

Research Paper

Livelihood Security of Migrated Farm Labours during COVID-19 Lockdown: Evidence from North Karnataka Region

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ABSTRACT

During the COVID-19 pandemic, migrant workers encountered a number of obstacles. As a result of the country's lockdown, millions of migrant workers have lost their jobs, income, and food. The response of migrant labour to livelihood security during the covid-19 outbreak was explored in North Karnataka. This study looked into the alternative employment options available to migrant workers who went home to avoid the outbreak. The purpose of this study is to apply logistic regression and path analysis to see what factors influenced agricultural migrant households' livelihood security when they returned home following the COVID-19 pandemic lockdown. The factors impacting livelihood security, according to the results of logistic regression, were family size, household income, and income from non-agriculture, dependency ratio, migrating reason, and average age of migrants. This study looks at the socioeconomic conditions of migrant workers as well as the factors that affect their capacity to earn a living.

Del JEL Classification: O21, C20, Q01, Q19

HIGHLIGHTS

- ① As a result of the country's lockdown during Covid-19 pandemic, millions of migrant workers have lost their jobs, income, and food.
- ① Migrants' livelihood security is impacted significantly by the indirect effects of family size and migration style.
- ① The factors impacting livelihood security, according to the results of logistic regression, were family size, household income, and income from non-agriculture, dependency ratio, migrating reason, and average age of migrants.
- ① Non-economic factors were found to be the primary cause of migrants' concerns.
- ① Inclusive agrarian transformation solutions should be examined in north Karnataka.

Keywords: Covid-19, Livelihood security, migrant labours, income from agriculture

COVID-19 has impacted the livelihoods of millions of people in practically every country, particularly the underprivileged of developing countries, because it directly affects their sources of income. COVID-19, a pandemic disease caused by a coronavirus that originated in China, has ravaged almost all the nations, putting the global economy in a panic (Kareemulla, K. *et al.* 2020). Migrant workers in India have experienced numerous challenges as a result of the lockdown imposed (First ever lockdown in India from 25th March 2020) due to COVID-19

outbreak. The Indian government's original twenty-one-day shutdown resulted in a massive influx of urban migrant labourers returning to their villages on a scale not seen in India in recent memory (Baria, B.P. 2020). Employment variability and income through intervening factors affect economic and livelihood conditions of the migrated farm labours

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(Rao, 1994). According to the World Economic Forum, there are about 139 million migrants in the country. According to the International Labour Organization, the pandemic and lockdown resulted in the poverty of over 400 million employees. India's government, like those of other countries, has used social distancing as a non-pharmaceutical infection prevention and control strategy. Social distancing is claimed to be an effective preventative and control technique in the absence of a vaccine (Singh and Adhikari, 2020; Chatterjee *et al.* 2020). Due to the country's lockdown, many industries, factories, and businesses were forced to close. Many migrant workers encountered challenges such as job loss, income loss, food scarcity, and uncertainty about their future. As a result, throughout the epidemic, millions of migrant workers and their families were hungry, and many were scared of the disease's severity. The lockdown period is a valuable resource for understanding the informal Indian labour market's overall adaptability (Baria, B.P. 2020). Thousands of people then began returning home on foot. Despite efforts by the central and state governments to assist migrant workers, their problems persisted, and the covid-19 pandemic wreaked havoc on them. Almost all migrant labourers belong to a marginalised group of people

who rely on daily income to make ends meet. In their home towns, food security is one of the most important concerns they face.

Migrants are forced to leave their native places in search of better opportunities and earnings, sometime leaving behind their families (Murakami, 2017). In many instances, the families in native places depend partially or entirely on the money sent by the migrant earning members of the family (Rahman and Akter, 2014). Because of political unrest, a lack of educational possibilities, and terrible economic progress in their home countries, migrants migrate in quest of work (Reimeingam, 2016). During the COVID-19 crisis and the restrictions imposed on normal activities as part of social distancing rules to prevent the disease's transmission, millions of migrant workers migrated back to their homes. Migrant labourers who have returned to their hometowns after working in cities are struggling to make ends meet. Many individuals were hungry and shelter less during the epidemic due to a scarcity of work in villages. As a result, the goal of this research is to look into the numerous strategies that migrant workers employ to maintain their livelihood stability during that time. Both skilled and unskilled migrant labourers are included in this study. 50 migrant workers who returned to

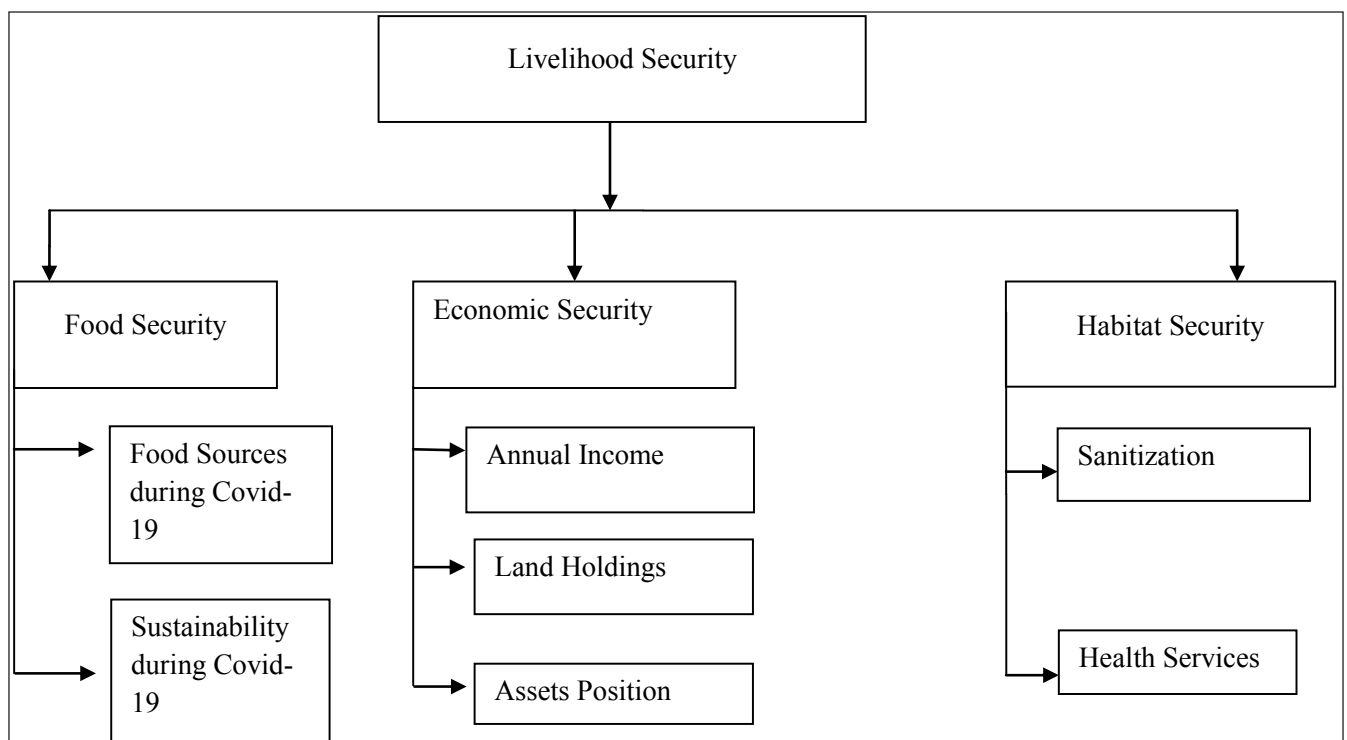


Fig. 1: Figure showing different components of livelihood security

their own villages during Covid 19's first lockdown were questioned and their views were recorded in several villages in north Karnataka. Although similar conditions can be seen in other parts of Karnataka, this research concentrates on migrants in North Karnataka because they were the hardest hit. The global Corona pandemic is providing important opportunities for economists to study the behavioural dynamics of economic agents in the context of this crisis, and may help to better understand how government intervention can or cannot improve economic outcomes in the future if similar events occur (Baria, B.P. 2020).

This study looks at the socioeconomic conditions of migrant workers as well as the factors that affect their capacity to earn a living. As a result, migrant worker issues, particularly during pandemic conditions, represent a major threat to millions of livelihoods.

DATA AND METHODS

Data and sampling technique

As a sample of the survey, a small number of 50 migrants were interviewed and their experiences were documented from various villages in north Karnataka comprising of villages from Koppal, Bellary and Raichur districts. Although similar situations can be found in other villages in Karnataka, the focus of this study was on migrants in the North Karnataka region. The survey included some villages that were chosen at random and a small number of 50 farmers were interviewed to document the factors affecting their livelihood security.

Analytical procedure

Binomial logit model was used to assess various determinant affecting the binary dependent variable (Thorat, V.S. *et al.* 2020). In this study, farm migrants' access to livelihood security was viewed as a binary dependent variable with two possible values, such as access to livelihood security, which is represented by an indicator variable, with the two values labelled "0" and "1" for access and non-access to livelihood security. Then the likelihood function of the multinomial logit model can be written as:

$$P_{im} = \text{prob}[Y_i = m] = \frac{1}{1 + \sum_{i=1}^{m-1} \exp^{x_i\beta}}$$

$$P_{ij} = \text{prob}[Y_i = j] = \frac{\exp^{x_j\beta}}{1 + \sum_{i=1}^{m-1} \exp^{x_i\beta}}$$

Because the model is non-linear, the maximum likelihood method was used to estimate it. The logit model's estimated coefficients, on the other hand, are difficult to interpret. This specification has two unintended implications. In the case of two outcomes, say access to livelihood (1) and non-access to livelihood (2), the odds of any result, say access to livelihood (1) and non-access to livelihood (2), were given by $\text{prob}(L)/[\text{prob}(NL)] = P_{i1}/P_{i2} = \exp[(x_{i1} - x_{i2})\beta]$. As a result, the calculated coefficients (β) are understood as the log odds ratio of an alternative to the base category's chance of occurrence. McFadden (1973) proposed Pseudo R^2 , a metric that is similar to R^2 and is generated from the log-likelihood ratio test to compare the accuracy.

Path analysis is a type of statistical analysis which is similar to multiple regression statistical analysis and assesses causal models by looking at the relationships between access to livelihood security and eight independent variables such as age, income, migration method, land holding, and cause for migration. Models that are more sophisticated (and realistic) than multiple regression can be analysed using path analysis. As a result, a model is created that depicts the causal pathways by which independent factors cause both direct and indirect effects on livelihood security. Researchers utilise arrows to depict how different socioeconomic characteristics link to one another in a path diagram.

RESULTS

The research findings are divided into three sections: socioeconomic features of migrant farm labours in their home towns, variables impacting migrant farm labours' livelihood security, and challenges faced by migrant farm labours. Each component is described in depth below:

1. Socio-economic Characteristics of migrated farm labours

Farm labour migration may be influenced by socioeconomic factors, which may have an impact on livelihood security (Table 1). Knowing more about farmers’ socioeconomic features would help us better comprehend their impact on livelihood security. The average size of a land holding was 2.16 acres. Irrigated farms had the largest holding size (1.10 acre), followed by dry farms (1.06 acres). In the research area, the typical family size including both adults and children was four and the average age of sample farm labour was 29 years.

Table 1: Socio-economic characteristics of farm labour migrant’s household

Sl. No.	Particulars	Average
1	Age (years)	29
2	Family size (in no.)	4
3	Dependent Household members (in no.)	2
4	No. of migrants per family (in no.)	2
5	No. Children in family (in no.)	2
6	Average education (in years)	7
7	Land holding average (acre)	2.16
8	Dry land (acre)	1.06
9	Irrigated land (acre)	1.10

2. Factors that influenced on the livelihood security of migrated farm labours

In this section, we looked at the aspects that affected livelihood security. The explanatory variables in the model are chosen based on the literature review and the data availability. Table 2 shows the results of the logit regression. The results of logistic regression found that the factors influencing upon livelihood security among the farm migrant households at their places consisted of land, family size, and household income, income from non-agriculture (0.523 %), dependency ratio (-0.622%), migrating reason (-0.261%), and average age of migrants (0.131 %). Total household income and income from non-agriculture had a positive effect on livelihood security. These findings confirmed Su *et al.* (2018), who presented the limitations of access to income from non-agriculture, would be sufficient to sustain livelihood security.

Table 2: Results of logistic regression of factor affecting on livelihood security (N=50)

Variables	Estimated Coefficients
Migrants characteristics factor	
Constant	25.37 (11.056)
Family size	-0.253** (-0.053)
Dependency ratio	-0.622*** (-0.053)
Average age of migrants	0.131 (0.124)
Migrating method	-0.496** (-0.127)
Migrating reason	-0.261** (-0.076)
Livelihood capital factors	
Income from non-agriculture	0.523*** (0.084)
Household Income	0.145* (0.075)
Land size	0.317*** (0.043)
Pseudo R ²	0.725

Note: 1. Figures in parentheses denote calculated Std. Err.

2. ***, ** and * denotes significant at 1, 5 and 10 per cent level, respectively.

An interesting finding indicated that Dependency ratio of the households being presented had a negative effect on livelihood security. The findings confirmed Kassie’s study (2017), which suggested that family size as well as dependency ratio within the households at their places of origin had negative effects on livelihood ratios.

Table 3: Results of path analysis of direct and indirect effects of factor affecting on livelihood security (N=50)

Variables	Estimated Coefficients	
Migrants characteristics factor		
	Direct effect	Indirect effect
Family size	-0.103 (-0.03)*	-0.131** (-0.0231)
Dependency ratio		-0.152** (-0.033)
Average age of migrants (years)		0.131 (0.124)
Migrating method	-0.096** (-0.017)	-0.025* (-0.013)
Migrating reason		-0.131** (-0.021)
Livelihood capital factors		
Income from non-agriculture (₹)	0.093 (0.086)	0.135* (0.040)
Household Income (₹)		0.105* (0.015)
Land size (acre)	0.281 (0.163)	0.112** (0.010)

Note: 1. Figures in parentheses denote calculated Std. Err.

2. ** and * denotes significant at 5 and 10 per cent level, respectively.

As indicated in table 3 and Fig. 2, a path analysis was conducted to examine the factors affecting livelihood security that had a direct impact on agricultural migrant households in the north Karnataka region, as well as the ones that had an indirect impact. Four variables were discovered to have a direct impact on livelihood security in the study. The size of land holdings had a favorable direct impact on livelihood security, but migration mode had a negative direct impact. Non-agricultural income has a direct positive impact on livelihood security in their hometowns. When non-agriculture income increases by one unit, the chance of livelihood security improved by 0.093 units among agricultural migrant households. Fig. 2 depicts the direct and indirect effects on agricultural migrant households' livelihood security.

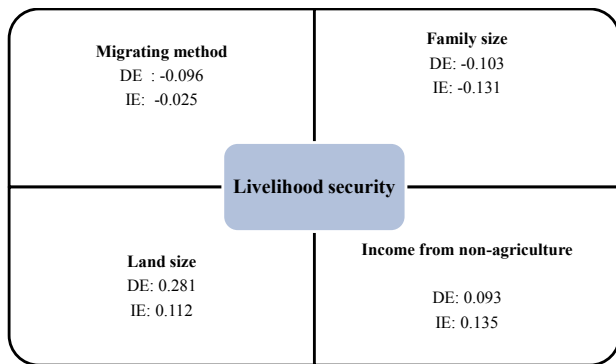


Fig. 2: Path model of factors influencing on livelihood security among migrants

3. Challenges faced by migrant farm labours

Table 4 shows the difficulties faced by migrants at their destination as reported by farmers in the North Karnataka region.

Table 4: Problems faced by the migrants at the destination

Sl. No.	Problem	Score	Rank
1	Drinking water	76.82	IV
2	No continuous job at the destination	54.55	V
3	Housing problems	92.73	II
4	Lack of proper medical treatment	95.45	I
5	Hazardous and risky environment	42.73	VI
6	Job contract taken by the agent/employer	13.64	VII

7	Wages are not paid according to the job	10.64	VIII
8	Transportation	9.09	IX
9	Children School	81.82	III

Farm labour migrants at the destination, for the most part, encountered identical challenges. The lack of competent medical treatment for farm labour migrants was a big issue (95.45 percent). Housing issues (92.73 percent), children's school (81.82 percent), there isn't a steady work at the destination (54.55 percent), and a harmful and risky environment were among the other obstacles (42.73 percent). Furthermore, farmers in general stated that transportation services to return to the destination were unavailable.

CONCLUSION

Following the preceding debate, it is clear that family size, dependency ratio, and income have a substantial impact on agricultural migrants' livelihood security. Agricultural migrants' livelihood security is impacted significantly by the indirect effects of family size and migration style. Non-economic factors were found to be the primary cause of migrants' concerns, according to the findings of this study. Despite the fact that agricultural migrants gain from livelihood stability, economic reasons such as income are adequate. Despite this setback, the study found that income-related characteristics were constant across regions. The findings of the logistic regression analysis indicate that inclusive agrarian transformation solutions should be examined in north Karnataka, as well as other sections of the state. According to the findings, migrants should incorporate a variety of livelihood resources, such as economic, physical, and natural capital, into their household livelihood plan.

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