A Study on the Effects of Covid-19 on the Lives of Migratory Labourers

Chandra Sen Mazumdar
Assistant Professor, Department of Faculty, Management and Commerce,
M S Ramaiah University of Applied Sciences,
Bengaluru, India
chandrasen.ms.mc@msruas.ac.in

Varsha S, Amruth N, Gagana P, Manasvi N M, Tilak P, Sanjana S Biradar, Sanjeev L D, Soorya Thejas G R and Tanushree N
MBA Student, Department of Management Studies,
M S Ramaiah University of Applied Sciences,
Bengaluru, India
varsha.shivaswamy@gmail.com, namruth97@gmail.com, gaganaprakash153@gmail.com, manasvimohan1998@gmail.com, tilakpaneendra978@gmail.com, sanjanabiradar50@gmail.com, sanjeev.sanjeevld1@gmail.com, rangasoorya@gmail.com, tanushree11598@gmail.com

Abstract

Covid-19 crisis has made huge impact and caused grave economic challenges in countries around the world and especially on developing countries like India. Many sectors were affected both economically and emotionally. One such sector which had the possibility of being harmed was that of migrant labourers. The labourers were suddenly left jobless due to the pandemic. Most of them moved to their place of origin but some decided to stay at their place of work. Many news articles highlighting their hardships and struggles were published. Government and private organizations extended some aid towards their daily requirements during the pandemic. However, not a lot of research articles were published about their condition and how they fared during the time. Being an unorganized sector, the workers do not have job security. Even in the best of times, their income rates are low and savings, non-existent. This project attempts to identify the issues, which affected the migrant labourers during lockdown. Data was collected from 63 migrant workers using a structured questionnaire. The respondents were workers who had migrated from places such as North Karnataka, Bihar, Odisha, Uttar Pradesh and Madhya Pradesh to Bengaluru. Data was collected from different parts of North Bengaluru. During the survey, it was found that earning was the factor that majorly affected their state of living. This study and subsequent analysis showed that migrants were content with their increased wages and job assurances given by their employers.

Keywords
Covid-19, Migrant Labourers, Challenges, Earning and Living Condition.

1. Introduction
The outbreak of Covid-19 in December 2019, led to a pandemic which put the world under an unexpected crisis. This caused enormous number of deaths (Vyas 2020) and also led to scarcity of food, water and basic necessities to many sections of the population in India. Covid-19 crisis destroyed the lives and livelihoods of millions of people around the world, and it has also emerged as the most disruptive global crisis in recent memory. The unemployment rate in India in April 2020 turned out to be 23.5%. This was much higher than the 8.8% unemployment rate in March 2020 and even higher than the 7.6% recorded in the fiscal year 2019–20 (Vyas 2020). With the enforcement of the lockdown, not only were many people left without jobs but some also had to face the hassle of moving back to their hometown.

Times of India reported that the sudden outbreak of Covid-19 caused an immense drop in the economic growth rate, which impacted all sectors of the economy (Agarwal and Singh 2021). India's GDP shrank by 7.3% in the year 2020-2021. This was the worst performance of Indian economy in any year since independence. This manifested in the plight of daily wage workers during lockdown as it affected the daily earnings on which they survived. A survey done in Lucknow reported that the monthly income of labour fell 62%, from Rs. 9,500 per month in pre-pandemic times to Rs.3,500 per month during the pandemic. According to World Economic Forum, there are 139 million internal migrants in India, of which 90% of daily workers' community comprises of unorganized workers (Sharma 2017).

Covid-19 is expected to have a long-term impact on the migrant workers. The migrants were found to be most vulnerable among the working class of the economy. All the economic activities were shut down due to the pandemic, which proved to be a nightmare for hundreds of people. There was shortage of food and also loss of shelter. Due to the shutdown, in many cases, the migrant workers had to move back to their native places. Many migrants could not meet the requirement of their family's everyday needs. The workers were also under immense emotional strain having to take care of themselves as well as their families back in their hometowns, many of whom were affected by the virus. Covid-19 has burdened the female migrant workers (Choudhari 2020). They were potentially affected more because in many contexts, they are considered to have less earning potential and lower status in the workplace. This issue not only grabbed attention of the Government but also made the locals think about the well-being of migrant workers and many volunteered to render help.

It is a well-known fact that the world has remained quite challenging for the labour sector since Independence; Government has taken many actions and laid many regulations and acts to make their living easier (Sunitha 2020). The Central and State Governments have strived to facilitate the workers section through reliefs, grants and even by revising the laws previously established. Few of the acts mandates the registration of workers under Central Government to avail the facilities.

- The Unorganized Workers' Social Security Act, 2008.
- The Contract Labor (Regulation and Abolition) Act, 1970.
- The Inter-State Migrant Workmen Act, 1979.
- Pradhan Mantri Garib Kalyan Yojna.
- Rashtriya Swasthya Bima Yojana.

This study focuses on the difficulties that the migrant workers confronted and analyses the causes and responses to this job and lifestyle crisis.

1.1 Problem Statement

The literature review showed that there was a major research gap in the technical analysis to highlight the relationship between the factors that affected the migrants' livelihood. Five major factors were also identified that affected their livelihood. This study tries to identify the relationship between the factors identified. Hypothesis was generated to establish the relationship between each of the factors and its effect on livelihood. The main aim of this paper was to identify the difficulties and potential harms posed by the Covid-19 pandemic on migrant labourers and also to analyse the changes in their livelihood.

1.2 Motivation

As discussed in the introduction, a lot of researchers have studied the plight of migrant labourers and reinforced the importance of treating them and their challenges more closely. This sparked our interest to look at the challenges faced by migrant labourers, their earnings, living standards, access to Government policies, especially in the backdrop of the Covid-19 pandemic. The one-on-one interactions with the migrant labourers also provided us with the personal satisfaction of instilling in them a sense of belonging to the mainstream society and further ignited our passion to learn.

1.3 Objectives

The objectives of the study are as follows:

1. To identify the factors that affected the lives and livelihoods of the migrant labourers due to Covid-19.
2. To prepare a questionnaire and gather primary data through scheduled survey.
3. To analyze the responses and identify the factors that affected the lives and livelihoods of the migrant labourers due to Covid-19.
4. To design a Structural Equation Model (SEM) to identify the relationship between input variables and latent

variables.

2. Literature Review

Jones et al. (2021) discusses the problems faced by migrant workers because of Covid-19 and lockdown imposed. The challenges faced by these migrants were job and income losses, increase in debts, migration cost, healthcare, social protection, remigration and reintegration to work. The author provides recommendation that protects the rights of the migrants such as efficient occupational safety and health measures in gender responsive manner, providing Covid-19 relief packages and health support, guidelines to access the lost wages, treating migrants equally on non-discrimination grounds, Bi-Lateral agreements for migrant labour protection, guidelines to check that labourers do not provide any recruitment fees etc. Lockdown had undoubtedly had a huge impact on the migrant workers and the author reminds about the need for urgent reforms to be made by the Government in order to develop a fairer employment system for all.

Bhagat et al. (2020) emphasises that most of the migration happening is for work and directed towards urban cities. However, the urban cities fail to recognize these migrants as stakeholder of the cities, which creates a sustainability imbalance in the country and hinders their social, economic and political rights. The instant challenges of the migrants problems during lockdown was addressed by providing food and basic amenities at camps, screening to identify the infected migrants, counseling and psychological support, basic income support after post Covid. The author also suggests long-term strategies that the Government needs to consider such as Public Distribution System for food management, recommendation from UNESCO-UNICEF, Health insurance scheme for migrants etc. Even if migrants are formal citizens, their substantive citizenship rights are not being fulfilled, hence care must be taken.

Alok (2020) says that a country like India is unable to avoid practices like inequity, injustice and unfairness. During the lockdown period many of the migrant workers lost their jobs and hence had to abandon their work place. In order to strengthen the democratic system, the Government of India took necessary measures in strengthening the policies and rights framed in the interest of migrant labourers. The remedial measures taken by Government also included providing relief camps, conveyance and relief packages. This brought into focus the need to build a strong plan to protect the social security of labourers in the long term.

Shahare (2021) speaks of the economic, psychological and livelihood issues that migrant labourers in India endured. The role of the Government in protecting workers' rights throughout the pandemic are also discussed. Government and NGO provided more than 10 lakh relief camps and distributed more than 70 lakh food packages to these camps. There, however, was inadequate support by the Government to improve the economic status of the deprived migrants. It is high time for the Government to rethink on social security, amendments in labour laws and safeguard the wages of all the workers.

Chatterjee and Chatterjee (2021) focus on the unemployment created because of lockdown and a complete review of poverty in India. Power regression and descriptive statistics are the two methods used in analysis. Regression analysis found that the poverty rate has increased in 2021 in comparison to 2011. Descriptive statistics performed on the data collected from 30 states found that highest migrants were in Chattisgarh. Analysis of the results showed that Covid-19 has adversely affected the society and economy and has imposed challenge to eradicate poverty.

Ahmed et al. (2020) highlights the challenges faced during lockdown. The International Labour Organization reported that 34 million people lost their jobs majorly people working in informal sectors, loss in income leading to poverty, mobility issues, loss of basic necessities and health services. The challenges described above were eliminated by providing short and long-term solutions. Using digital technologies to gather the data of migrants since their information is not easily accessible in the national statistics, facilitating collaboration between the host and origin country to avoid mobility issues, plans to help migrant labourers returning home to develop their skills, entrepreneurial activities, and facilitating small companies in their home towns are some of the solutions the author suggests.

Wankhede et.al. (2021) speaks about the factors that have caused problems during Covid-19 pandemic. The study aims to provide comprehensive analysis on the Government policies framed and suggests reforms to improve the living of migrants in India. The methodology includes identifying the pattern of migrations, understanding the reasons for migrating, impact of pandemic on the life of workers and lastly to recommend the policies and solutions that can elevate their living conditions. The analyzed evidence clearly noted that the factors like gender norms, mental illness,

social and economic barriers significantly affected the living conditions of migrants. The Government of India was not successful to provide immediate aid and relief in the pandemic, which need to be improved by short and long-term solutions.

Azeez et al. (2021) explores the impact of Covid-19 on women migrant workers and their families. From the interview conducted in Gurugram in Haryana State the major factors affecting their livelihood were identified as debts, compromises, burden of responsibility, accessibility, emotional geographies and insufficient support. From the survey it is understood that women migrants urge for impoverishment in policies and strengthening security measures.

Choudhury (2020) speaks on the mobility issues faced by the migrants' labourers in India. The streets were flooded with people, where many managed to reach their hometown by various transportations available, while many could not. In order to stop the labourers from migrating Supreme Court of India came up with an idea of portable ration cards. This portable ratio card provided food provisions to migrants within the state, but did not play a major role in reducing inter-state migration. A Random Forest Regression was performed whose result says that mean absolute error decreased after including intra-state portability in both training and testing data set. Thus, food provisions made available to migrants played significant role in reducing mobility issues (PRS Legislative Research 2022).

The literature review focuses on identifying the areas that affected the migrant labourers the most during the lockdown and the major factors which created a problematic environment in the attainment of basic needs. The papers reviewed describe how the Government and other social organizations dealt with these issues as well as methodologies used for the studies. From the study of papers, it is seen that there was an impact on migrant's accessibility, earnings, mobility and employment. Scientific tools were used to analyze the effect of Covid-19 on the labourers. Most of the studies were focused only on the different ways that Covid-19 affected the different genders, GDP, economy but did not focus on how the plight of the labourers could have been improved and which factors made them suffer the most. In this work, an attempt has been made to bridge this gap.

3. Research Methodology

The methodology adopted was based on the literature review, which played a major role in identifying the variables for the study. Five factors were identified as important for this study viz., livelihood, job security, privileges, threats and earning. Based on this classification the questionnaire was framed by drafting 3 to 5 questions for each factor. The number of questions were dependent on the accuracy of the data required for the study.

Bengaluru accommodates 15-20 lakh labourers. For this study, a part of north Bengaluru was chosen which included the areas of Nelamangala, MS Palya, Thindlu and Manyata. The population size was around 5,000 – 6,000 considering only the online sources. This fact led us to finalize our sample to be around 65. Also, the labourers were reluctant to talk without prior permission from their contractor or supervisor. This limitation made us settle down with a smaller sample size of 63, which included those labourers whose supervisors provided the permission to gather responses.

The data was collected using well-structured questionaries as shown below and the data was analyzed through following techniques:

- Harman's single factor test to ascertain the reliability of the instrument used to gather data i.e. the questionnaire.
- Descriptive statistics to summarize the characteristics of the dataset.
- Independent sample t-test to ascertain if there is a difference in the effects of the factors based on gender, age or other such factors.
- Structural Equation Model (SEM), a combination of factor analysis and multiple regression analysis which is mainly used to analyse the relationship between measured variables and latent variables.

4. Data Collection

The aim of this survey was to identify various difficulties and potential harms posed by the pandemic of Covid-19 towards migrant labourers and also to analyse the change in their livelihood.

Based on the above aim, a structured questionnaire was prepared which consisted of 30 questions that were grouped into various factors such as Livelihood, Earning, Job security, Mobility issues and Privileges. A survey was conducted

by personal interviews at four different consruction sites located in North Bengalur namely Nelamangala, MS Palya, Thindlu and Manyata. A survey of 63 migrant workers was taken which has 81% responses from male and 19% from female that were spread across various age groups. The interviewed migrants were from different places in India namely Bihar, Andra Pradesh, Uttar Pradesh, Rajisthan, West Bengal, Odisha, Karnataka and Tamil Nadu.

There were various issues while interviewing labourers, like the questions had to be conveyed in an understandable way to them in their own langauage and many of the workers hesitated to provide there opinion on the same. They had to be taken into confidence and assured that their responses would in no way hamper their relationship with their supervisors. This made the data collection process slow and tedious.

5. Results and Discussion

This section talks about the results that we have obtained through model designing and analysis. By designing and analyzing, we were able to achieve all of our objectives in an effective and efficient manner.

5.1 Numerical Results

5.1.1 Harman's single factor test

The result of Harman's single factor test is shown in Table 1. Same has been conducted to find out reliability of the questionnaire prepared. It is also called single factor test as we have to fix the number of factors to one while performing the test. The variance of this test should be below 50% for the questionnaire to be reliable. Here, we have got the variance as 19.12%, we can conclude by saying that our questionnaire is reliable.

Table 1. Harman's test result

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.294	19.120	19.120	2.294	19.120	19.120
2	1.776	14.801	33.920			
3	1.541	12.838	46.758			
4	1.271	10.595	57.353			
5	1.143	9.521	66.874			
6	.920	7.664	74.538			
7	.881	7.338	81.875			
8	.657	5.475	87.350			
9	.572	4.767	92.118			
10	.387	3.228	95.345			
11	.327	2.722	98.067			
12	.232	1.933	100.000			

Extraction Method: Principal Component Analysis.

Table 2. Rotated Component Matrix generated by SPSS Software

Rotated Component Matrix					
	Component				
	1	2	3	4	5
Livelihood	0.532				
V14					
V15			0.655		
V16			0.519		
V17		-0.627			
V18					
Job Security					0.602

V21					
V22					
V24		-0.509			
V25		-0.583			
V26				0.608	
V27			0.631		
Privileges	0.640				
V30			-0.638		
V31					
V32		0.606			
V33		0.606			
Earning	0.682				
V36	-0.659				
V37	0.695				
V38		0.656			

5.1.2 Descriptive statistics

Descriptive statistics is a method used to have a summarized representation of the whole data set. Four main parameters were studied for the analysis namely mean, standard deviation, skewness and kurtosis. Before doing the descriptive statistics, the principal components were identified using exploratory factor analysis in SPSS (Table 2).

Since each factor had many variables, it is difficult to get the values for factors manually. So, performing a principal component analysis gives the components which are really significant. The values above 0.5 in each column of Table 2 were retained as those variables that contributed to the respective principal components or factors. By looking at the major contributors to the Principal Components (PC's) common group names were provided to represent the PC's namely Earning, Privileges, Issues faced, Threats and Livelihood as shown in Table 3 below. The values above 0.5 in each principal component are grouped. None of the variables are repeated. A common name for the group were assigned based on the category of variables initially taken into our study.

Table 3. Principal Components

Earning	**Privileges**	**Issues_faced**	**Threats**	**Livelihood**
PC1	**PC2**	**PC3**	**PC4**	**PC5**
On what scale do you think you are able to fulfil the basic necessities for a living?	How likely are you to lead the same lifestyle if you migrate to your hometown? If yes, how would you be able to achieve it?	How strongly do you feel you need migrate to your hometown?	Rate the scale of hardships you faced from police or any other government entity while traveling?	How likely are you to lose your job once you migrate to your hometown?
If not migrated, how would you rate your stay?	How would you rate the transport facility given by your contractor/Boss?	How likely are you to lead the same lifestyle if you migrate to your hometown?		
How satisfied are you with the earning?	How satisfied with the monetary benefits given by contractor/Boss to reach your hometown?	List out the difficulties faced.		
Has the remuneration changed after Covid?	Were you affected by Covid-19?	What were the difficulties faced w.r.t stay?		

If changed, by how much?	What kind of support did you receive if affected by Covid-19?			
	To reach Pre-Covid situation, how hard do you feel you should work?			

Table 4. Descriptive statistics for the Principal Components

Earning	
Mean	0
Standard Error	0.12598809
Median	-0.08223
Mode	#N/A
Standard Deviation	0.999999463
Sample Variance	0.999998927
Kurtosis	1.043954112
Skewness	0.70335511
Range	5.11707
Minimum	-1.79218
Maximum	3.32489
Sum	0
Count	63
Confidence Level(95.0%)	0.251846604

Privileges	
Mean	6.35E-07
Standard Error	0.125988222
Median	-0.1032
Mode	#N/A
Standard Deviation	1.000000507
Sample Variance	1.000001014
Kurtosis	6.771710872
Skewness	1.59699053
Range	6.31849
Minimum	-1.58293
Maximum	4.73556
Sum	4E-05
Count	63
Confidence Level(95.0%)	0.251846866

Issues_faced	
Mean	3.17E-07
Standard Error	0.125988091
Median	0.02351
Mode	#N/A
Standard Deviation	0.999999471
Sample Variance	0.999998942
Kurtosis	2.155395561
Skewness	-1.014019201
Range	5.20381
Minimum	-3.31536
Maximum	1.88845
Sum	2E-05
Count	63
Confidence Level(95.0%)	0.251846605

Threats	
Mean	-4.7619E-07
Standard Error	0.125988114
Median	-0.08434
Mode	#N/A
Standard Deviation	0.999999653
Sample Variance	0.999999307
Kurtosis	2.144857892
Skewness	-0.182203084
Range	6.11275

Livelihood	
Mean	-1.11111E-06
Standard Error	0.125988112
Median	-0.01454
Mode	#N/A
Standard Deviation	0.999999637
Sample Variance	0.999999275
Kurtosis	-0.607155833
Skewness	0.282078617
Range	3.97905

Table 5. Independent Sample T-test

Sum	-3E-05
Count	63
Confidence Level(95.0%)	0.251846651

Sum	-7E-05
Count	63
Confidence Level(95.0%)	0.251846647

Table 5 shows the results of the independent sample's t-test. Here, we have divided the factors age, occupation and gender into two groups. Age is divided into two groups - less than or equal to 30 and greater than 30, gender as male and female. Similarly, occupation is divided into civil mason and others (others include painters, plumbers, electrician and carpenter). The principal components are grouped according to the two divisions made in age, occupation and gender to perform independent sample's t-test. Below is the generic null hypothesis and the generic alternate hypothesis:

Generic null hypothesis: (H_0): Age/Occupation/Gender has no impact on Earning/Livelihood/Privileges/Issues faced/Threats.

Generic alternative hypothesis: (H_1): Age/Occupation/Gender has impact on Earning/livelihood/Privileges /Issues faced/Threats.

Outcomes of the analysis are:

- Gender has an impact on Issues faced and Threats.
- Age has an impact on Livelihood.
- Occupation has an impact on Privileges, Issues faced, Threats and Livelihood.

Table 5: Independent sample t-test

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Earning	1	51	.1040508	1.02355467	.14332632
	2	12	-.4422158	.78148529	.22559537
Privileges	1	51	-.0345355	1.07826664	.15098753
	2	12	.1467792	.56791151	.16394193
Issues_faced	1	51	-.0743245	1.04098847	.14576754
	2	12	.3158808	.75906553	.21912334
Threats	1	51	.0609843	1.06316352	.14887267
	2	12	-.2591858	.63877171	.18439751
Livelihood	1	51	.0113978	1.04789564	.14673474
	2	12	-.0484467	.80118667	.23128267

Group Statistics

	Age	N	Mean	Std. Deviation	Std. Error Mean
Earning	1	25	-.1432104	.85674041	.17134808
	2	38	.0942174	1.08470672	.17596267
Privileges	1	25	-.0591504	.73693880	.14738776
	2	38	.0389158	1.14869084	.18634226
Issues_faced	1	25	-.0272888	.94224694	.18844939
	2	38	.0179537	1.04830836	.17005807
Threats	1	25	-.1711732	.75121279	.15024256
	2	38	.1126132	1.12995873	.18330351
Livelihood	1	25	-.3113992	1.01506814	.20301363
	2	38	.2048661	.94800123	.15378611

Group Statistics

	Occupation	N	Mean	Std. Deviation	Std. Error Mean
Earning	1	51	-.0454724	1.02722937	.14384088
	2	12	.1932575	.88862962	.25652527
Privileges	1	51	.0700757	1.04235694	.14595917
	2	12	-.2978183	.76037513	.21950139
Issues_faced	1	51	-.0702445	1.05536009	.14777997
	2	12	.2985408	.67349294	.19442067
Threats	1	51	.0563224	1.03854302	.14542511
	2	12	-.2393725	.81027513	.23390628
Livelihood	1	51	.0490469	.94916570	.13290978
	2	12	-.2084550	1.21767482	.35151244

5.2 Structural Equation Model (SEM)

The SEM (Figure 1) was built using the JMP software. A path diagram was generated as a result after following the steps to build the SEM. In this diagram the dotted lines between variables indicates non-significance and straight line indicates greater significance. The size of effect is also mentioned along with the lines. In the path diagram, job

security, mobility issues, privileges and earning have a significant variance on itself. Among these four variables privileges have the highest variance followed by earning, mobility issues and job security respectively. Since livelihood has a dotted line, the variance is non-significant. Mobility issues and earning have significant covariance between them. The effect of the significance is 0.266. The rest of the latent variables have dotted lines, which indicates that they are non-significant. The measured variable regarding job guarantee is non-significant but it an effect of 20.03. Similarly, in mobility issues the measured variable regarding monetary benefits has significance and also size of the effect is high i.e. 3.359. The rest of the measured variables job guarantee, monetary benefits and quality of stay are non-significant.

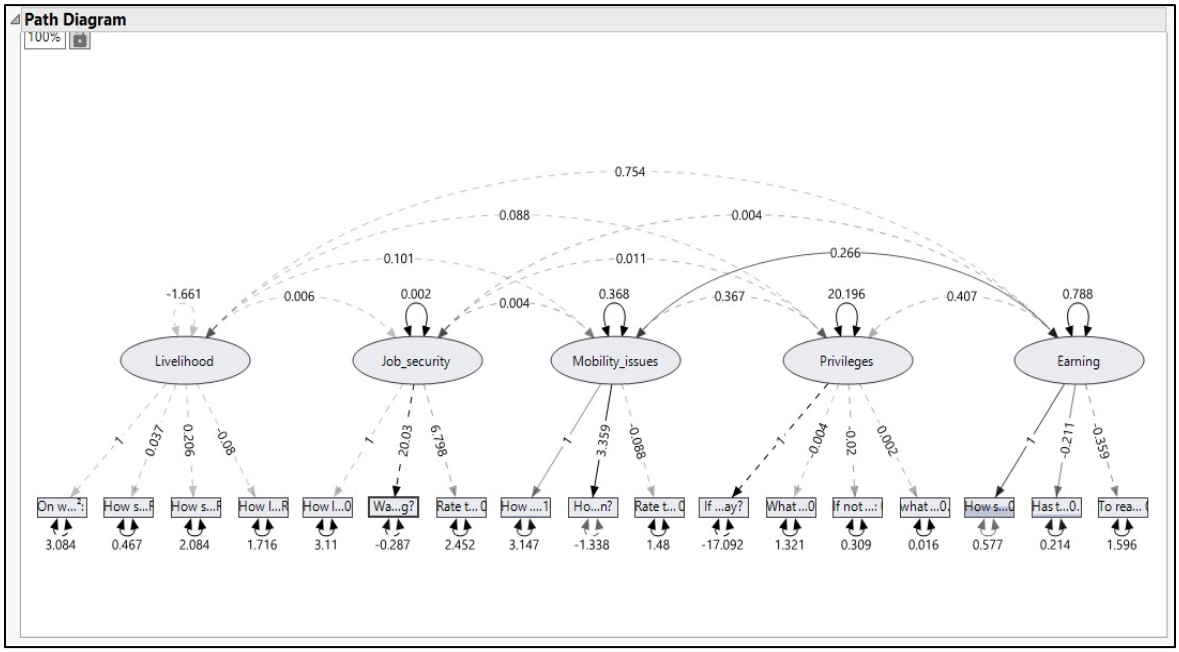

Figure 1. Structural equation model

5.3 Proposed Improvements

During lockdown we witnessed many migrant workers walked miles to reach the place where they belonged, being unemployed, no shelter and with financial insecurity. After the literature review, we considered five such factors which created major impact on their living during Covid for analysis. But there are many other factors that affected these migrants which can also be considered. Because of the time constraints the responses were collected only from North Bengaluru, which also limited the sample size for the analysis.

From our analysis we found that majority of the migrants were farmers and agriculture workers in their villages. The main reason for their migration was lack of rural infrastructure. A fundamental change is required by the Government which will reduce the distress migration of these skilled agricultural labourers.

6. Conclusion

The Covid-19 outbreak, has disturbed millions of lives around the world. Similarly, it has affected a lot on the lives of the people who live in India. Many of the labourers who travel to different parts of the country had faced lot of issues. Some of these issues include getting back to their hometown, getting support to fulfil their necessities and so on. Our focus was to analyze the difficulties faced by them. This was possible by conducting a scheduled survey, which consisted of questions regarding the five major factors namely Livelihood, Earning, Privileges, Mobility Issues and Job Security. The qualities such as measure of central tendency, measure of variability was analyzed by performing Descriptive Statistics for the PC's. The effect of age, occupation and gender on the factors was found out by conducting independent sample T-test. We have also built a Structural Equation model using JMP to build a relationship between latent variables and measured variables.

From the analysis, it is found that earning has a significant effect on livelihood of migrant labourers. We can also say that earning has an impact on mobility issues, most of the mobility issues were concerned with the monetary benefits

given by the contractors/supervisors. The quality of stay was also a major factor for deciding the privileges given to the labourers. The job guarantee given by the bosses became the major factor for job security of the migrant labours.

References

Agarwal, S. and Singh, A. 2020, *Covid-19 and Food Insecurity in India* in *Socio-Economic Impact of Covid-19 on Indian Economy*, 1st Edition, N.B. Publications, India, 2021.

Ahmed, M.S., Coulibaly, D., Karanfil, F., Kinani, H., Moreno, A.B., Omgba, L.D. and Vu, N., Impact of the covid-19 pandemic on migrant workers in the informal sector and spin-off effects in their destination and home countries, *Policy Brief, G20 Summit*, 2020.

Alok, A., Impact of COVID-19 on Migrant Workers: Issues and Challenges, *International Journal of Research and Review*, vol. 7, no. 7, 2020.

Azeez E.P., Negi, D.P., Rani, A. and Senthil Kumar, A.P., The impact of COVID-19 on Migrant Women Workers in India, *Eurasian Geography and Economics*, vol. 62, no. 1, 2021.

Bhagat, R.B., Reshmi, R.S., Sahoo, H., Roy, A.K. and Govil, D., The COVID-19, Migration and Livelihood in India. A Background Paper for Policy Makers, IIPS Analytical Series on Covid 19: Paper 1, *International Institute for Population Sciences*, vol. 17, no. 5, 2020.

Chatterjee, P. and Chatterjee, M., Impact of Covid 19 on Poor and Migrant Labourers of India, *International Journal of Humanities and Social Science*, vol. 10, no. 9, 2021.

Choudhari, R., COVID 19 pandemic: Mental health challenges of internal migrant workers of India, *Asian Journal of Psychiatry*, vol. 54, 2020.

Choudhury, P., Koo, W.W., Li, X., Kishore, N., Balsari, S. and Khanna, T., Food security and human mobility during the covid-19 lockdown, *Harvard Business School Technology & Operations Mgt. Unit Working Paper,* no. 20-113, 2020.

Jones, K., Mudaliar, S. and Piper, N., Locked Down and in Limbo: The Global Impact of COVID-19 on Migrant Worker Rights and Recruitment, *International Labour Organisation*, Available: https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---migrant/documents/publication/wcms_821985.pdf, Accessed on July 25, 2022.

PRS Legislative Research. 2022. Migration in India and the impact of the lockdown on migrants, Available: https://prsindia.org/theprsblog/migration-in-india-and-the-impact-of-the-lockdown-on-migrants, Accessed on April 24, 2022.

Shahare, V.B., COVID-19 lockdown: the neglected migrant workers in India, *Asia Pacific Journal of Social Work and Development*, vol. 31, no. 1-2, 2021.

Sharma, K., India has 139 million internal migrants. They must not be forgotten, Available: https://www.weforum.org/agenda/2017/10/india-has-139-million-internal-migrants-we-must-not-forget-them/, Accessed on July 25, 2022.

Sunitha, C., Labour Policy of the Government | India | Economics, Available: https://www.econom.icsdiscussion.net/labour/policy-labour/labour-policy-of-the-government-india-economics/29326, Accessed on July 25, 2022.

Vyas, M., Impact of Lockdown on Labour in India, *The Indian Journal of Labour Economics*, vol. 63, no. 12, 2020.

Wankhede, P., Mukherjea, S., Banuana, V., Subramaniam, R., Basha, M., Sainarayan, A., Harlalka, L., Savio, S., Prakash, V., Rajuskar, C. and Kadlak, H., The Impact of COVID-19 on India's Internal Migration, *Across the Spectrum of Socioeconomics*, vol. 1, no. 5, 2021.

Biographies:

Dr. Chandra Sen Mazumdar is a PhD in Operations Research from the Indian Institute of Science, Bangalore and is currently an Assistant Professor at the M.S. Ramaiah University of Applied Sciences, Bangalore. Her research interests lie in the areas of Mathematical Modeling for Optimisation, Logistics and Supply Chain Management, Data Analytics and the applications of Machine Learning algorithms to business decision making.

All the below authors are currently pursuing MBA in various specialisations at the M.S. Ramaiah University of Applied Sciences, Bangalore. In addition,

Ms. Varsha S has completed BCom (professionals) from Christ deemed to be university.

Mr. Amruth N has completed B.E (CS) from Vivekananda College of Engineering & Technology, Puttur.

Ms. Gagana P has completed BCom from Mount Carmel College.

Ms. Manasvi N M has completed B.E(EI) from M S Ramaiah Institute of Technology, Bangalore.

Mr. Tilak P has completed B.E (IS) from Sri Jayachamarajendra college of Engineering, Mysore.

Ms. Sanjana S Biradar has completed B.S.M.E from Nagarjuna College of Engineering and Technology, Bangalore.

Mr. Sanjeev L D has completed B..S.M.E from Nagarjuna College of Engineering and Technology, Bangalore.

Mr. Soorya Thejas G R has completed B.Tech (Civil Engineering) from Reva University, Bangalore.

Ms. Tanushree N has completed B.E (EC) from Sri Venkateshwara College of Engineering, Bangalore.