

# CHALLENGES FOR EMPLOYMENT FROM COVID IMPORTED REVERSED MIGRATION: AN EMPIRICAL STUDY OF THE INDIAN STATE OF BIHAR

Ramun PRASAD\*

Deepak Kumar BEHERA

## Abstract

This paper explores the consequences of COVID-19 as reverse migration and employment challenges in Bihar. This study used PLFS, Bihar Economic Survey, Migration Survey, and Ministry of Rural Development data. The outbreak of Covid-19 made migrant labourers jobless, forcing them to return to their place of origin. Around 51 lakh households have been accommodated under MGNREGA in Bihar. Yet, the highest percentage of unemployment has been found among youths aged 15 to 29 years. This study suggests that the government must focus more on skill development to prepare skilled manpower so that the impact of such an unprecedented calamity can be minimized in the future.

**Keywords:** Migration, Reverse Migration, Employment and COVID-19.

**JEL Code:** E24, O15, R23.

## 1. Introduction

Bihar is the third most populous state after Uttar Pradesh and Maharashtra where the poverty rate is 33.74 (RBI). Around 51.91 per cent of the population is multidimensionally poor (NITI Aayog). There are 10.38 crore population living in Bihar where 11.30 per cent are in urban areas while 88.70 per cent are in rural areas. A major portion of rural dwellers is mainly dependent on agriculture for their livelihood. But, the growth of mechanization in the agriculture sector restricted their employment opportunities and hence a large number of the rural population migrated out to urban areas in search of livelihood (Haan 1999; Himansu, 2011; Mehrotra et al., 2014; Prasad et al., 2020).

Even, casual laborers who work in the agriculture sectors are also more likely to migrate during agricultural 'lean seasons' in search of livelihood. But, the outbreak of COVID-19 changed the scenario by creating challenges for humanity and reducing the Gross State Domestic Product (GSDP). Since, mining and quarrying, manufacturing, construction, hotel and restaurants, railways, road transport and air transport remained highly impacted sectors while Trade and repair service, water transport, communication and broadcasting-related services were medium impacted sectors; but crops, livestock, forestry and logging, fishing and aquaculture, electricity, gas, financial service, real estate, professional services and public administration are low impacted sectors of Bihar (Bihar Economic Survey, 2020-21).

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\*Ramun Prasad (Corresponding Author), *Part-Time Ph.D. Scholar*, Department of Humanities and Social Sciences, National Institute of Technology Patna, *Full Time Lecturer*, Department of Science & Humanities, Government Polytechnic Aurangabad, Bihar, India.

Email: [ramunp.phd20.hs@nitp.ac.in](mailto:ramunp.phd20.hs@nitp.ac.in). Deepak Kumar Behera, *Associate Professor & HOD*, Department of Humanities and Social Sciences, National Institute of Technology Patna, India.

Email: [dkb@nitp.ac.in](mailto:dkb@nitp.ac.in)

Bihar received a large number of reverse migrants during the pandemic. As migrant workers returned, the supply of labour increased and created fierce competition among rural labourers (Sabreen & Behera, 2020; Behera et al. 2021). But skilled labourers started searching for alternatives with the help of Information and Communications Technology (ICT) (Iqbal et al. 2020). Since, due to the lockdown, people were jailed in their own houses. Apart from online activities, nothing was available to do. Therefore, professionals like Doctors, Lawyers, Teachers and consultants have learned new skills and shifted their work from physical to hybrid mode with help of ICT (Prasad & Behera, 2022).

But this pandemic severely affected the unskilled and semi-skilled migrants at the destination place (Khan & Arokkiaraj, 2021). Therefore, after waiting till the first phase of the lockdown, they became desperate to return home and started returning by trucks, buses, and even by feet or bicycles also. In the pre-Covid studies, so many factors have been discussed regarding migration. Most of the migration theories and pieces of literature say that migration is an important constituent of development because it contributes to the stock of human capital, contributes to the development of origin, improved the standard of living, reduces unemployment, helps in the technology diffusion, spur innovation and economic growth, boost the working age population at the place of destination, help to reduce the gap between rich and poor, reduce the disguised unemployment in the agriculture sector (Stark and Bloom 1985; Lucas 2004; OECD 2014)

But very few studies talk about the reverse migration of Bihar. As discussed, before Covid-19, a large number of people had migrated outside Bihar. Out of those migrants, some are seasonal and some are permanent. These migrants are either influenced by their individual characteristics or household characteristics (Parida & Madheswaran, 2011). Migrants used to choose their destination as per their knowledge and skills (Banerjee, 1983; Borodak & Piracha, 2010; Korpi & Clark, 2015; Pradhan et al., 2021). According to NSS, a major share of Bihar migrants were concentrated in developed states like Delhi, Gujarat, Maharashtra, Punjab, Haryana and Western UP before COVID-19.

But an outbreak of coronavirus diseases emerged as job losses, reverse migration, and employment challenges where a large number of people became unemployed. Around 25 lakh migrant workers had returned to Bihar (Bihar Economic Survey, 2020-21). The heavy influx of reverse migrants created challenges for the government to think of a solution. At first, the government made skill mapping of reverse migrants, then decided to give a special incentive package for attracting investments and retaining them.

Since, the unemployment rate, particularly among the educated youths, has increased to unprecedented levels (Mehrotra and Parida, 2020, 2021) which has been accelerated more during the pandemic (Thakur, 2020). It suddenly increased from 5.27 per cent in 2019 to 7.11 per cent in 2020 which was at the highest level since 1991 (ILO); while the unemployment rate of Bihar has increased from 33.74 to 46.6 per cent in April 2020 (CIME). Further, it created an existential threat for the people by making them jobless. The jobless people who had returned to their birthplace were also searching for

employment in the agriculture and allied sector (Singh, 2020). Some of the returnees have started low-paid work at their native place (Behera et al., 2021).

Moreover, in discussing the pervasiveness impact of COVID-related reverse migration, Sarkar and Tigga (2020); Mukhra et al. (2020); Mehrotra & Roy (2020); Choudhari, (2020); Pradhan et al. (2021); Khan and Arokkiaraj (2021); Ramashankar (2021); Posel & Casale (2021) often claim that the pandemic has brutally hampered both the formal and informal sectors, brought job crisis, raised health challenges and increased unemployment. On the other side, Chacko (2007); Mayr & Peri (2008); Zweig et al. (2016); Pradhan et al. (2021) claim that the reverse migrants having good knowledge, skill and experiences, increase the 'brain gain' at the place of origin which can be utilized as catalysts for sustainable development.

From above, it is clear that covid-19 raised the labour supply in the rural economy, created fierce competition among rural workers by lowering their income and deteriorated the standard of living. But, a few studies are related to Bihar. So it is also important to study how these returnees have created challenges for employment in Bihar. It is assumed that ICT, MGNREGA, and the Social network of migrant workers also played a significant role in Bihar to provide livelihood opportunities during the pandemic. So, this paper is dedicated to exploring the impact of Covid-19 on migrant workers, employment status and challenges faced by reverse migrants in Bihar. Furthermore, what role did MGNREGA play in providing employment to returnees would also be discussed?

## **2. Data and Methods**

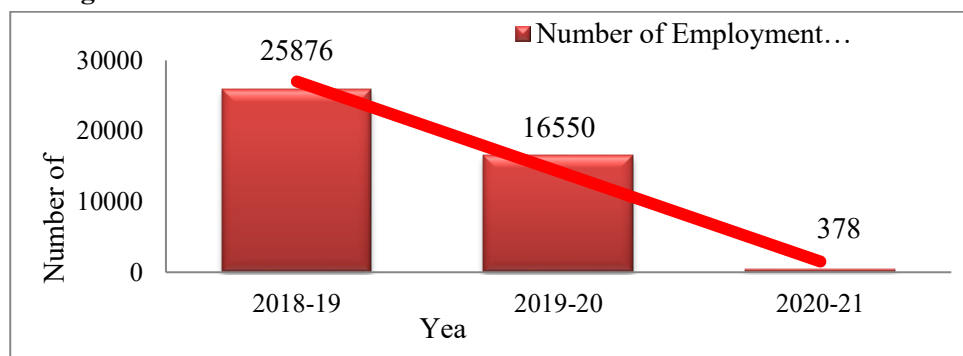
This study is based on secondary data. Periodic Labour Force Survey (PLFS) and National Sample Survey (NSS) data have been used to know the state-wise employment, unemployment and migration status of Bihar migrants during the COVID period. Since, it provides information on various socio-economic indicators which helped us to explore the employment, unemployment and migration status of Bihar migrants during the pandemic. Moreover, Ministry of Rural Development data has also been used to know how many people have registered for jobs under MGNREGA and how many people really got jobs during the COVID period in Bihar.

Furthermore, RBI data has also been used to compare the per capita state domestic product of Bihar with other Indian states. But, the major findings of this paper are based on the Periodic Labour Force Survey (PLFS), Bihar Economic Survey report 2020-21, Migration Survey report 2020-21 and Ministry of Rural Development data. Subsequently, the study has also tried to compare the result with the data obtained from the literature survey. This study has tried to analyses the major findings of COVID period damage, people displaced from their job, losses of a family member and the absolute number of migrants and reverse migrants in Bihar, with the ideas and opinions of several reports, News articles, books, journals, etc. Later, this study tried to see some other reports published by other agencies also.

### 3.Results and Discussion

#### 3.1. Employment and Unemployment status of Migrants and Non-migrants individuals in Bihar during the Pandemic

**Figure 1: Year-wise achievement of employment fairs organized in Bihar during 2018 -2020**



Source: Own Plotted using data of Labour Resource Department, Govt. of Bihar, 2022

Figure 1 is showing the absolute number of employment opportunities which have been created by organizing various employment fairs in Bihar during 2018-2020. But during the pandemic, its trend was declining and the total number of selected persons in different employment fairs declined suddenly after the commencement of COVID in December 2019. This declined and reached 378 in 2020-21 from 25876 in 2018-19. This might be the result of COVID-19 initiated countrywide stringent lockdown which closed most of the economic activities and brutally affected the informal sectors. This pandemic retrenched a large number of people from their jobs and increased unemployment not only in Bihar but all over India also. As demonstrated by the above figure, expresses that more employment opportunities have been affected during 2019-20 and 2020-21. Even per capita state domestic of Bihar has also been declined (See annexure-1) during 2020-21 and 2021-22. The circular migration and multidimensional effect of the pandemic might be seen in every section of the society and economy of the country.

**Table 1: Percentage unemployment rate according to usual status (PS+SS) in Bihar**

| Area         | Gender         | Age group-15 to 29 years | 15 to 59 years | 15 years & above | All ages   |
|--------------|----------------|--------------------------|----------------|------------------|------------|
| Rural        | Male           | 16.3                     | 4.9            | 4.4              | 4.5        |
|              | Female         | 10.0                     | 2.0            | 1.9              | 1.9        |
|              | <b>Persons</b> | <b>15.7</b>              | <b>4.5</b>     | <b>4.1</b>       | <b>4.2</b> |
| Urban        | Male           | 25.1                     | 9.5            | 9.0              | 9.0        |
|              | Female         | 51.7                     | 17.4           | 17.0             | 17.0       |
|              | <b>Persons</b> | <b>27.4</b>              | <b>10.2</b>    | <b>9.6</b>       | <b>9.6</b> |
| Rural +Urban | Male           | 17.3                     | 5.4            | 4.8              | 5.0        |
|              | Female         | 14.4                     | 3.0            | 2.8              | 2.8        |
|              | <b>Persons</b> | <b>17.0</b>              | <b>5.1</b>     | <b>4.6</b>       | <b>4.7</b> |

Sources: PLFS Report, 2020-21

Table 1 gives a glimpse of the unemployment rate according to usual status (PS+SS) in Bihar; where the age group-wise percentage rate of unemployment among males and females of the rural and urban areas has been demonstrated. A higher percentage of the unemployment rate has been found among all youth in the age group of 15 to 29 years in rural as well as urban areas. But among urban females unemployment rate is around four to five times more than that of their rural counterparts.

This is not only limited to the females of age group 15 to 29 but all over the age groups also. This result of less unemployment in rural females might be due to more engagement of rural women in household work and less attainment of educational level. Due to this, they are more engaged in their own economic and non-economic activity at home and have less demand for jobs. So the unemployment rate is low among rural females. On the other hand, females in the urban area, among the same age groups have a higher percentage of the unemployment rate.

This might be due to less engagement of urban females in household work and more attainment of educational level as compared to rural females which instigated them to search for employment outside the home.

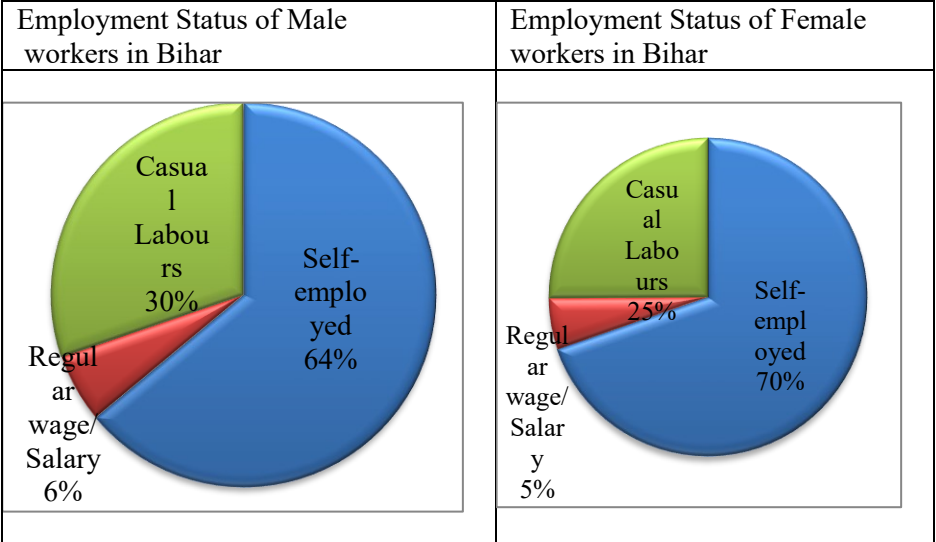
Furthermore, the unemployment rate is higher in males of the same age group in both rural as well as urban areas. This is due to a higher percentage of job seekers among the age group of 15 to 29. As it is clearly articulated in the National Youth Policy (NYP-2014), persons having aged between 15-29 years, come under Youth. Around 27.5 per cent of the total population in India comes under youth which is around 33 crores (Census of India 2011).

Due to this, job seekers are more in this age group and that might be the reason for the higher unemployment rate in the age group of 15-29 years in urban as well as rural areas. As per table -05, 21.8 per cent of people have secondary-level educational qualifications while 49.4 per cent of people have above secondary-level educational qualifications in rural and urban areas of Bihar. But, in the urban area, there is still a higher percentage of unemployment rates as compared to rural. Because a major share of urban people is educated as compared to rural people.

Figure 2 exhibits the percentage distribution of male and female workers by their employment in Bihar. In the below pie chart, it is clearly demonstrated that the majority of male and female workers are self-employed. Around 64 per cent of male workers and 70 per cent of female workers are self-employed in Bihar. Moreover, about 30 per cent of male workers and 25 per cent of female workers work as casual labourers while 6 per cent of male workers and 5 per cent of female workers are regular wage/salaried holders.

But, there is a very less gap in the percentage share of male and female regular wage/salaried holders. This, less gap is the result of 35 per cent horizontal reservation for women in each and every reserved and unreserved category of Bihar. Since, reservation for Scheduled Tribes (STs), Scheduled Castes (SCs), Other Backward Classes (OBCs) and Economically Weaker Sections (EWS) is referred as vertical reservation and 35 per cent horizontal reservation are being provided from the vertical reservation.

**Figure 2: Percentage distribution of male and female workers by their employment in Bihar**



Sources: *Own plotted using PLFS Data, 2020-21*

Even, the Bihar government recently announced a 33 per cent horizontal reservation for women in State engineering and medical colleges also (Priya & Harad 2021). So this significant percentage of females in employment is due to women's reservation and awareness of women to their socio-economic-political rights.

Table 2 shows the percentage employment status of male and female workers in the different sectors of Bihar.

Agriculture, forestry and fishing sectors are the most important sectors which have engaged around 47.9 per cent of male workers and 66.8 per cent of female workers.

Construction is the second most important employment provider sector which provides employment to around 17.7 per cent of male workers.

While wholesale and retail trade; repair of motor vehicles and motorcycles are also equally important which provides jobs to 12.6 per cent of male workers and 4.0 per cent of female workers.

Moreover, the education sector is also important which has employed around 16.7 per cent of female workers. This might be due to horizontal reservation for women in each and every government job and government educational institution of Bihar which provided good employment opportunities for *Bihari* females and made them empowered.

Thus the aforementioned four sectors of Bihar have engaged around 69.3 per cent of total workers. Apart from the above, manufacturing, transportation and storage, education and other service activities also play a significant role to provide employment. These sectors also engaged around 15.1 per cent of total male workers in Bihar. Thus, from this table, it is clearly articulated that a major portion of total workers is being engaged by primary sectors.

**Table 2: Percentage Employment status of male and female Workers by Industry in Bihar**

| <b>Sector</b>                                                                                                             | <b>Male</b>  | <b>Female</b> | <b>Person</b> |
|---------------------------------------------------------------------------------------------------------------------------|--------------|---------------|---------------|
| Agriculture, forestry and fishing                                                                                         | <b>47.9</b>  | <b>66.8</b>   | <b>48.9</b>   |
| Mining and Quarrying                                                                                                      | 0.4          | 0.0           | 0.3           |
| Manufacturing                                                                                                             | <b>5.4</b>   | 3.6           | 5.3           |
| Electricity, gas, steam and air conditioning supply                                                                       | 0.1          | 0.0           | 0.1           |
| Water supply, sewerage, waste management and remediation activities                                                       | 0.2          | 0.0           | 0.2           |
| Construction                                                                                                              | <b>17.7</b>  | 1.6           | 16.8          |
| Wholesale and retail trade; repair of motor vehicles and motorcycles                                                      | <b>12.6</b>  | <b>4.0</b>    | 12.2          |
| Transportation and storage                                                                                                | <b>4.8</b>   | 0.0           | 4.6           |
| Accommodation and food service activities                                                                                 | 1.7          | 0.8           | 1.6           |
| Information and Communication                                                                                             | 0.2          | 0.1           | 0.2           |
| Financial and Insurance activities                                                                                        | 0.6          | 0.4           | 0.6           |
| Real estate activities                                                                                                    | 0.1          | 0.0           | 0.1           |
| Professional, Scientific and Technical activities                                                                         | 0.5          | 0.3           | 0.5           |
| Administrative and Support service activities                                                                             | 1.0          | 0.8           | 1.0           |
| Public administration and defence; Compulsory social security                                                             | 0.6          | 0.9           | 0.6           |
| Education                                                                                                                 | 2.9          | 16.7          | 3.6           |
| Human health and social work activities                                                                                   | 0.7          | 2.2           | 0.8           |
| Arts, entertainment and recreation                                                                                        | 0.2          | 0.0           | 0.2           |
| Other service activities                                                                                                  | 2.0          | 1.5           | 2.0           |
| Activities of households as employers; undifferentiated goods and services producing activities of households for own use | 0.6          | 0.4           | 0.6           |
| Activities of extraterritorial organizations and bodies                                                                   | 0.0          | 0.0           | 0.0           |
| <b>All</b>                                                                                                                | <b>100.0</b> | <b>100.0</b>  | <b>100.0</b>  |

Sources: *Economic Survey, Govt. of Bihar, 2020-21*

**Table 3: Percentage distribution of migrants by reason for migration from PLFS 2020-21**

| <b>Reason for Migration among male migrants</b>                                                                            | <b>Percentage of male migrants</b> | <b>Reason for Migration among female migrants</b>                                                                            | <b>Percentage of female migrants</b> |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| In search of employment or better employment                                                                               | 22.8                               | Marriage                                                                                                                     | 86.8                                 |
| For employment/ work (to take up employment/ to take up better employment/ business/ proximity to place of work/ transfer) | 20.1                               | Migration of parent/earning member of the family                                                                             | 7.3                                  |
| Migration of parent or earning member of the family                                                                        | 17.5                               | Housing problem                                                                                                              | 0.8                                  |
| Loss of job or closure of unit/lack of employment opportunities                                                            | 6.7                                | For employment or work (to take up employment/ to take up better employment/ business/ proximity to place of work/ transfer) | 0.7                                  |

Source: *Migration in India, 2020-21*

In Table 3, reasons for male and female migration have been deliberated. It is clearly demonstrated that the major reasons for male migrants are: in search of employment or better employment and migration with a parent or earning member of the family where around 60.4 per cent of males migrated. While only 6.7 per cent of males reported migrants due to loss of job, closure of the unit and lack of employment opportunities. But in the case of females, major migrants have been reported due to marriage and movement of parents or earning members of the family.

Thus, due to the outbreak of Covid-19 and other related reasons more than half of the migrant workers of Bihar have returned to their native villages but those who belong to scheduled castes (SCs), scheduled tribes (STs) and other backward class (OBCs) households in villages are more severely affected than the others (Venugopal, 2021) because major share in migration and circular migration, come from STs, SCs, and OBCs social group (Mishra, 2020; Datta, 2020).

**Table 4: Percentage distribution of temporary visitors residing temporarily in a place different from UPR by reason for leaving the last usual place of residence from PLFS 2020-21**

| Reason for leaving the last usual place of residence                                       | Rural        |              | Urban        |              |
|--------------------------------------------------------------------------------------------|--------------|--------------|--------------|--------------|
|                                                                                            | Male         | Female       | Male         | Female       |
| Closure of unit/ Loss of job/Lack of employment opportunities                              | 19.5         | 4.0          | 11.4         | 2.7          |
| Migration of parent/earning member of the family                                           | 3.4          | 7.5          | 3.0          | 1.3          |
| To meet with family/relatives/friends                                                      | 38.8         | 59.2         | 53.8         | 60.4         |
| Closure of the educational institution (school/college/ university, etc.)                  | 2.5          | 3.6          | 3.7          | 3.3          |
| Natural disaster (drought, flood, tsunami, etc.)                                           | 2.5          | 0.9          | 1.4          | 0.8          |
| Social / political problems (riots, terrorism, Political refugee, bad law and order, etc.) | 1.1          | 0.4          | 0.6          | 0.9          |
| Displacement by development project                                                        | 0.2          | 0.1          | 0.2          | 0.0          |
| Reasons related health                                                                     | 18.1         | 14.0         | 12.3         | 13.5         |
| Others                                                                                     | 13.9         | 10.4         | 13.6         | 17.2         |
| <b>All</b>                                                                                 | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |

Source: *Migration in India, 2020-21*

In Table 4, the percentage dispersal of temporary visitors living temporarily in a place different from the usual place of residence (UPR) by reason for leaving the last usual place of residence has been demonstrated. In this table, major motives for leaving the last usual place of residence have been exposed as to meet family, relatives, and friends in rural as well as in the urban area among male and female both. The second major reason for leaving the last usual place of residence has been shown to be loss of job, closure of the unit and lack of employment opportunities.

The third important reason has been mentioned health-related issues and others for leaving the last usual place of residence in males and females in rural as well as the urban area. If we compare this result with the previously published NSS data, it could be seen that the current reason for leaving the last usual place of residence has been realized as due to loss of job, closure of the unit, lack of employment opportunities, to meet the family, relatives, friends; closure of the educational institutions and health-related reasons.

These all above-mentioned reasons for temporary migration or leaving the last usual place of residence might be the outcome of COVID-19 initiated countrywide lockdown which affected each and every sector of the economy. This is the reason that 19 per cent of rural males and 11.4 per cent of urban males have reported migration due to loss of

job, closure of the unit, and lack of employment opportunities in rural as well as urban areas during the pandemic.

### 3.2. Educational status

**Table 5: Percentage educational status of people aged 15 years and above in Bihar**

| Level of General Education       | Rural |        |         | Urban |        |         |
|----------------------------------|-------|--------|---------|-------|--------|---------|
|                                  | Male  | Female | Persons | Male  | Female | Persons |
| Not literate                     | 24.2  | 44.8   | 34.2    | 13.6  | 27.2   | 20.1    |
| Literate and Up to primary level | 14.5  | 15.9   | 15.2    | 12.2  | 13.0   | 12.6    |
| Middle                           | 23.8  | 16.4   | 20.2    | 16.3  | 15.3   | 15.8    |
| Secondary                        | 17.3  | 11.2   | 14.4    | 17.3  | 17.6   | 17.4    |
| Higher secondary                 | 12.4  | 8.5    | 10.5    | 17.3  | 13.4   | 15.5    |
| Diploma / Certificate courses    | 0.1   | 0.0    | 0.1     | 0.6   | 0.1    | 0.4     |
| Graduate                         | 7.4   | 3.0    | 5.3     | 18.4  | 11.4   | 15.0    |
| Post Graduate & Above            | 0.2   | 0.2    | 0.2     | 4.3   | 2.0    | 3.2     |
| Total                            | 100   | 100    | 100     | 100   | 100    | 100     |

Sources: *PLFS Report, 2020-21*

In the Table, 5 percentage status of educational attainment among people aged 15 years and above has been described. Around 20.1 per cent of people are not literate in the rural and urban areas of Bihar; while 12.6 per cent of people are literate up to the primary level only. Furthermore, 15.8 per cent of people have attained their education up to middle level and 17.4 per cent of people up to secondary. Thus, around 20.1 per cent of people are illiterate while 45.8 per cent of people are literate but below the higher secondary level in rural as well as urban areas.

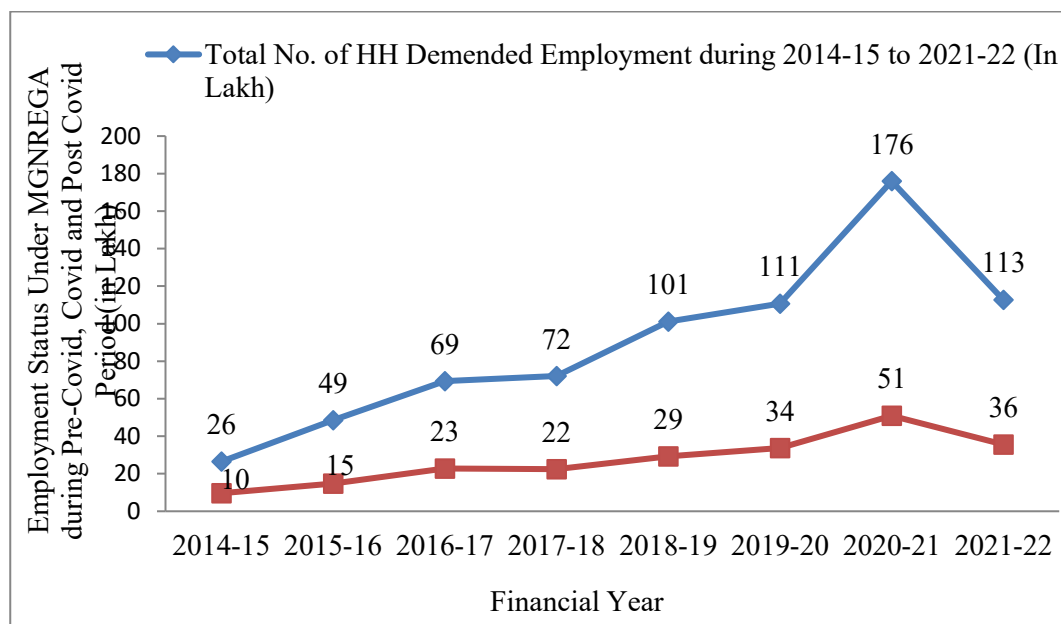
This is the reason; a major portion of migrant labour chooses those places like Delhi, Punjab, Haryana and Western UP where more works are available for unskilled or semi-skilled workers. After the commencement of the pandemic, a large number of unskilled and semi-skilled workers have returned to Bihar. But at the time of returning, the social network of migrants' labour played a significant role to accommodate and make their adjustment.

In this regard, Information Communication and Technology (ICT) supported much in interaction with colleagues and others in digital mode for employments etc. The subsequent extension of the lockdown period kept almost all economic activities closed

which kept a large number of employees unemployed and ICT was the only medium to do any work. But, from the above table, it could be inferred that most people have neither skills nor are in a position to do any work in digital mode with the help of ICT.

### 3.3.Demand and supply status of employment under MGNREGA during a pandemic

Figure 3: Number of Employment Demanded and Provided under MGNREGA during 2014-2022



Source: Plotted using Ministry of Rural Development Data

Figure 03 shows the year wise number of employment demanded and provided under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) during 2014-2022 where its' trend is increasing but after 2019-20, a sudden increment in demand for employment under MGNREGA emerged which remain consistent up to 2020-21 and surged up to 176 lakh in 2020-21 from 111 lakh of 2019-20 and after that, it started declining.

These sudden changes clearly articulate the impact of the first and second waves of COVID-19 which impacted on the employment of migrants and non-migrant households and made them jobless. This might be the reason for the sudden increase in demand for the job under MGNREGA.

Further, at the same time, the government has also released ₹41,187.06 crore extra on dated 20.07.2021 to generate more employment under MGNREGA and accommodate the reverse migrants in the countryside. Some well-educated people have also worked as

plantation labourers under MGNREGA during the pandemic (Parth & Roy, 2020). Thus, a total of ₹111170.86 crores have been released under MGNREGA for the county to deal with a pandemic-pushed job loss of unskilled and semi-skilled labours. And around 51 lakh people have been provided employment under MGNREGA during 2020-21 in Bihar which was much higher than preceding years.

### **3.4. Per capita state domestic product of Bihar in comparison to other Indian states**

Per Capita State Domestic Product (SDP in \$) of Bihar is the lowest among the twenty-eight states of India. It is also at the lowest position among BIMARU states. The term 'BIMARU' was coined by Ashish Bose in 1980 to indicate the four poorest Indian states viz. Bihar, Uttar Pradesh, Madhya Pradesh and Rajasthan.

Even the per Capita SDP of Bihar is also the lowest in comparison to its neighbouring states like Sikkim, West Bengal, Jharkhand, Chhattisgarh, Madhya Pradesh and Uttar Pradesh (See Annexure-1). This might also be one of the main push and pull factors which instigate people to migrate towards developed states and union territories like Punjab, Haryana, Maharashtra, Tamil Nadu, Gujarat, Delhi, Chandigarh, Andaman and Nicobar etc. where per capita state domestic product is three to five times more than that of Bihar. As far as the Covid-19 period is concerned, no state in India has remained untouched by its impact. If we look at the columns of 2019-20 and 2020-21, it seems that there has been a decline in the Per Capita SDP of every state of India (See Annexure-1).

The low level of production per capita in a state is related with its low level of Education. Guisan, Aguayo and Exposito (2001) published one of the pioneer international studies in this regard, showing the effects of Education on the moderation of high Fertility rates and on the increase of industrial and total production per capita, and Guisan (2021) published a study on the role of Education and other social factors on the development of 164 countries for the period 1995-2019.

In the case of India, the indicators of Education (literacy % of population, average years of schooling or education expenditure per capita) show difference among the states, as seen in OECD (2019) and RBI (2023), being Bihar the state with the lowest level of literacy. The Handbook of statistics of Indian states, also show that Bihar is one of the states with the highest Fertility rates, over the Indian average. This indicator evolved, for the period 2003-2002, from 4.2 to 3.1 in Bihar and from 3 to 2.1 in year 2023.

In the Annexure we may notice important differences in production per capita in the Indian states, with the lowest in Bihar with 598 and the highest value in Goa, with 6473. Figures are expressed in US constant Dollars (USD) at 2011 prices and exchange rates.

### **3.5. Impact of COVID-19 on the Economy of Bihar**

The COVID-19-propelled lockdown has affected the Bihar economy by reducing production levels in the different sectors of the economy. This reduction in production also retrenched a large number of employees in different sectors from their jobs and created challenges for livelihood.

Lockdown also impacted fishing and aquaculture, trade and repair services, water transport, financial service etc. Moreover, it has had more impact on mining and quarrying, manufacturing, construction, restaurants and hotels, railways, and road and

air transport which affected the livelihood of the people in Bihar (Bihar Economy Survey 2020-21). But in Bihar, after mild relaxation from COVID-19, construction workers like masons and labour started to work in the area of construction but after some time, sand mining was banned by the Bihar government in the Sone and the Ganga rivers of Rohtas, Aurangabad, Bhojpur, and Patna districts of Bihar which affected a large number of construction workers and created challenges for them (Khan, 2022).

Thus, the banned of sand mining also affected the construction workers made them more vulnerable. Furthermore, due to the succeeding extension of the lockdown period, some of the agricultural labours have not returned to their home, at the time of harvesting of Rabi crops which badly affected the agriculture sector also. Thus, this COVID-19 has negatively impacted on poverty, education, health and self-employment while positively impacted on digitalization, automation and the environment.

#### 4. Conclusions

Bihar is one of the poorest and backward states of India where poverty increased from 33.7 per cent to 46.6 per cent during the pandemic. The outbreak of Covid-19 made migrants labour jobless and forced them to return towards their place of origin. Around 25 lakh people had returned to Bihar. But MGNREGA has played a significant role by providing employment to 51 lakh households during 2020-21. Even, ICTs and social networking of migrants have also played an important role to provide jobs to the reverse migrants.

Further, horizontal reservation for women in Bihar significantly affected women's participation in employment and empowered them. Yet, the highest percentage of unemployment has been found among youths aged between 15 to 29 years. This study suggests that the government must focus more on skill development to prepare skilled manpower so that the impact of such unprecedented calamity could be minimized in future.

To diminish poverty and increase economic development and quality of life, in Indian states, particularly in those with the lowest levels of real income per capita, it is very important to foster Education and Industrial Production, given the positive effects that these variables usually have on the development of real income per capita in all sectors.

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**Annexure:** Per Capita State Domestic Product in 32 Indian States.

## Annexure

Table A1. Per Capita State Domestic Product (SDP in constant \$) of Thirty Two Indian States/UTs from 2011-12 to 2021-22

| Year<br>State/Union Territory                                                                             |                           | 2011-12    | 2012-13    | 2013-14    | 2014-15    | 2015-16    | 2016-17    | 2017-18    | 2018-19    | 2019-20    | 2020-21    | 2021-22    |
|-----------------------------------------------------------------------------------------------------------|---------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| State / UTs wise Per Capita State Domestic Product (SDP) of twenty eight Indian states in the Dollar (\$) | Andaman & Nicobar Islands | 1859       | 1933       | 2060       | 2227       | 2393       | 2703       | 3038       | 3219       | 3372       | 3068       | 3404       |
|                                                                                                           | Andhra Pradesh            | 1440       | 1437       | 1508       | 1652       | 1849       | 1964       | 2153       | 2272       | 2308       | 2210       | 2451       |
|                                                                                                           | Arunachal Pradesh         | 1535       | 1543       | 1649       | 1900       | 1852       | 1905       | 1962       | 2078       | 2360       | 2212       | 2333       |
|                                                                                                           | Assam                     | 859        | 868        | 897        | 935        | 1057       | 1118       | 1207       | 1251       | 1284       | 1279       | 1372       |
|                                                                                                           | <b>Bihar</b>              | <b>454</b> | <b>463</b> | <b>475</b> | <b>485</b> | <b>502</b> | <b>531</b> | <b>558</b> | <b>607</b> | <b>622</b> | <b>560</b> | <b>598</b> |
|                                                                                                           | Chandigarh                | 3317       | 3534       | 3769       | 3816       | 4074       | 4345       | 4553       | 4742       | 4994       | 4369       | 4586       |
|                                                                                                           | Chhattisgarh              | 1151       | 1185       | 1281       | 1276       | 1282       | 1401       | 1427       | 1574       | 1602       | 1529       | 1636       |
|                                                                                                           | Delhi                     | 3861       | 4011       | 4188       | 4459       | 4865       | 5097       | 5279       | 5376       | 5437       | 4895       | 5259       |
|                                                                                                           | Goa                       | 5414       | 4591       | 3931       | 5031       | 5814       | 6383       | 6434       | 6443       | 6552       | 6230       | 6473       |
|                                                                                                           | Gujarat                   | 1826       | 2018       | 2141       | 2324       | 2518       | 2707       | 2997       | 3232       | 3424       | 3261       | 3556       |
|                                                                                                           | Haryana                   | 2214       | 2333       | 2500       | 2609       | 2876       | 3136       | 3260       | 3539       | 3560       | 3250       | 3603       |
|                                                                                                           | Himachal Pradesh          | 1831       | 1934       | 2062       | 2196       | 2352       | 2550       | 2698       | 2844       | 2941       | 2799       | 2997       |
|                                                                                                           | Jharkhand                 | 861        | 922        | 914        | 1018       | 929        | 1019       | 1091       | 1171       | 1161       | 1074       | 1180       |
|                                                                                                           | Karnataka                 | 1884       | 1969       | 2126       | 2206       | 2438       | 2738       | 2937       | 3110       | 3257       | 3110       | 3432       |
|                                                                                                           | Kerala                    | 2043       | 2161       | 2251       | 2346       | 2512       | 2697       | 2863       | 3075       | 3087       | 2766       | 3105       |
|                                                                                                           | Madhya Pradesh            | 803        | 859        | 888        | 919        | 988        | 1101       | 1144       | 1231       | 1262       | 1175       | 1284       |
|                                                                                                           | Maharashtra               | 2078       | 2170       | 2287       | 2401       | 2564       | 2790       | 2876       | 2938       | 2968       | 2670       | 2890       |
|                                                                                                           | Manipur                   | 830        | 813        | 865        | 920        | 968        | 984        | 1069       | 1004       | 1028       | 928        | 1035       |
|                                                                                                           | Meghalaya                 | 1252       | 1246       | 1225       | 1166       | 1169       | 1205       | 1221       | 1255       | 1289       | 1263       | 1321       |
|                                                                                                           | Mizoram                   | 1203       | 1258       | 1411       | 1775       | 1917       | 2068       | 2447       | 2484       | 2728       | 2425       | 2708       |
|                                                                                                           | Nagaland                  | 1106       | 1158       | 1223       | 1260       | 1266       | 1341       | 1394       | 1465       | 1531       | 1425       | 1461       |
|                                                                                                           | Odisha                    | 1010       | 1059       | 1131       | 1134       | 1206       | 1386       | 1482       | 1574       | 1596       | 1531       | 1694       |
|                                                                                                           | Puducherry                | 2497       | 2487       | 2695       | 2444       | 2525       | 2640       | 2816       | 3244       | 3196       | 2829       | 3240       |
|                                                                                                           | Punjab                    | 1786       | 1855       | 1946       | 1999       | 2090       | 2209       | 2313       | 2412       | 2473       | 2359       | 2467       |
|                                                                                                           | Rajasthan                 | 1193       | 1220       | 1274       | 1346       | 1431       | 1488       | 1534       | 1544       | 1599       | 1526       | 1681       |
|                                                                                                           | Sikkim                    | 3311       | 3350       | 3525       | 3770       | 4071       | 4327       | 4851       | 5024       | 5190       | 4950       | 5145       |
|                                                                                                           | Tamil Nadu                | 1943       | 2030       | 2133       | 2235       | 2418       | 2571       | 2776       | 2960       | 3023       | 2994       | 3225       |
|                                                                                                           | Telangana                 | 1902       | 1935       | 2004       | 2117       | 2343       | 2536       | 2744       | 3063       | 3199       | 2936       | 3301       |
|                                                                                                           | Tripura                   | 984        | 1054       | 1140       | 1335       | 1286       | 1458       | 1566       | 1718       | 1753       | 1651       | 1778       |
|                                                                                                           | Uttar Pradesh             | 668        | 687        | 710        | 722        | 772        | 852        | 872        | 883        | 899        | 829        | 906        |
|                                                                                                           | Uttarakhand               | 2093       | 2220       | 2356       | 2483       | 2655       | 2896       | 3089       | 3134       | 3147       | 2880       | 3110       |
|                                                                                                           | West Bengal               | 1076       | 1109       | 1123       | 1138       | 1195       | 1265       | 1336       | 1423       | 1452       | 1326       | 1458       |

Sources: RBI, Base Year: At Constant Price of 2011-12. **Note:** To convert from the rupees (₹) to the dollar (\$), the per capita income of each year has been divided by an exchange rate of the rupee with the dollar (Purchasing Power Parity) in 2011-12 (i.e. 47.92).