suffered mostly. Many of them are in trouble with their job loss, no income or low income, salary reduction due to the closes of business, manufacturing and service sector, and other organizations. The supply chain also disrupted a lot due to the fear of the spread of Covid-19 (DeBord, 2020; Kumar *et al.,* 2020). Again, some other social issues like information, availability of ration, food, and other emergencies also affect a lot of workers in both the formal and informal sectors (Vyas, 2020). The Covid-19 has caused some social impacts in developing countries including India and Bangladesh. Earlier few pieces of research related to Covid-19 also supported the same (Rajkumar, 2020; Sahoo *et al.,* 2020; Tandon 2020; Sharma, 2020).

There are a lot of workers became jobless due to disruption of production, closures of business, travel bans due to pandemic situation (ADB Briefs, 2020). Employees of both casual and informal type cannot move to their workplace due to closures of business, quarantine measures which must knock on effects on their income. Due to the pandemic, consumption and demand become decreases and job losses of working class got increases (Stiff, 2020). Again, when there are huge unemployment and people are facing losses of their jobs it increases inequality as well as more social and economic tension followed by decreases of human capital for living (Brooks *et al.,* 2020). According to the theory of supply and demand, the entire relationship between quantity supplied and price of goods followed by the quantity demanded of a good and its price when all other influences on planned to buy of consumers remain the same. On the other hand, when there is the scenario of job losses, industry faces shortage of workers. It is resulting increases of wages as well as production and consumption costs and that's why consumers' purchasing power affected a lot. Hence, economic growth decreases at remarkable level which also creates negative impact on society. The working-class people in both India and Bangladesh are facing the reality of job risk at work or no work, migration from work, no or low income, uncertainty in investment, and so on due to Covid-19 (Agrawal *et al.,* 2020). These scenarios hence

trigger to induce both the economic and social unstable situation (Rajkumar, 2020; Sahoo *et al.,* 2020; Tandon 2020; Sharma, 2020).

It is now the crucial time to looking for socio-economic recovery to tackle the outcome of Covid-19 (Gupta, 2020). Obviously, a question may arise: Is there any socio-economic impact on the working class with respect to India and Bangladesh due to Covid-19? Then, some sub-questions may also arise. These are

1. Are economic factors affecting the working class by reason of Covid-19?
2. Are societal factors affecting the working class because of Covid-19?

So, it is important to explore the actual socio-economic impact of Covid-19 on the working class to go for possible measures to tackle the pandemic. Therefore, the study deals with the problem to get a clear depicts of the socio-economic impact of the Covid-19 outbreak on the working people of India and Bangladesh.

II. LITERATURE REVIEW

Ozili and Arun (2020) examined the impact of coronavirus on major sectors of the global economy and the effect of social distancing policies on the level of economic activities using descriptive statistics and Pearson correlation test. The study showed that the increasing number of lockdown days, monetary policy decisions and international travel restrictions imposed at the peak of the coronavirus crisis severely affected the level of general economic activities. ILO Monitor (2020) investigated the impact of Covid-19 on global GDP growth. The study explored that the total value added of industrial enterprises in China declined by 13.5 percent during the first two months of 2020. Under the mid and high scenarios, there will be between 20.1 million and 35.0 million more people in working poverty than before the pre-Covid-19 estimate for 2020. Again, global, and regional supply chains have been disrupted. The services sector, tourism, travel, and retail are especially vulnerable. An initial assessment by the World Trade and Tourism Council forecasts a decline in international arrivals of up to 25 percent in 2020, which would place millions of jobs at risk. The study summarized that social protection systems and public infrastructures for social services increase resilience, allowing societies to cope with emergencies in the immediate term and to mitigate the impact of possible future crises. Meanwhile, preparedness at all levels is essential to mitigate impacts and increase resilience, protecting jobs, enterprises, and livelihoods.

Nicola *et al.,* (2020) found that lockdown and social distancing measures to prevent the spread of the Coronavirus have increased the fears of increasing domestic violence, which includes emotional, physical, and sexual abuse. Covid-19 is having a significant impact on sports, real estate, events, hospitality, tourism, and aviation industry view in 2020. Again, it also affected all levels of the education system from every level of education followed by calendar rescheduling, online interaction. Kumar et al. (2020) examined the impact of coronavirus on the Indian economy. The study summarized that in the Chemical industry 20% of the production has been impacted due to the disruption in raw material supply. Again, in the auto industry then it is expected to result in an 8-10% contraction of Indian auto manufacturing in 2020. However, India's electronic industry may face supply disruptions, production, reduction impact on product prices due to heavy dependence on electronics component supply directly or indirectly, and local manufacturing. Hence, any major disruption in the Chinese economy can disrupt the imports and follow by both production processes and supply of consumer goods in India.

Kapur *et al.,* (2020) mentioned that after the lockdown situation Government is facing these immediate challenges with respect to the socio-economic aspects of Covid-19. These are building up the medical care facilities, even in the remote areas in the country to meet the rising number of Covid-19 cases in the event of an uncontrolled outbreak; Ensuring that the lockdown is implemented successfully throughout the country; Keeping the supply chains of essential commodities robust and to keep the 1.2 billion citizens fed, and Ensuring that the 450 million migrant workers rendered jobless by the lockdown and trudging on the country's highways to return to their villages are stopped in their tracks, and are housed, clothed and fed at shelters put up on the state borders.

Lalon (2020) felt that the economic situation in Bangladesh will also witness a strong hit caused by the national shut down to stop the explosion of this highly infectious disease which causes the suspension of many national and international trade, the movement of persons, food supply chain and consumption, informal jobs, and so forth. Begum *et al.,* (2020) found that the social crisis and mental stress will undeniably be generated without protecting the basic needs of the vulnerable extreme poor in Bangladesh.

Bodrud-Doza *et al.,* (2020) found a positive link between the shutdown and misery of poor citizens have been intensified, with an increase in the prices of basic critical elements and barriers to formal training, as well as the risk of a major socioeconomic and health crisis.

Mohiuddin (2020) shows that the per capita income of the urban slum and the rural poor decreases by 80 percent because of the lockdown to avoid the spread of Covid-19 in Bangladesh. Deb and Nafi (2020) reveals that airlines have canceled flights, whereas hotels are nearly entirely vacant and as a result, tourism agencies in Bangladesh face enormous economic and job losses.

International travel restrictions imposed at the peak of the pandemic crisis due to Covid-19 severely affected the level of general economic activities and the production, unemployment, etc. (Ozili and Arun, 2020; McKibbin and Fernando 2020; ILO Monitor, 2020; Leigh, 2020; Letzing, 2020). Workers including daily-wage, contractual

employees, and migrant workers rendered jobless by the lockdown and trudging on the country's highways to return to their home with no income, uncertainty regarding investment, and education affected by the society. Most of the studies examined the impact of Covid-19 on the economy. A few studies are hardly available on the socio-economic impact on the working-class during the period of Covid-19. So, we have considered the socio-economic impact on the working-class group during the period of Covid-19 with special reference to Kolkata, India, and Dhaka, Bangladesh.

III. DATA AND METHODOLOGY

This study is mainly based on inductive theory as it examines the theory using the collected data. The design of the study is to observe quantitative information using statistical methods. The steps of the methodology have been presented below.

A. Pilot Study

A pilot study is a small description of a complete study, or a rehearsal made in preparation of the whole study. It is an exact pre-testing of research mechanisms including questionnaires. The questionnaires are mainly tested after considering 100 respondents from India and Bangladesh to assess whether the questionnaires met the aims of the study. It has been found that respondents are hesitant to give information regarding economic and societal factors and as a result, a few questions are removed and a few are included, and then the revised questionnaires are exercised to complete the primary survey.

B. Data Source

The study is generally structured on the data obtained from the primary source. The data has been obtained through a survey method by applying a structured questionnaire. The respondents are requested to give answers in response to a Google Form arranged by us and data founded on the raw responses are arranged and tabulated. The questionnaire has been arranged into three parts where respondents' working characteristics (a type of occupation, type of work, education, and family income) have placed in Part-I by using multiple-choice questions. In part II and III, 7 questions associated with economic factors and 7 questions associated with societal factors of the working-class have been placed through a 5-point Likert scale (mentioned in the questionnaire). The primary data for the study has been obtained through structured questionnaires using the Likert-5 point scale from 250 respondents of working-class each both from Kolkata City, India and Dhaka City, Bangladesh.

C. Sample Design

The sample design is an extremely crucial feature that undergoes a chronological process. The sample is aimed at the target population so that it can be generalized in the larger population. Here, the only working-class groups have been taken as respondents and a convenient sampling technique has been used to select the respondents. Since the feature of West Bengal and Bangladesh are not different, so we have considered two areas for investigation.

D. Variables Used

In this study, 18 variables have been chosen from the conceptual framework and previous studies. These are used in the questionnaire. Here, three are working-class characteristics, namely, type of occupation (V1), type of work (V2), level of education (V3), and family income (V4). There are seven variables related to the economy, these are, huge numbers of daily wage workers are workless (V5), migrant labors have no income right now (V6); salaried employees in the private sector are facing the risk of seas down (V7), feeling expensive in consumption of essential commodity (V8), investments in assets are decreasing (V9), feel bad due to falling of interest rate in investment (V10), and facing losses as small businesses are not running right now (V11).

There are four variables related to society, namely, unsatisfied through online interactions (V12), feeling uncertain regarding exam due to lockdown (V13), uncertainty in higher education in abroad (V14), adequate foods and medicines are not available while purchasing (V15), free ration for poor is not sufficient (V16), people are not much aware and getting panic regarding Covid-19 (V17), and facing uncomfortable after getting pandemic related information (V18).

E. Tools Used

In this study, the Cronbach Alpha test has been used to test the reliability. Then, exploratory factor analysis has been applied to identify the important variables and latent factors, and structural equation modeling has been applied to know the impact of identified socio-economic variables on the working class.

IV. EMPIRICAL RESULTS AND ANALYSIS

In this study, we have used exploratory factor analysis, confirmatory factor analysis, and structural model to examine the socio-economic impact on the working-class group.

A. Reliability and KMO-Bartlett's Test Results

After collecting the data from the working class of Kolkata City (India) and Dhaka City (Bangladesh), it is mandatory to verify whether the data is reliable or not. The reliability test results and the KMO and Bartlett's test Sphercity are given in table I. Cronbach's Alpha value is 0.76 for West Bengal and 0.72 for Bangladesh, which is more than the standard (0.70). This means the questionnaire used in this study is reliable and provides perfect information from the dataset.

TABLE I RELIABILITY STATISTICS AND KMO AND BARTLETT'S TEST RESULTS

Particulars		Kolkata City	Dhaka City
KMO Measure of Sampling Adequacy		.76	.74
Bartlett's Test of Sphericity	Approx. Chi-Square	1086.02	1086.02
	df	15	15
	Sig.	.00	.00
Cronbach's Alpha =	No. of Items = 18	.76	.72

To identify the key variables, the KMO and Bartlett's test Sphercity has been used for observing whether exploratory factor analysis is appropriate or not. KMO measure is 0.76 for Kolkata and 0.74 for Dhaka, which is more than 0.60; this shows both the dataset is appropriate for fitting exploratory factor analysis. Simultaneously, Bartlett's test results indicate that both the dataset is suitable for exploratory factor analysis.

B. EFA Test Results

First, we have considered eighteen variables for exploratory factor analysis (EFA) of Kolkata and Dhaka Cities. EFA can explain variability among observed and correlated variables in terms of a probable lesser number of unseen variables. We confirmed the normality of data through the Kolmogorov-Smirnov test, the linearity of data through F-statistic, and no multicollinearity through the correlation matrix. The principal component extraction method has been used because it looks for a linear combination of variables so that maximum variance is extracted. A strict decision has been considered to remove the items with loading less than 0.50 or cross-loaded (Hair *et al.,* 2016). Besides, communality values of 0.50 or more for each item are also checked. The orthogonal varimax rotation technique has been used on the supposition that the variables are not considered for the exclusive relationship between the variables and each factor. It also reduces the number of variables with higher loadings (positive or negative) on a factor and creates to recognize a variable with a factor.

Factor extraction results of Kolkata, India (Table II) demonstrate the five factors, whose eigen values are more than 1. The rotated factor matrix results show that 18 variables jointly could describe more than 63% of the total variation of the socio-economic impact of the working class. Exploratory factor analysis test results show that V4, V9, V10, and V17 are removed owing to low loading and communality values. Principal component analysis has clustered the remaining 14 variables into five factors. The loading and communality values of the remaining 14 significant variables are prognostic the socio-economic impact of each factor, the eigen values, and the percentage of variation explained of the factors are presented in table II. These results present the statistical reality to maintain the newly recognized socio-economic factors/variables that are implied as F1 (economic factor), F2 (working class), F3 (societal factor 1), F4 (societal factor), and F5 (societal factor 2). Factor 1 consists of five variables, namely, V5, V6, V7, V8, and V11. Factor 2 consists of three variables, namely, V1, V2, and V3. Factor 3 consists of two variables, namely, V13 and V14. Factor 4 consists of two variables, namely, V12 and V18. Factor 5 consists of two variables, namely, V15 and V16. All the investigated variables can make the socio-economic position of the working-class of Kolkata City during the period of Covid-19 listed in table II.

TABLE II EXPLORATORY FACTOR ANALYSIS TEST RESULTS OF KOLKATA CITY, INDIA

Variables	Economic factor	Working class	Societal factor 1	Societal factor 2	Societal factor 3	Communalities
V8	.807					.624
V6	.753					.669
V11	.646					.664
V7	.634					.635
V5	.615					.679
V3		.826				.758
V1		.746				.627
V2		.716				.597
V13			.779			.687
V14			.664			.590
V18				.715		.581
V12				.605		.561
V16					.839	.756
V15					.812	.695
Eigen values	4.179	2.332	1.978	1.553	1.299	
% of Variance	17.246	13.382	11.143	10.709	10.526	

Factor extraction results of Dhaka, Bangladesh (Table III) demonstrate the six factors, whose eigen values are more than 1. The rotated factor matrix results show that 18 variables jointly could illustrate about 62% of the total variation of the socio-economic impact of the working class. Exploratory factor analysis test results illustrate those two variables, namely, V4 and V12 are removed owing to low loading and communality values. Principal component analysis has clustered the remaining 16 variables into six factors. The loading and communality values of the remaining 16 significant variables are predictive of the socio-economic impact of each factor; the eigen values and percentage of variation explained of the factors are presented in table III. These results present the statistical authenticity to uphold the newly recognized socio-economic factors/variables that are implied as F1 (societal factor 1), F2 (working class), F3 (economic factor 1), F4 (economic factor 2), F5 (societal factor 2), and F6 (societal factor 3). Factor 1 consists of four variables, namely, V15, V16, V17, and V18. Factor 2 consists of three variables, namely, V1, V2, and V3. Factor 3 consists of three variables, namely, V5, V6, and V7. Factor 4 consists of two variables, namely, V10 and V11. Factor 5 consists of two variables, namely, V13 and V14. Factor 6 consists of two variables, namely, V8 and V9. All the identified variables are presented in table IV.

TABLE III EXPLORATORY FACTOR ANALYSIS TEST RESULTS OF DHAKA CITY, BANGLADESH

Variables	Societal factor 1	Working class	Economic Factor 1	Economic Factor 2	Societal Factor 2	Economic Factor 3	Communalities
V16	.830						.742
V18	.796						.676
V17	.795						.717
V15	.705						.526
V1		.771					.649
V2		.760					.665
V3		.707					.548
V6			.772				.672
V7			.716				.610
V5			.630				.547
V11				.740			.567
V10				.668			.591
V13					.820		.712
V14					.797		.692
V8						.784	.657
V9						.619	.652
Eigen values	3.761	2.343	1.596	1.254	1.106	1.040	
% of Variance	15.995	11.781	9.142	9.087	8.588	7.074	

C. Structural Equation Modeling (SEM)

The structural equation modeling method furthermore gives an estimation of the extent of robustness between the causal structure and the used dataset. The path diagram reveals the association among independent latent variables in the structural equation model and path coefficients between each independent latent variable and the dependent observed variable.

Diagram 1 shows that five latent variables (oval-shaped) were deduced from the measured variables (rectangle-shaped) using the confirmatory factor analysis method in Kolkata City, India. The latent variable 'economic factor' was deduced from five measured variables (V5, V6, V7, V8, and V11), societal factor-1 was deduced from two measured variables (V13 and V14), societal factor 2 was deduced from two measured variables (V12 and V18), and societal factor 3 was deduced from two measured variables (V15 and V16). 'Working-class' is considered as the fifth latent variable, which was deduced from three measured variables (V1, V2, and V3). Diagram 2 shows that six latent variables (oval-shaped) were deduced from the measured variables (rectangle-shaped) using the confirmatory factor analysis method in Dhaka City, Bangladesh. Economic factor 1 was deduced from two measured variables (V10 and V11), economic factor 2 was deduced from two measured variables (V6 and V7), and economic factor was deduced from two measured variables (V8 and V9). Societal factor 1 was deduced from four measured variables (V15, V16, V17, and V18) and societal factor 2 was deduced from two measured variables (V13 and V14). 'Working-class' is considered as the sixth latent variable, which was deduced from three measured variables (V1, V2, and V3).

Both diagrams show that the paths from unobserved variables to the observed variables demonstrate the loadings of the observed variables because those variables

operationalize the unobserved/latent variables. The paths from latent variables to the dependent variable (working class) are standardized regression coefficients, which put forward that the degree to which each independent variable influences the dependent variable. The curved-double-headed lines show bivariate correlations among economic, societal, and working-class latent variables. The disturbance term (d_1) was included in the model to signify the impact on the dependent variable (working class).

Fourteen measurement errors were considered on the measured variables that connected from five latent variables in Kolkata, which influence the variables elsewhere the latent variables, and fifteen measurement errors were considered on the measured variables that connected from six latent variables in Dhaka, which influence the variables elsewhere the latent variables.

1. Confirmatory Factor Analysis (CFA)/Measurement Model

Confirmatory factor analysis is applied to authenticate and corroborate the association among the factors identified after exploratory factor analysis. The theorized model is recursive in the case of both Kolkata and Dhaka cities for the sample size of 250 each because it demonstrates a clear-cut causal relationship between constructs in the economic, societal, and working-class group. An over-identified model has been identified in the case of both Kolkata and Dhaka cities because the number of parameters was less than the number of data points, which allows positive degrees of freedom that, can be used logically. The model identification is given in table IV.

TABLE IV IDENTIFICATION OF MODEL

Parameter	India	Bangladesh
Number of distinctive sample moments	105	120
Number of distinctive parameters to be estimated	32	35
Degrees of freedom	73	85

We exercised the most popular maximum likelihood method as the estimates parameters are able to make the best use of the uninterrupted oversimplification of the data that are drawn from the population. We found that the least iteration was attained, so giving an assertion that the evaluation method gave up an acceptable result and removed every anxiety about multicollinearity impacts for the economic, societal, and working-class group in the case of Kolkata and Dhaka cities.

Now, the evaluation method is used to make out the goodness-of-fit between the theorized model and the sample data. Goodness of fit shows how fine the model repeats the measured covariance matrix among the identified variables. The Chi-square goodness of fit metric is applied to measure the association between theoretical measurement and experimental data in the confirmatory factor analysis.

The model fit results of Kolkata and Dhaka Cities are shown in table V.

TABLE V MODEL FIT TEST RESULTS

Fit Statistics	Recommended Value	Kolkata City	Dhaka City
Chi-square	-	350.40	282.20
DF	-	73	85
CMIN/DF	< 5.00	4.80	3.32
GFI	> 0.95	0.97	0.96
AGFI	> 0.80	0.94	0.91
NFI	> 0.95	0.97	0.98
CFI	> 0.95	0.98	0.97
TLI	> 0.95	0.96	0.97
RMSEA	< 0.05	0.02	0.04

In structural equation modeling, a high chi-square value maintains the anticipated theoretical model. Chi-square/degrees of freedom are 4.80 and 3.32, which reveals acceptable and indicates a minimum divergence between the free sample-covariance matrix and the limited-covariance matrix. This also means that the parsimonious model is fit. The table shows that AGFI is more than 0.80, AGFI, NFI, CFI, and TLI are more than 0.95 in all the cases (recommended value is more than 0.95) which reveals satisfactory for a good model fit. RMSEA is associated with the residuals of the model and the value of RMSEA is less than 0.05, which indicates a better model fit. This indicates that the theorized confirmatory factor analysis model robust the obtain data thoroughly.

2. Structural Model

In this study, we have considered the common guidelines and then we have examined the structural relationships for both Kolkata and Dhaka cities.

Table VI shows the unstandardized parameter estimates of Kolkata city. We observe that the working-class increases 0.900 for a 1.00 unit increase in economic factors, which indicates that the economic factors influence the working class. Again, the working class increases 0.35, 0.40, and 0.25 for 1.00 unit increase in socio 1, socio 2, and socio 3, which designates that the societal factors influence the working class. However, V5, V6, V7, V11, and V8 increases 0.150, 0.031, 0.034, 0.037, and 0.041 for 1.00 unit increase in economy, which signifies that job lost of daily-wage workers, no income of migrant workers, risk of private-sector employees, increase in consumption cost, and revenue loss of small businesses influence the economy in Kolkata City, India.

TABLE VI UNSTANDARDIZED PARAMETER ESTIMATES OF KOLKATA CITY

Class		Factor	Estimate	S.E.	P
Working class	<---	Economy	.900	.129	<.001
Working class	<---	Socio1	.350	.082	<.001
Working class	<---	Socio2	.400	.143	<.001
Working class	<---	Socio3	.250	.046	<.001
V5	<---	Economy	.150	.022	<.001
V6	<---	Economy	.031	.015	<.001
V7	<---	Economy	.034	.025	<.001
V8	<---	Economy	.037	.031	<.001
V11	<---	Economy	.041	.051	<.001
V13	<---	Socio1	.023	.009	<.001
V14	<---	Socio1	.026	.106	<.001
V12	<---	Socio2	.028	.078	<.001
V18	<---	Socio2	.031	.062	<.001
V15	<---	Socio3	.022	.182	<.001
V16	<---	Socio3	.026	.058	<.001
V1	<---	Working_class	.054	.027	<.001
V2	<---	Working_class	.047	.152	<.001
V3	<---	Working_class	.043	.139	<.001

Furthermore, V13 and V14 increases 0.023 and 0.026 for 1.00 units increase in Socio1, which designates that uncertainty in examination and uncertainty in higher education in abroad influence the society in Kolkata. Yet again, V12 and V18 increase 0.028 and 0.031 for 1.00 units increase in Socio2, indicating unsatisfied through online interactions and uncomfortable on social media, TV, newspaper for getting pandemic information influences the society. In addition, V15 and V16 increase 0.022 and 0.026 for 1.00 units increase in Socio3, which points out that the availability of foods and medicines for purchase and free ration to the poor influences the society in West Bengal. Finally, V1, V2, and V3 increase 0.054, 0.047, and 0.139 for 1.00 units increase in the working-class, which indicates that occupation type, job type, and education level influence the working class. All the coefficients are significant statistically at a 1% level because the probability of all the parameter estimates of Kolkata City, India is less than 0.01. The measurement model and structural model are shown in figure 1 below.

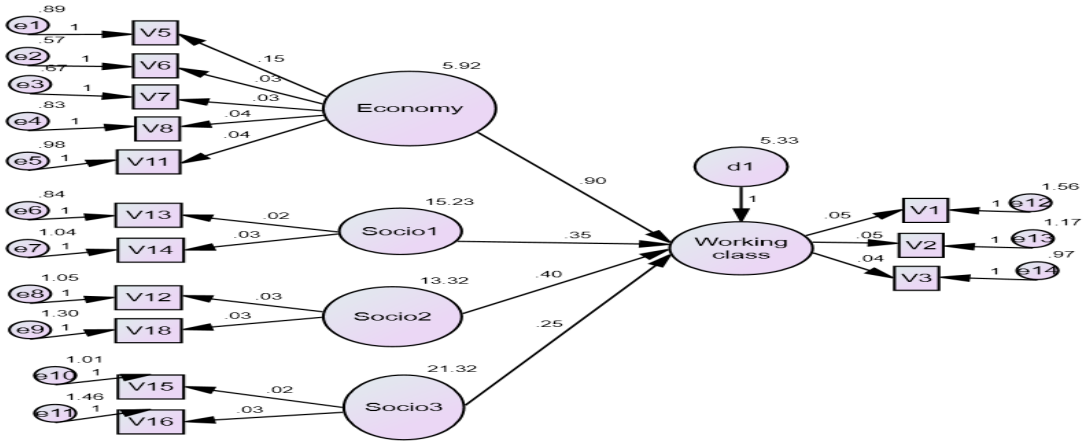

Fig. 1 Measurement and Structural Model

Table VII shows the standardized regression weights, and the hypothesis test results of Kolkata City, India. We observe that economic and societal factors influence the working class significantly and four hypotheses are accepted. Therefore, the working class is influenced by the economic factors and societal factors pessimistically and significantly due to Covid-19.

TABLE VII STANDARDIZED REGRESSION TEST RESULTS OF THE HYPOTHESES IN KOLKATA CITY

Class		Factor	Path coefficients	Supported/ not supported
Working class	<---	Economic	.557	Supported
Working class	<---	Socio1	.347	Supported
Working class	<---	Socio3	.294	Supported
Working class	<---	Socio2	.371	Supported

Table VIII shows the unstandardized parameter estimates of Dhaka City, Bangladesh. We observe that the working-class increases 0.40, 0.28, and 0.32 for a 1.00 unit increase in economic factors, which indicates that economic factors influence the working class. Again, increases working class increases 0.55 and 0.45 for a 1.00 unit increase in societal factors in terms of socio 1 and socio 2, which indicates that societal factors influence the working class. Nonetheless, V10 and V11 increases 0.055 and 0.048 for 1.00 units increase in economy, which indicates that falling of interest rate and revenue loss of small businesses, influence the economy in Bangladesh.

Furthermore, V6 and V7 increase 0.045 and 0.039 for 1.00 units increase in economy, which designates that no income of migrant workers and the risk of salaried employees in the private sector influence the economy in Bangladesh. Yet again, V8 and V9 increase 0.041 and 0.040 for 1.00 units increase in economy, which signifies that an increase in consumption cost and a decrease in investment return influence the economy in Dhaka City, Bangladesh. Furthermore, V15, V16, V17, and V18 increases 0.075, 0.095, 0.100, and 0.084 for 1.00 units increase in society, which indicates that non-sufficient foods and medicines, sufficient free-ration to the poor, unawareness about Covid-19, and uncomfortable regarding pandemic related information influence the society.

Finally, V13 and V14 increases 0.052 and 0.049 for 1.00 units increase in society, which points out that uncertainty in examination and uncertainty in higher education in abroad influences the society. All the results are significant statistically at a 1% level. The measurement model and structural model are shown in figure 2 below.

TABLE VIII UNSTANDARDIZED PARAMETER ESTIMATES OF DHAKA CITY

Class		Factor	Estimate	S.E.	P
Working class	←-	Eco1	.400	.091	<.001
Working class	←-	Eco2	.280	.011	<.001
Working class	←-	Eco3	.320	.093	<.001
Working class	←-	Socio1	.550	.068	<.001
Working class	←-	Socio2	.450	.112	<.001
V10	←-	Eco1	.055	.005	<.001
V11	←-	Eco1	.048	.021	<.001
V6	←-	Eco2	.045	.002	<.001
V7	←-	Eco2	.039	.067	<.001
V8	←-	Eco3	.041	.006	<.001
V9	←-	Eco3	.040	.001	<.001
V15	←-	Socio1	.075	.031	<.001
V16	←-	Socio1	.095	.121	<.001
V13	←-	Socio2	.052	.044	<.001
V1	←-	Worker	1.000		
V14	←-	Socio2	.049	.026	<.001
V18	←-	Socio1	.084	.059	<.001
V17	←-	Socio1	.100	.008	<.001

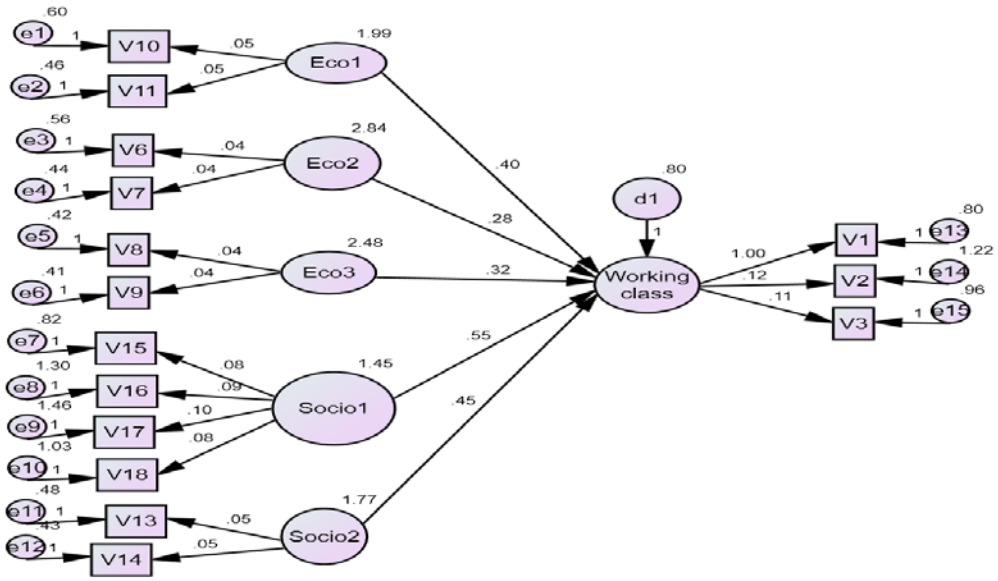

Fig. 2 Measurement and Structural Model

Table IX shows the standardized regression weights, and the hypothesis test results of Bangladesh. We observe that economic and societal factors influence the working class significantly and four hypotheses are accepted.

TABLE IX STANDARDIZED REGRESSION TEST RESULTS OF THE HYPOTHESES IN DHAKA

Class		Factor	Path coefficients	Supported/ not supported
Working class	<---	Eco1	.365	Supported
Working class	<---	Eco2	.306	Supported
Working class	<---	Eco3	.327	Supported
Working class	<---	Socio1	.428	Supported
Working class	<---	Socio2	.387	Supported

Therefore, the working-class is influenced by the economic factors and societal factors negatively and significantly in Bangladesh due to Covid-19. There is no significant difference between Kolkata and Dhaka regarding the socio-economic impact on the working-class during the pandemic situation.

V. CONCLUSION

This study considers the most important factors that have a socio-economic impact on the working class in two cities of two countries during the period of Covid-19 because nature and culture are not different. Exploratory factor analysis shows that huge numbers of daily wage workers are workless, migrant workers have no income right now, salaried employees in the private sector are facing the risk of seas down, feeling expensive in consumption of the essential commodity, facing zero or low profit as businesses are not running right now, feeling uncertain regarding exam due to lockdown, uncertainty in higher education in abroad, benefited through online interactions, facing comfortable on social media, TV, the newspaper for getting pandemic related information, foods and medicines are available while purchasing and free ration for poor is available are important variables for explaining the socio-economic impact on the working class both in Kolkata and Dhaka.

The structural equation model demonstrates that economic variables in terms of job losses of daily-wage workers, no income of migrant workers, risk of private-sector employees, increase in consumption cost, and revenue loss of small businesses and societal variables in terms of uncertainty in the examination, uncertainty in higher education, online interactions, uncomfortable on social media, TV, newspaper for getting pandemic information, availability of foods, medicines for purchase and free ration to the poor negatively influence the working class in Kolkata. Again, falling of interest rate, a revenue loss of small businesses, no income of migrant workers, risk of salaried employees in the private sector, an increase in consumption cost, a decrease in investment return, non-sufficient foods and medicines, sufficient free-ration to the poor, unawareness about Covid-19, and uncomfortable regarding pandemic related information, uncertainty in examination and uncertainty in higher education negatively influence the working class in Dhaka. There is no significant difference between Kolkata, India and Dhaka, Bangladesh regarding the socio-economic impact on the working-class during the pandemic situation.

It is obvious that some policies should be taken on an immediate basis so that the benefits are transferred to the working class during the period of Covid-19. Policies related to trade policy, monetary policy, change in the labor market, and production sector, which increases in factor productivity and reduces the levels of poverty as well as income inequality. Again, a static micro-reproduction model should be used to evaluate a labor income and factors of the

job-related choice. It will reduce the poverty level also. One more, market inefficiencies make high factor rents, consumer losses, and unemployment. So, controlling consumer prices and keeping the minimum standards for food consumption will affect positively the economy and society by connection with the agricultural and food sector. A shift to the direct cash transfer subsidy method progresses targeting of the poor worker and eradicates twists on the consumption side. Furthermore, the cash subsidy symbolizes an incremental income for poor workers. So, greater efficiency is comprehended on the consumption factor. For providing direct cash benefits and then smoothing the education sector, government spending should be increased. Finally, Farm/non-farm linkages are necessary because they depend significantly on the supply reaction as well as on its extent of changes in price elasticity (Gilbert *et al.,* 2020).

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