PUSH-PULL FACTORS AND SOCIO-ECONOMIC CONDITION OF REVERSE MIGRANTS DURING 1ST WAVE OF COVID-19: A GRASS ROOT SURVEY IN GARHWAL HIMALAYA

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Abstract: Reverse migration of people across the country through all means of transport became a glaring event during the first wave of Covid-19 as soon as the central government announced the national lockdown. This research paper explores the impact of "push" and "pull" factors of reverse migration in Jaiharikhal block of Pauri district and its correlation with the socio-economic status of the reverse migrants during the first wave of Covid-19. It also examines the relationship between inter and intraclass income of reverse migrants in pre and during Covid-19 pandemic at the micro-regions of the study area. There are a total four sample sites being among which a total of 112 samples of reverse migrants were taken for study. Both primary and secondary data are being used in the study. Descriptive statistics, as well as Pearson correlation methods, are also used to examine the drivers of push and pull factors of reverse migration before and during the 1st wave of Covid-19. The study found that the income category 10,000-15,000 before Covid-19 has moved to below 10,000 and no income category with a Pearson's r-value 0.914 and 0.901 respectively, showing a very high positive correlation.

Keywords: reverse migration; socio-economic status; push-pull factors; income; unemployment

1 INTRODUCTION

The movement of individuals from one location to another is known as migration and is commonly accompanied by a change in a permanent place of residence. Migration or Displacement is a worldwide problem influenced by economic, social, political, cultural, environmental, health, education, and transportation. It frequently

occurs due to the push elements of fewer options in the socio-economic position and the pull elements present in more developed locations (Thet, 2014). Migration is motivated by interregional and intraregional inequities at the macro-level and a general lack of employment possibilities resulting in low living standards across various socio-economic groups at the micro-level (Simpson, 2017).

The push factors are variables that persuade people to move from one location and go to another for various reasons. Low productivity, unemployment and underdevelopment, poor economic conditions, a lack of opportunity for progress, the depletion of natural resources, and natural disasters are all typical push factors. The Pull Factors are factors that attract the migrants to an area. Pull factors are the opportunities for better employment, higher wages, facilities, better working conditions, and attractive amenities. Push factors relating to life events can be one reason for dissatisfaction with one's present location, while pull factors are those characteristics of faraway places that make them look enticing (Dorigo and Tobler, 1993).

According to the majority of studies, economic factors are the primary motivators for migration (Haas, 2011). With the highest percentage of variance, the first and most crucial element that causes people to migrate to cities is a better standard of living. Low agricultural income, agricultural unemployment, and underemployment are significant causes driving migration to more affluent areas with better career prospects in emerging countries (Sridhar et al., 2013; Teddy, 2019). Reverse migration is a concept where the migrants have left their native places and then return after some time (Mohapatra and Jha, 2019; Stark, 2019). During the Covid 19 Pandemic, when India was put under lockdown from March 24, 2020, it is believed that approximately 12 million migrants returned to their regions of origin, that too in its early stage (Chisti, 2020, June 8), the number must have increased in later stages. The states with maximum reverse migrants were Uttar Pradesh, Bihar, Rajasthan, Madhya Pradesh, Odisha, Jharkhand, West Bengal, and the hill state of Uttarakhand. During the pandemic, the number of reverse migrants in Uttarakhand was estimated to be over 2.15 lakh (Awasthi and Mehta, 2020; de Haan, 2020), out of which 1 lakh was from Pauri district only; this includes both urban and rural as per the data collected from DPRO at Vikas Bhawan situated in Pauri Garhwal district headquarter. As per migration census 2011, about 455 million people have been reported as migrants by place of birth. Out of them, about 395 million migrated within the state of enumeration. At the same time, 54 million from one part of the state to another, i.e., other states in India beyond the state of enumeration. According to the Rural Development Migration Commission Uttarakhand, Pauri Garhwal Report 2018-2019, around 383,726 people have migrated on a semi-permanent basis, and 118,981 people have relocated permanently outside their place of enumeration, resulting in 502,707 persons in total in Uttarakhand. The report also highlights the reason for migration from Uttarakhand to other states and from Pauri District and Jaiharikhal Block separately. Among the causes of migration (Figure 1) about 50.16% of migrants from Uttarakhand, 52.28% Pauri District, and 43.43% specifically from Jaiharikhal CD Block migrated due to employment, the primary cause of migration in Jaiharikhal CD block. Whereas, Education and Medical Facilities remain one of

the major causes of migration in Jaiharikhal CD Block and Uttarakhand state as a whole (Rural Development and Migration Commission, 2018, 2019).
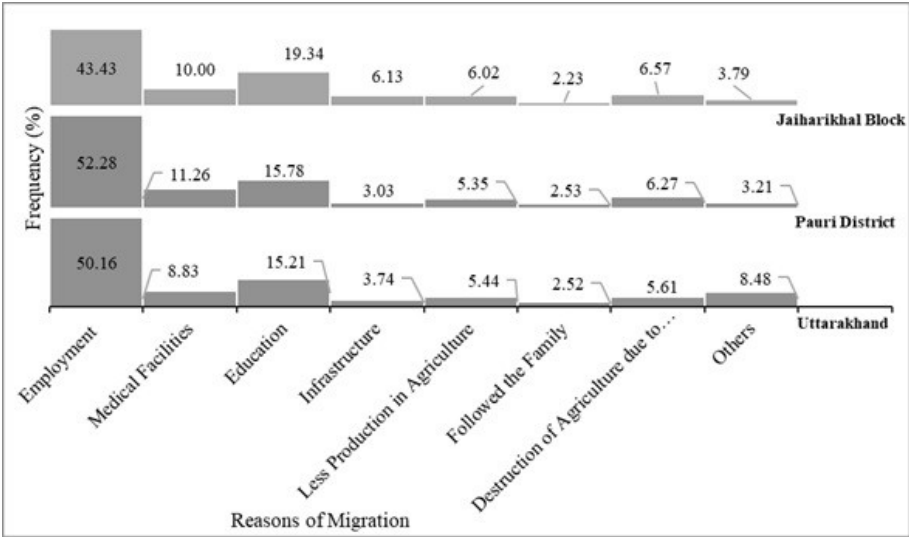

Figure 1 Reasons of Migration in Himalayan Region by State, District and CD Block.
Note: Rural Development and Migration Commission, 2018; 2019

The Population Census of 2011 shows modest population growth in the State's hill districts, with Almora and Pauri Garhwal seeing in population growth from 2001 to 2011, indicating widespread migration (Awasthi, 2010; Mamgain and Reddy, 2015). The two possible reasons for migration in the State have been mentioned as a lack of economic possibilities and increased demand on the local economy (Arya and Arya, 2020; Awasthi, 2010; Awasthi and Mehta, 2020). According to the *Rural Development & Migration Commission Report 2021*, in Uttarakhand total of 357,536 reverse migrants came to their native villages from other parts of the country till September 2020. Among this, 104,849 (29%) migrated again till Sept. 2020 (Figure 2). In the Pauri district total of 95,079 reverse migrants came to their native villages, and 15,101 relocated again till Sept. 2020. As far as Jaiharikhal CD Block's data is concerned, 4,833 reverse migrants returned, and 354 migrated again until Sept. 2020 (Rural Development and Migration Commission, 2021).

2 LITERATURE REVIEW

Historically, migration has occurred mainly due to disparities in regional development due to which people frequently migrate from rural areas to developed areas for finding better employment and life prospects (Awasthi and Mehta, 2020). The

foremost reason behind migration is an economic condition (Lee, 1966). The same reverse migration. People who have migrated cannot support their families, especially under situations like lockdown; they have to come back to their native place for survival. Demographers, economists, and evolutionary anthropologists have clearly illustrated the spectrum of push and pull factors and migratory dynamics that may influence the decision to migrate from rural areas (Harris and Todaro, 1970; Lee, 1966).
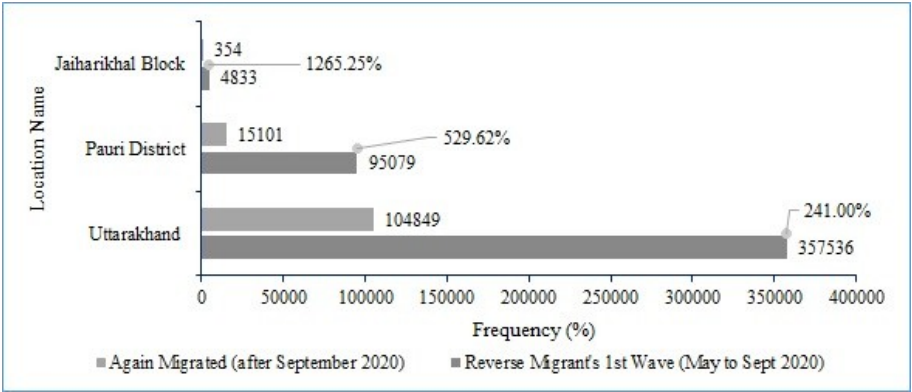

Figure 2 Reverse Migrants during 1st wave of Covid-19 at State, District and CD Block. Note: Rural Development and Migration Commission Report-15, 2021

Uttarakhand has three types of migration: seasonal, rural-to-urban, and international. It has also been suggested that the most popular reason for people leaving. Uttarakhand was to seek employment in the private sector, specifically in hotels and restaurants (Hoffmann et al., 2019). Backward economies with distinct geographical characteristics (e.g., hill/mountain regions) have demonstrated striking migration patterns to plains or low altitude areas, primarily due to differences in opportunities or facilities between the two unique locales and more so as a survival strategy. Even though many such underdeveloped places have significant resource advantages in terms of speciality products, the resources cannot be utilized extensively because their geographical features maintain the region at a disadvantage (Awasthi and Mehta, 2020).

Most areas in the Himalayan state of Uttarakhand had experienced ongoing large-scale migration due to a lack of resources and employment. However, in the last few months, these towns have witnessed a complete 180-degree turn. Reverse Migration is on the rise, and abandoned settlements are reviving (Singh, 2020). Cities will likely play an essential role in human mobility in the upcoming years, given expected increases in urbanization and migration.

Mountain people rely on subsistence agriculture, animal husbandry, and income creation via small-scale commercial activities and wages for a living (ICIMOD,

2017). The reliance on low – income economy and a lack of suitable local work prospects compel many adult males to travel from mountainous areas to several other regions in quest of a livelyhood (Maithani,1996). Previously, the principal reason for long-term male migration was working for a living, with strong ties to their native places, commonly referred to as the "money order economy" (Bora,1996).

The state and central governments attempted to increase the support to most impoverished in the poverty-stricken economy through various social welfare schemes such as MGNREGA, Mukhyamantri Swarojgar Yojana (MSY), National food security Act, and many more. However, the government's efficient implementation of such plans is a real problem (Institute of Economic Growth, 2020). In such a pandemic situation, there is a need to comprehend the various interconnected migration challenges while developing policies and measures to prevent such distressing forms of movement in the future (Awasthi and Mehta, 2020).

With progress taking root in the hill regions, the long-term movement has turned into everlasting out-migration in many settlements in these areas resulting to ghost villages. Migration, not only for the job and improved academic possibilities, has resulted in loss or no connection to the homelands (Awasthi and Mehta, 2020). Previously, the flow of migration was limited to males with solid ties to their area of origin. However, the pattern of out-flow has altered with time, and migration with family members has occurred, which has understandable repercussions for the place of origin and produces ghost hamlets (Rural Development and Migration Commission (RDMC) Uttarakhand, 2019).

3 OBJECTIVES

In the proposed study, we have made an effort to recognize whether it is a push (out of the job loss, corona fear or financial fear in Urban areas) or pull (toward the Rural area due to low Covid-19 cases, Food availability, and moral family support), which explains the phenomenon of reverse migration. Our first objective here is to examine the push and pull factors in Reverse migration. The second objective is to analyze the relationship of push-pull factors among reverse migrants and their socio-economic conditions during 1st wave of Covid-19. The third objective is to determine the deformation relationship at village level income in pre and during Covid-19 pandemic at Jaiharikhal Block.

4 MATERIALS AND METHODS

Study Area

Jaiharikhal is a community development (CD) block in Pauri Garhwal District of Uttarakhand State, India. Jaiharikhal can undoubtedly be rated as one of the most coveted destinations in Uttarakhand (One Five Nine, 2021). It is located in the middle Himalayan region and has a sub-temperate to a temperate climate and is surrounded by deodar forest, making it pleasant throughout the year. It is situated

40 km away from Kotdwara, also known as the "*Gateway of Garhwal*", and 5 km from the hill station and Garrison town of Lansdowne. Jaiharikhal is a very charming and scenic place for a quiet holiday as it is devoid of the usual hustles and bustle of hill stations (The Government of Uttarakhand for the Asian Development Bank, 2017; Ullaar, 2021). The total geographical area of the Jaiharikhal block is 181.9637 km^2 (Census, 2011). Its geographical coordinates extend between 29° 38' 46.81" north to 29° 54' 34.42" north latitude and 78° 37' 5.91" east to 78° 52' 11.76" east longitude (Figure 3). The altitude of Jaiharikhal CD block is 1584 meters (Census, 2011; The Government of Uttarakhand for the Asian Development Bank, 2017). In Jaiharikhal, the average high-temperature drops, from a scorching 40.3 °C in June, to a hot 34.8 °C (Ullaar, 2021; weather-atlas.com, 2021). Whereas, the average low temperature is 26.3 °C. The average relative humidity in Jaiharikhal CD block is 65.0%. In Jaiharikhal, during July, the rain falls for 26.5 days and regularly aggregates up to 138 mm of precipitation.
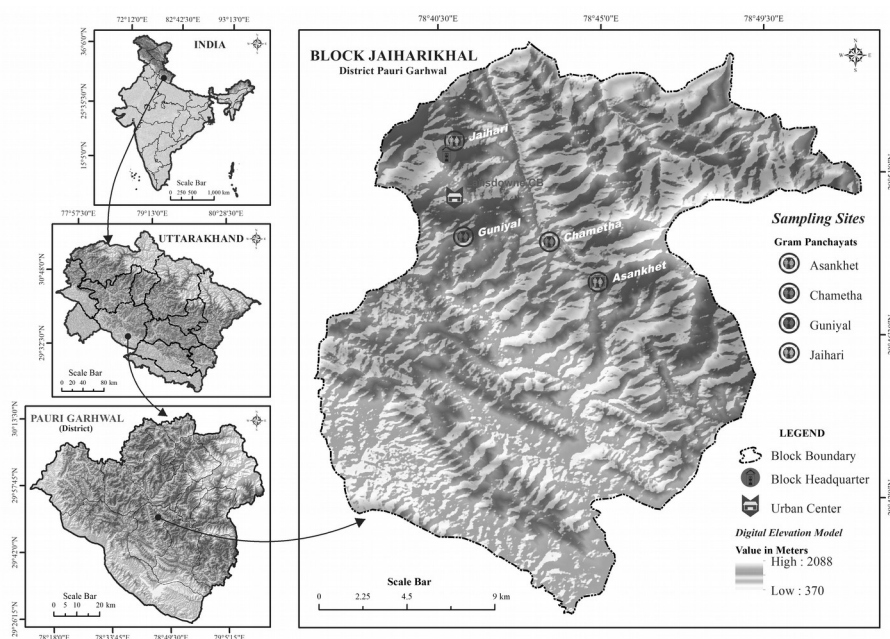

Figure 3 Location Map of the study area and Sample Sites of Jaiharikhal CD Block.
Note: Survey of India, 2016; USGS DEM and Google Maps, 2021

In Jaiharikhal, during the entire year, the rain falls for 113.3 days and collects up to 477 mm of precipitation (Ullaar, 2021; weather-atlas.com, 2021). It is bordered by the community development blocks Ekeshwar and Pokhra in North, Rikhnikhal in East, Dugadda in south-west and Dwarikhal in north-west. The

Jaiharikhal CD block is administratively divided into 09 Nyaay Panchayats and 73 Panchayats (District Pauri Garhwal, 2021).

As per the Census, 2011, the human population of Jaiharikhal CD block is 26,493 among which 4,944 is Scheduled caste. The total cultivation area is 27.33% of the total geographical area. Within the total cultivation area, only 8.23% of area is under irrigation (Census,2011). The sex ratio of that area is 1,147 females for every thousand males (Census, 2011). As far as the literacy rate of Jaiharikhal CD block is concerned 80.68% (Census, 2011) of the people are literate. There is a total of 4,833 reverse migrants in Jaiharikhal CD Block which accounts for 5.10% of total reverse migrants in Pauri Garhwal District who came to their native villages during nation-wide Covid-19 lockdown (DPRO, 2011). According to the Census 2011, total number and percentage of main workers are 4,515 Persons, 17.04% whereas, marginal workers are 5,540 in-person, 20.91% (Census, 2011). At the same time, a total of 7,899 households are registered with the MNREGA Schemes among which 8,823 are male and 9,870 are females (Ministry of Rural Development, 2021).

Data

The study is cross-sectional in nature which was designed for the Jaiharikhal block. It employs both qualitative and quantitative approaches. Quantitative data focuses on facts and qualitative data allows for the exploration of perception. Both the qualitative and quantitative approach compliments each other and offers a different perspective. At the same time, it enables a thoughtful exploration of the various socio-economic dimensions of reverse migrants (IIPS and ORC Macro, 2000; Roy and Bhagat et.al., 2021).

The entire study is based on secondary and primary data. Secondary data information is being used to explore the answer to the research problem of the study. The secondary data are collected mainly from District Panchayati Raj Office, Pauri Garhwal, Rural Development and Migration Commission, Uttarakhand, Pauri Garhwal; Primary Health Centre (PHC), Jaiharikhal Block etc.

Sample Strata and Method

Primary data are collected from returned migrants to Jaiharikhal Block. To ensure coverage and representation of returned migrants during Covid-19 in a whole region, a Uni-Stage Stratified Random Sampling Technique are being used (IIPS and ORC Macro, 2000; Roy and Bhagat et al., 2021). The entire study is conducted through a primary survey of reverse migrants in Jaiharikhal community development block during 1st wave of Covid-19. Total 4388 reverse migrants arrived in Jaiharikhal Community Development block till September 2020, which represents 5.65% of reverse migrants out of total reverse migrants arrived in Pauri Garhwal District (DPRO,GoUK 2021).

Hence in this study, primary data are combined to provide rigorous quantitative results supported by the qualitative findings from reverse migrants' respondents. Without primary data, it is not possible to authenticate experiences of the reverse migrants and throw light on the push-pull factors.

A primary survey of reverse migrants is conducted in Jaiharikhal community development block. Data has been collected from four selected primary sample sites (census village) to understand the impacts of Push-Pull factors and socio-economic condition of reverse migration.

The sample size for the primary survey is given by:

$$N = \frac{Q}{\rho} \times \frac{1}{e^2}$$
<div align="right">1 (Sridhar et al., 2013)</div>

The proportion of reverse migrants in the Jaiharikhal community development (CD) block is 5.65% (P=5.65) which is being used to find out the Universal Sample Size (USS) directly. If P is given proportion, Q=1-P (here, 1-5.65=94.35) gives the proportion of non-reverse migrants in Jaiharikhal CD block. With P=5.65, Q=94.35, error (e) = 0.024. The sample size turns out to be 111 reverse migrants (Sridhar et al., 2013). Based on the equal Proportion of Sample Size (PSS), we sampled 112 reverse migrants from four sample sites (Figure 3) during 1st wave of Covid-19. We have sampled 36 reverse migrants from lower strata and 76 reverse migrants from higher strata. A total 112 of reverse migrants come under the interview list of the study (Behera et al., 2021; Roy and Bhagat et al., 2021).

Selection of Sample Census Village

The list of census villages of Jaiharikhal CD Block is being arranged in descending order of their reverse migrants population. Among these, two strata of villages are being classified in terms of their percentage of reverse migrants in particular census villages with respect to the total number of reverse migrants in Jaiharikhal block. First strata is being classified as "Higher Strata" in which the list of census villages whose reverse migrants frequency ranges from 2.5 % (120 reverse migrants) to highest 4.1% (192 reverse migrants) of total reverse migrants in Jaiharikhal CD Block. Whereas, Second strata is being classified as "Lower Strata" in which the list of census villages whose reverse migrants frequency fall from 2.4% (115 reverse migrants) to 1.0 % (48 reverse migrants) out of total reverse migrants in Jaiharikhal CD Block. The list of villages whose reverse migrants frequency is below 0.9% is out of Universal Sample Size (USS). Overall, Higher Strata consists of 24.8% (1199) reverse migrants and Lower Strata consists of 50.42% (2437) of reverse migrants out of total reverse migrants in Jaiharikhal CD Block. Census villages from each stratum were selected randomly using the Probability Proportional Size (PPS) method to ensure an equal chance of probability of each census village and also to ensure an equal spread of reverse population across the selected strata in Jaiharikhal CD block. Using this technique two villages from each stratum is being selected as sampling census village. Thus, Higher Strata consists of 5.17% (276) of reverse migrants and Lower Strata consists of 2.73% (132) of reverse migrants out of total reverse migrants of Jaiharikhal CD Block which is also a Primary Sampling Unit (PSUs) of the universal population. A total of four (*Jaihari, Chametha, Asankhet, and Guniyal*) census villages/PSUs were selected for data collection (Roy & Bhagat

et al., 2021). One census village from each stratum is being selected for having highest random number and another two from each stratum is being selected for having lowest random number (Table 1).

Table 1 Primary Sample Sites of the Study by Universe Strata, Random Number

Strata		Census Village		Households	Population	Reverse Migrants (Sep.2020)		Random Number
Range		*Code*	*Name*	*2011 Census*		*Total*	*Share*	
Higher Above 2.5%		47396	Jaiheri	398	1666	147	3.1	0.798808987
		47440	Asankhet	34	136	129	2.7	0.132812859
Strata Total				*432*	*1802*	*276*		
Lower 2.4 -1.0 %		47422	Chametha	40	109	80	1.7	0.252726266
		47468	Guniyal	42	142	52	1.1	0.139312962
Strata Total				*82*	*251*	*132*		

Source: Authors analysis based on Census, 2011 and DPRO, 2021 Data

We have used a structured close handed questionnaire based on research (Ciarniene and Kumpikaite, 2011; Mihi-Ramirez and Kumpikaite, 2014) about Socio-economic and demographic variables, reasons for push and pull factors in pre and during 1st wave of Covid-19. Before Covid-19 push factors were unemployment, poor agriculture produces destruction of agriculture by wild animals, and pull factors were infrastructure, medical facility, and education. However, a shift can be seen in the data and push and pull factors for reverse migrants during Covid-19 were loss of job, financial insecurity, shortage of food, and anxiety due to loneliness.

For this, a field survey was conducted in the study area in April 2021. Eleven different socio-economic parameters of reverse migrants such as age distribution, Gender, Marital Status, Education, Employment sector, Household size, Migrated type, Housing unit at City, Landholding size, types of ration cardholders, and their Income per month were taken into consideration for Migration before Covid-19 and Reverse migration during Covid-19.

Statistical Analysis

Descriptive statistics such as percentage, frequency, average, range minimum and maximum value was used to summarize the result of the study. We have used Venn diagram, Pie chart, bar graph correlation graph and heat map for a graphical representation. The answers to the close handed structured questionnaire's interview were digitalized into an Excel spreadsheet. The relationship between push-pull factors and socio-economic condition of the reverse migrants before and during the 1st wave of Covid-19 were analyzed by using Pearson's correlation coefficient (Hassan et al., 2020; Hoffmann et al., 2019; Sridhar et al., 2013).

5   RESULT AND DISCUSSION

Survey

Reasons for migration in Pre-Covid-19: Among the 112 reverse migrants interviewed in this study, urban-rural reverse migration took place with unprecedented circumstances of Covid-19 pandemic. However, the rural-urban migration took place over an extended period since the independence of India or even before. Out of the data collected recently from the Jaiharikhal block, it is observed that on average 9.38% of people migrated from Jaiharikhal block to other places because employment appears to be the most critical factor of migration. Whereas, reasons for migration such as "Education" and "Followed the family that migrated" appear to be 4.02% and 3.13%, respectively. At the same time, poor agriculture produce and destruction of the agriculture produce by wild animals also seem to be prominent factors of migration as the average value marked to be 2.01% and 2.90% respectively. Site-by-site data shows that 16.96% of people on an average from Jaihari CD block migrated to other places because of employment reasons. 6.25% of people on an average from Asankhet migrated because of education and 9.82% for the reason of employment. In all the four villages, education appears to be the most important factor of migration. However, 2.90% of people on an average from Jaiharikhal also migrated due to the destruction of agriculture by wild Animals (Figure 4).
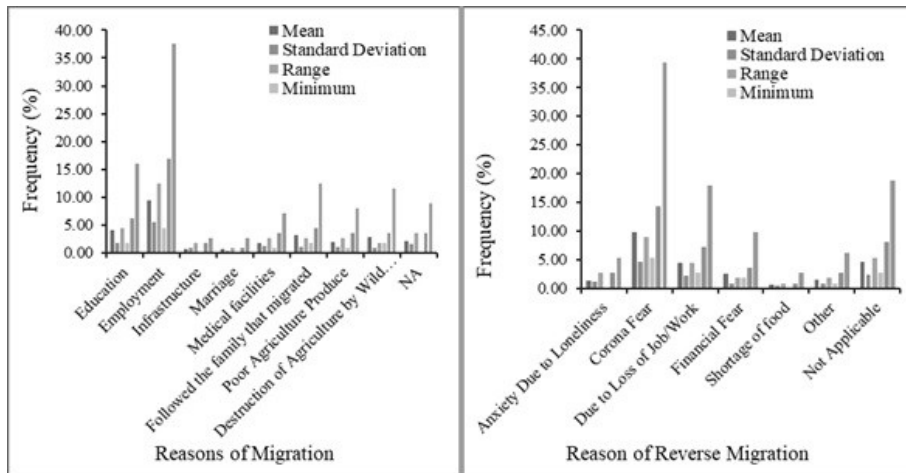

Figure 4 Percentage of Migration Drivers and Reverse Migration Drivers in Pre-to-During Covid-19 at Jaiharikhal CD Block (n=112). Note: Field survey data, 2021

Reasons for reverse migration during Covid-19: There are five sub-variables such as Corona fear, Due to loss of jobs/work, financial fear, Shortage of food and Anxiety due to loneliness are being considered to find out the reason for reverse migration. On average, 9.82% of people in the village came back due to the corona

fear, 4.46% people came due to loss of jobs/work. As far as site-by-site data is considered, Asankhet holds the highest number of people who came due to loss of jobs/works, followed by Jaihari then Chametha, and Guniyal. On average, 0.67% of people came due to a shortage of food (Figure 4).

Socio-Economic Condition of Reverse migrants during Covid-19: On average, 6.47% reverse migrants belong to the 30-34 age category. Whereas, 4.24% and 4.02% reverse migrants belong to the 20-24 and 25-29 age groups. Together the highest number of reverse migrants comes at the age group of 20-34. As far as site-by-site data is considered, 8.93% of reverse migrants came from the age group of 30-34 from Jaihari village. Guniyal holds maximum reverse migrants from the age group of 30-34.

As far as gender analysis is considered, 18.97% of reverse migrants are male compared to females, which holds 6.03%. Asankhet has the highest average male reverse migrants with 26.79%, and Chametha has the lowest female average number with 1.79%. Overall, 16.52% of reverse migrants on average are married, and 8.48% are unmarried. Guniyal is the only village that has the opposite trend where Unmarried is 9.82% and Married is 7.14%. On average 8.93% of reverse migrants are intermediate and 8.04% are graduates. The highest intermediate and graduates are from Asankhet and Jaiheri village with the sharing value of 18.75% and 12.50% respectively. As far as the employed sector is considered, 13.17% of people are engaged in the private sector (Small+MNC, Industry), whereas, 9.38% are engaged in the Private Sector (Small Industry/Retail/Hotel Industry). Highest number of reverse migrants are engaged in Private sector (Small+MNC, Industry) from Asankhet, Private Sector from Chametha, Guniyal and Jaiheri village with an average value of 21.43%, 7.14%, 9.82% and 14.29% respectively.

On average 10.27% of reverse migrants have migrated alone and 14.73% along with their family. Among which 14.29% persons have a family size of 2-4. At the same time, 19.20% of persons use to live in a rented house in comparison to personally owned or given by a company. 6.92% of people on average have small pieces of land with cultivation and 6.03% with non-cultivation. Which comprises a total of 12.95% personnel having small land to survive upon. It is astonishing to see that 10.04% of people on average hold an APL ration and 9.60% holds a BPL ration card. As far as the income of the reverse migrants are concerned, 6.25% of persons on average earn 15000 to 25000 whereas, very few people earn above 40000 with a mean value of 0.67% (Figure 5).

The "Venn Diagram" shows the reason for migration in the Pre-Covid-19 time of Jaiharikhal block village, considering the push-pull factors. Overall, 59.82% of reverse migrants have been migrated before Covid-19 due to both Push-pull factors. Only 14.29% migrated due to Pull factors and 17.86% due to push factors alone. Asankhet village shows the highest number of reverse migrants who migrated because of the factors that come under both the push and push category with 20.54%. Whereas Jaiheri village is listed in second, Chametha in third, and Guniyal in fourth where reverse migrants migrated before Covid-19 due to all those factors that come under both push and pull category with 22.32%, 9.82%, and 7.14% respectively.
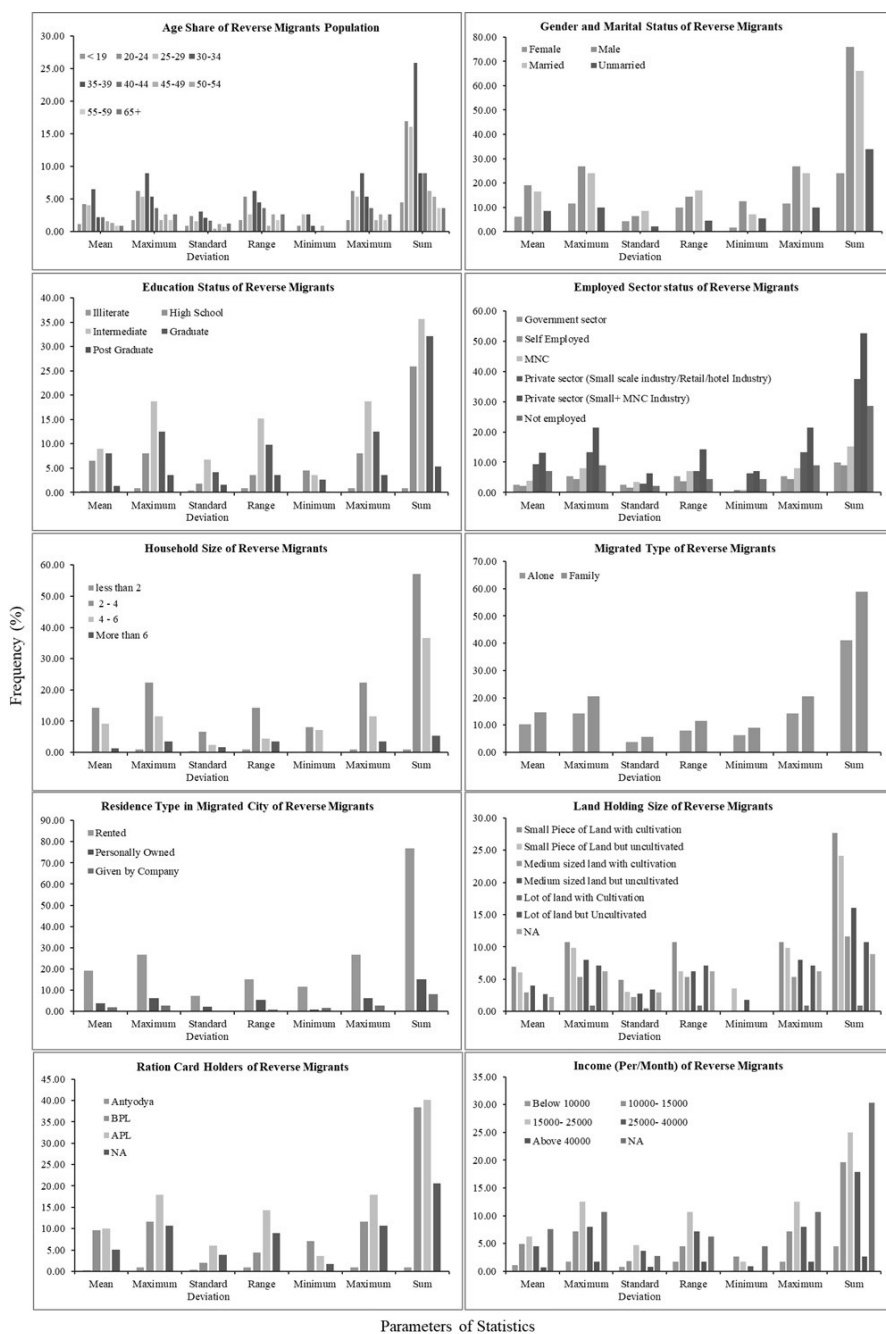
Figure 5 Socio-Economic Condition of Reverse migrants during Covid-19 by Age, Gender, Education, Employment, Household size, Landholding, Resident type and Income (n=112)

As far as push factor is considered, 7.14% of reverse migrants from Asankhet village listed the top among all villages and Jaiheri village comes in the top where reverse migrants migrated due to pulling factors with 4.46%. However, overall pull factors come only 14.29% showing the least significant reason for migration before Covid-19. The Venn Graph shows the overall distribution of reason for the migration of reverse migrants in Pre-Covid-19 (Figure 6).

In this (Figure 6) shows the reason for the reverse migration of Jaiharikhal CD Block during Covid-19 is shown village wise by categorizing the multiple factors in terms of push and pull. It is being observed that a total of 53.57% of reverse migrants came back to their home villages due to factors coming under both the category of push and pull terming as Push-Pull category whereas 27.68% came due to push factors. As far as Push-Pull factors village-wise is considered Jaiheri village scores highest and Chametha scores lowest numbers of reverse migrants with 19.64% and 8.04% respectively. Considering the Push factors Asankhet and Jaihari village has highest reverse migrants with 8.93% each and Guniyal village has least reverse migrants. Venn Graph shown below highlights the overall distribution of reasons for reverse migration during Covid-19
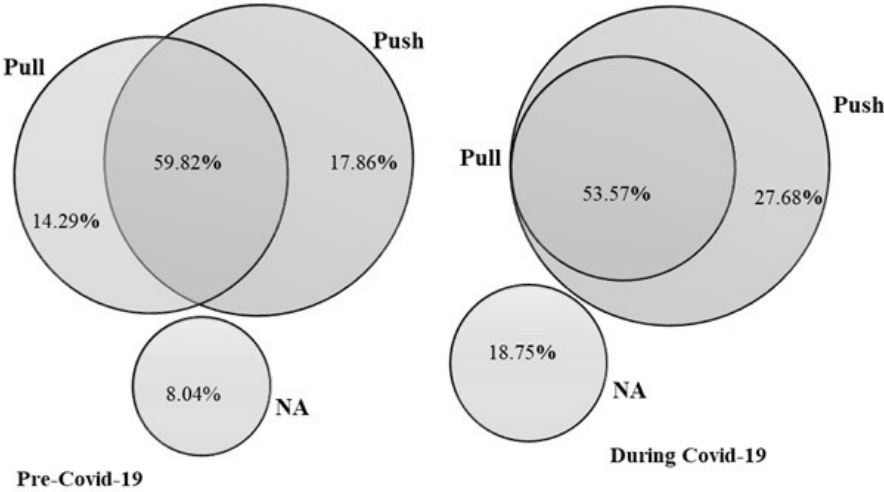

Figure 6 Overlap of Push-Pull Drivers of Migration and Reverse Migration in Pre-to-During 1st wave of Covid-19 at Jaiharikhal CD Block (n=112)

Below (Figure 7) shows the **Heat Map of Correlation between Socio-Economic Condition and Reason of Migration during Pre-Covid-19 period at Jaiharikhal CD Block** by considering the eleven different socio-economic parameters of reverse migrants such as age distribution, Gender, Marital Status, Education,

Employment sector, Household size, Migrated type, Housing unit at City, Landholding size, types of ration cardholders and their Income per month. It is being observed that the 20-24 age group of reverse migrants migrated due to the issue of marriage in their hometown having a very high positive correlation between these two variables with Pearson's r-value 0.95. Employment as a factor of migration seems to be high for the age group 25-29, 50-54, and 65+ with r-value 0.839, 0.876, and 0.838, respectively. At the same time, Infrastructure factors seem to have a very high negative correlation with the age group 20-24, 25-29, 30-34, and 50-54, respectively. Most of the reverse migrants from the age group of 20-24 followed the family members who migrated, showing a high correlation with the value 0.834 (Figure 7).

The gender distribution in the data shows that women are more likely to migrate due to the reason of employment and also followed the family that migrated as it is showing very high and high positive correlation with r-value 0.922 and 0.861 respectively.

Marriage is also an important factor of migration, especially for the unmarried, as the value appears to be 0.98 with a very high positive correlation. Most of the reverse migrants who have migrated due to employment are self-employed in the destination places as data is showing a very high positive correlation with r-value 0.964 (Figure 7). The household size of reverse migrants having 2-4 migrated due to employment shows a very high positive correlation with an r-value of 0.976. Whereas the issue of poor agricultural produce and agriculture destruction by wild animals seems to be very prominent factors for families with a family size above 6, the data shows a high positive correlation with r-value 0.898 and 0.819, respectively. Those who migrated with the family and alone are showing very high and moderate positive correlation with the reason for employment as factors with r-value 0.909 and 0.678 respectively.

The reverse migrants who have small pieces of land but are uncultivated had mostly migrated for employment as the r value with 0.973 showing very high positive correlation. One more factor is the medical facility, which also shows a very high and high correlation with the reverse migrants who have more land with cultivation and come under the income category of 15000-25000 as the r-value comes to be 0.942 and 0.711 respectively. It means they are migrating because of better health facilities in the destination places. Even the income category 10000-15000 is going out of their home villages because of the poor infrastructure as the two variables are showing a high positive correlation with r-value 0.752 (Figure 7).

Below (Figure 8) shows the **Heat Map of Correlation between Socio-Economic Condition and Reason of reverse migration during Covid-19 period at Jaiharikhal Block** by considering the eleven different socio-economic parameters of reverse migrants such as age distribution, Gender, Marital Status, Education level, Employment sector, Household size, Migrated type, Housing unit at City, Landholding size, types of ration cardholders and their Income per month.
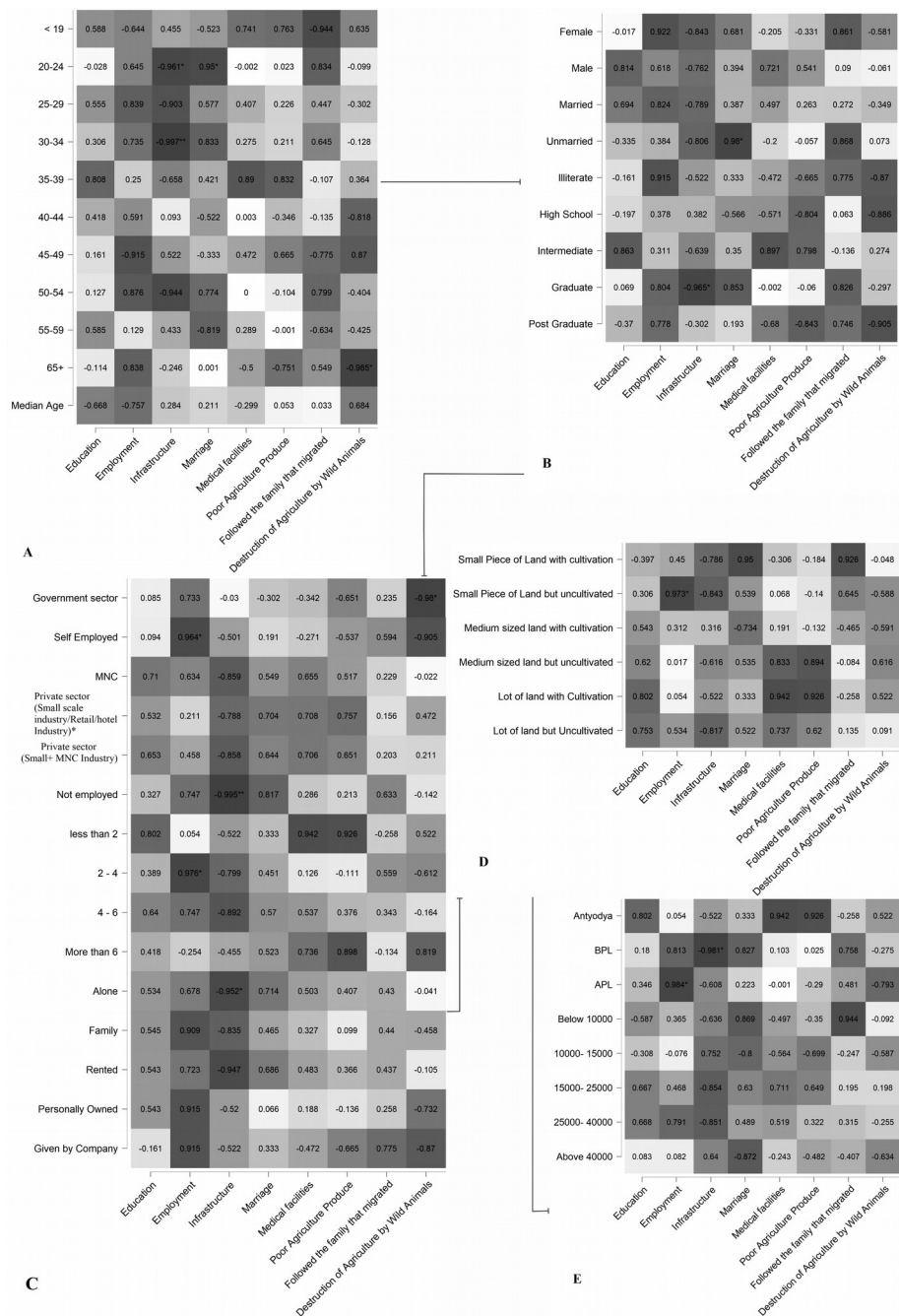
Figure 7 Heat Map of Correlation between Socio-Economic Condition and Reason of Migration during Pre-Covid-19 period at Jaiharikhal CD Block (n=112)

147

It is being observed that the reverse migrants from the age group of 25-29 and 30-34 came back to their home villages due to corona fear and showing a very high positive correlation with Pearson's r-value 0.994 and 0.955, respectively. At the same time, the 25-29 and 35-39 age group came back due to loss of jobs/works showing very high positive correlation with r-value 0.943 and 0.915 respectively. Among these, Male are more vulnerable in terms of job loss and a reason for coming back, which gets reflected as a very high positive correlation with r-value 0.985 whereas female correlation with job loss remains moderate with 0.587. Most of the 65 and above age group came back due to financial fear showing a very high positive correlation with an R-value of 0.985. Anxiety due to loneliness was the prominent factor, especially for Unmarried reverse migrants whose income was below 10000, showing a very high positive correlation with r-value 0.867 and 0.944, respectively (Figure 8).

As far as their education level and cause of reverse migration is concerned, it is being observed that those who are intermediate came due to loss of job but didn't suffer any food shortage. They are showing a very high positive (negative) correlation with r-value 0.929 and -0.963, respectively (Figure 8).

Those working in the MNC and Private sector(small+ MNC industry) came due to loss of job/works showing very high positive correlation with r-value 1.0 and 0.973 respectively. At the same time, corona fear is also high for those working in MNC and those not employed, especially with r-value 0.969 and 0.963, respectively (Figure 8).

Their reason for reverse migration is also influenced by their household size. Families whose members are 4-6 show a high positive correlation between corona fear and loss of a job with r value 0.994 and 0.983, respectively. At the same time, those who migrated alone and used to live in the rented house came back mainly due to corona fear and loss of jobs as it has a very high positive correlation with r-value 0.986, 0.971, 0.995, and 0.971 respectively. Whereas those who migrated along with family mostly had corona fear showing a very high correlation with a value of 0.958. Even those who have a small piece of land with cultivation show a very high positive correlation with financial fear, and shortage of food as the r-value is observed to be 0.952 and 0.969, respectively. As far as their income is concerned, those who come under the category of 10000-15000 went into a shortage of food and decided to come back as the r-value stands to be 0.8 showing a high positive correlation. Two income groups, 10000-25000 and 25000-40000, came due to corona fear and loss of jobs/works as the r-value 0.916, 0.977, 0.984 and 0.967 showed a very high positive correlation (Figure 8).

Intraclass Income Matrix of Reverse Migrants during 1st Wave of Covid-19 in Sample Sites of Jaiharikhal CD Block: From this data 19.64% of migrants were coming in the category of 10000-15000, 25.0% in the category of 15000-25000 and 18.75% in the category of 25000-40000 before Covid-19 and within this category, 10.71%, 7.14% and 1.79% migrants slipped into the category of below 10000 income categories during Covid-19 respectively. In total 4.46% of the migrants fell under the category of below 10000 before Covid-19 whereas it increased to 23.21%
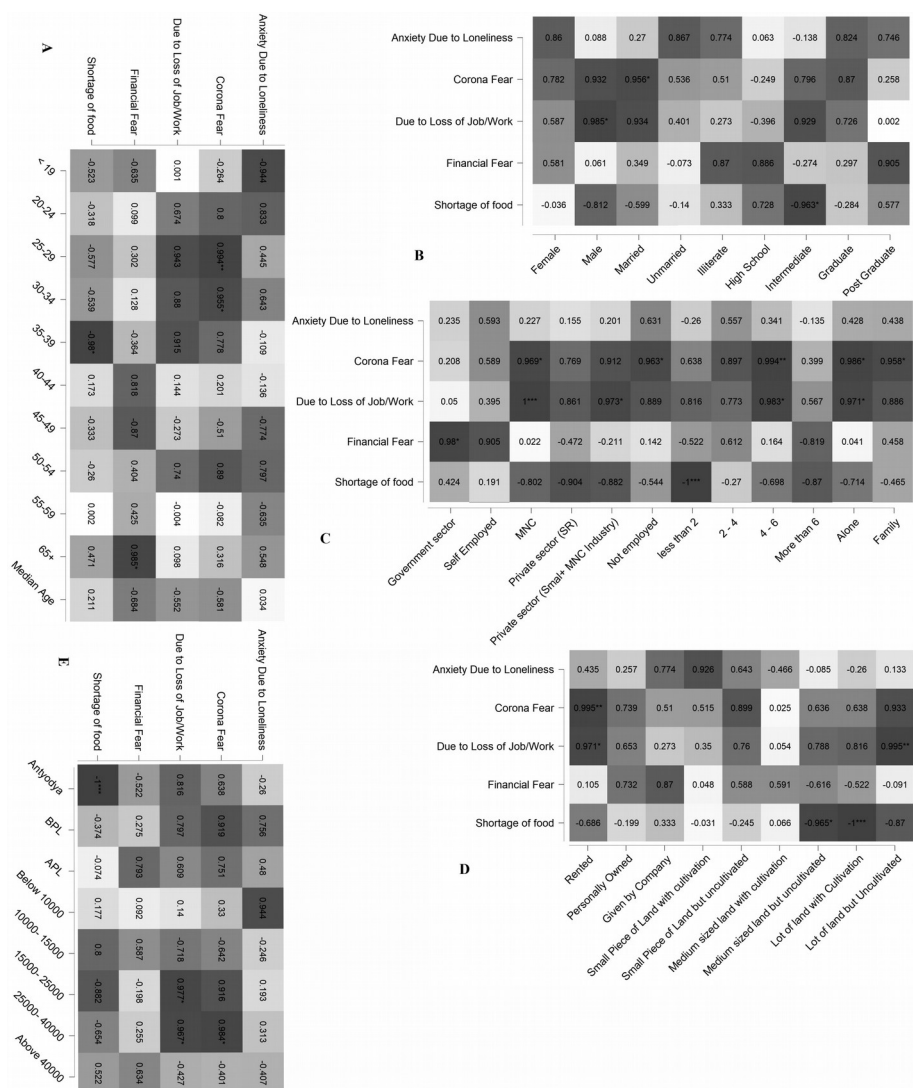
Figure 8 Heat Map of Correlation between Socio-Economic Condition and
Reason of Reverse Migration during Covid-19 period at Jaiharikhal CD Block (n=112)

during the Covid-19 pandemic. At the same time from the income category below 10000, 10000-15000, 15000-25000 and 25000-40000 during Pre-Covid 1.79%, 3.57%, 5.36% and 0.89% of reverse migrants showing no income during the Covid-19 period. This data shows that the overall large number of reverse migrants either lost their jobs or their income has reduced during the Covid-19 periods (Table 2).

Table 2 Intraclass Income Matrix of Reverse Migrants during 1st Wave of Covid-19 in Sample Sites of Jaiharikhal Block (n=112)

Pre-Covid-19		During Covid-19						
Income Class	Total	Below 10000	10000-15000	15000-20000	Above 20000	No Income	NA	Total
Below 10000	4.46	1.79	0.00	0.89	0.00	1.79	0.00	4.46
10000- 15000	19.64	10.71	4.46	0.89	0.00	3.57	0.00	19.64
15000- 25000	25.00	7.14	3.57	6.25	2.68	5.36	0.00	25.00
25000- 40000	18.75	1.79	0.00	1.79	13.39	0.89	0.00	18.75
Above 40000	2.68	0.00	0.00	0.00	2.68	0.00	0.00	2.68
NA	29.46	1.79	0.00	0.89	0.00	0.00	27.68	29.46
Total	100.00	23.21	8.04	10.71	18.75	11.61	27.68	100.00

Source: Field Survey data (2021)

Correlation Matrix of Inter Income Classes in Pre-to- during 1st wave of Covid-19: As far as the income of reverse migrants are concerned the primary data indicates that there is a drastic shift in their income due to Covid-19. This (Figure 9) shows the correlation of income classes in Pre to during the 1st wave of Covid-19 at Jaiharikhal CD block. Two variables are considered, the first income of reverse migrants before Covid-19 and the second the income of reverse migrants during Covid-19. With the help of Pearson's r value and p-value, the assumption of the statement "the income of migrant workers during Pre-Covid-19 coming under particular income group has shifted to another income groups during Covid period".

In analyzing the data, it is being found that the income of reverse migrants falling under the 10,000 categories has shifted to the no Income category during the Covid-19 period with Pearson's r-value 0.917 showing from the data which indicates a very high positive correlation. The reverse migrants who come under the income category 10000-15000 before Covid-19 has moved to below 10000 and no income category with a Pearson's r-value 0.914 and 0.901 respectively, showing a very high positive correlation. The income of the reverse migrants from these categories remains in the same category with a high positive correlation. For the income category 15000-25000 before Covid-19, the income of reverse migrants has shifted to Below 10000, 10000-15000, and no income categories with a Pearson's r-value 0.943, 0.956, and 0.937 respectively, showing a very high positive correlation. The income of the reverse migrants from these categories remains in the 15000-20000 category showing a high positive correlation. For the income category 25000-40000

before Covid-19, the income of reverse migrants has shifted to below 10000, 10000-15000 and above 20000 categories with a Pearson's r-value 0.972, 0.981 and 0.925 respectively showing a very high positive correlation. Income of the reverse migrants from these categories has shifted to 15000-20000 and no income categories with a Pearson's r-value of 0.899 and 0.889 respectively showing a high positive correlation (Figure 9). Even the income of reverse migrants from 40000 above category before Covid-19 has shifted to above 2000 category with a Pearson's r-value 0.849 showing high positive correlation.
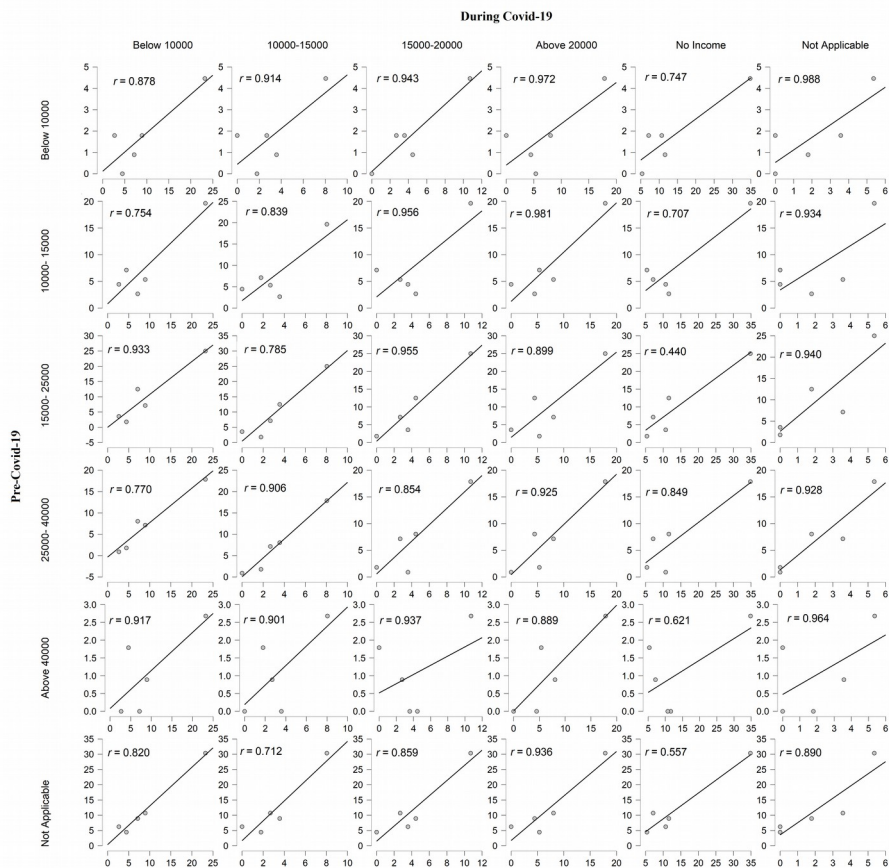

Figure 9 Correlation of Inter-Income Classes in Pre-to-during 1st wave of Covid-19 at Jaiharikhal CD Block (n=112)

6 CONCLUSION

The migration of the young population is a crucial adaptation response to the restrictions of the low-income economy and altering climatic conditions and the accompanying ecological and socio-economic threats all over the world's mountain regions (Joshi, 2018; ICIMOD, 2009). The exodus of valuable human resources from mountains has significant consequences for economic and social development and the richness of socio-cultural life in the area (Maithani, 1996). Districts in the foothill region have grown in popularity in recent years. They have developed as major industrial and economic hubs and a core of educational institutions, generating a significant out-migration from hilly regions. Overall, 59.82% of reverse migrants have been migrated before Covid-19 due to both Push-pull factors. Only 14.29% migrated due to Pull factors: employment, infrastructure, and 17.86% due to push factors like unemployment, poor agricultural produce, and destruction of agriculture by wild animals alone. However, during Covid-19 it is being observed that a total of 53.57% of reverse migrants came back to their home villages due to factors coming under both the category of push and pull terming as Push-Pull category whereas 27.68% came due to push factors which were due to loss of job, financial fear, corona fear and anxiety. When we look at the reason for migration before Covid-19 these inferences came into the limelight that employment as a factor of migration seems to be high for the age group 25-29, 50-54, and 65 and above. This shows that the reverse migrant from working age group of 25-29 years are more likely to migrate in search of employment as the responsibility of running the households increases. At the same time reverse migrant from the age group of 50-54 and above 65 are forced to leave the home for their/their family's survival. The gender distribution of the data shows that women are more likely to migrate due to the reason of employment and also followed the family that migrated as it is showing very high and high positive correlation with r-value 0.922 and 0.861 respectively. This indicates that women has to make a scrafice while shifting along with their male family members. Marriage is also an important factor of migration, especially for the unmarried, as the value appears to be 0.98 with a very high positive correlation.

The issue of poor agricultural produce and agricultural destruction by wild animals is also seems to be very prominent factors of migration for families with a size above 6. The income category 10000-15000 is going out of their home villages because of the poor infrastructure as it is showing a high positive correlation with r-value 0.752. At the same time, infrastructure as a factor of migration is very inversely correlated with the reverse migrants from BPL as the data showing r-value -0.981. Medical facility as a factor of migration also shows a very high and high correlation with the reverse migrants who have more land with cultivation and come under the income category of 15000-25000 as the r-value comes to be 0.942 and 0.711 respectively. It means they belong to high middle class or rich families who are migrating because of better health facilities in the destination places. However, during the 1st wave of Covid-19, it is observed that the reverse migrants from the age group of 25-29 and 30-34 came back to their home villages due to corona fear

and showing a very high positive correlation. At the same time, 25-29 and 35-39 age groups came back due to loss of jobs/work. Male are more vulnerable in terms of job loss and a reason for coming back, which gets reflected as a very high positive correlation, whereas female correlation with job loss remains to be moderate. Most of the 65 year and above age group came back due to financial fear and anxiety due to loneliness, especially for Unmarried reverse migrants. As far as their income is concerned, those who come under the category of 10000-15000 went into a shortage of food and decided to come back and two income groups, 10000-25000 and 25000-40000 came majorly due to corona fear and loss of jobs/works.

While analyzing the income data, it can be summarized that the income of reverse migrants falls more drastically during Covid-19 irrespective of the income category. The income category 10000-15000 before Covid-19 has moved to below 10000 and no income category with a Pearson's r-value 0.914 and 0.901 respectively, showing a very high positive correlation. Over here, the primary reason was in search for employment and an upgraded lifestyle, which led to many ghost villages leaving behind abandoned villages. The (Image-01) from one of the villages of Jaiharikhal Block visualizes the old Himalayan model house which was opened during Covid-19 lockdown and got closed once again (Figure 10). Pauri district in Uttarakhand state is considered to be the worst hit by this phenomenon known as migration. However, during the Covid-19 pandemic, when the government put a lockdown in the country and people were supposed to stay back home to fight against the disease, many people were forced to return to their original state to curb the situation. Apart from government and other private-sector employees, most reverse migrants belong to the semi-skilled and unskilled category facing a hand-to-mouth crisis in terms of employment and their income. The restricted reverse migration from urban to rural areas would profoundly impact India's population, society, and economy. Historically, a significant proportion of migratory labourers were typical farmers who abandoned farming and relocated to metropolitan areas to seek better economic opportunities (Parveen and Mamgain, 2020). Since its establishment, Garhwal Himalayas in the Uttarakhand state of India has transported its human resources systematically through poor economic policies of various governments to other states like Delhi, Maharashtra, Haryana, and many other countries.

On the one hand, this reverse Migration will impact the rural economy positively and negatively. To sustain, people will need to do agriculture in their land, but without any support from the government, it will be challenging to do so, which might lead to significant stress in the rural areas. During the pandemic, reverse migrants faced severe difficulties in employment. The current analysis illustrates the vulnerable circumstances of migrant workers in Uttarakhand. On the other hand, Reverse migration represents an excellent opportunity for the Uttarakhand government if those who have returned can be encouraged to stay back by providing better work possibilities, infrastructure, improved livelihood possibilities, education, and health care (Parveen & Mamgain, 2020; Sengupta, 2020). As (Image-02) shows new Rawat Bhojnalaya that was inaugurated by one of the reverse migrants from Asankhet Village as a livelihood (Figure 10). The state government must notify the villagers

about all public assistance measures and implement them adequately. The government must establish a committee to scrutinize and review the initiatives to analyze the effects of policies on migration and reverse migration to boost the rural economy post-pandemic.

Figure 10 Field Survey Photographs

The below are few images of Jaiharikhal Block which was captured during the field survey. *Image-01* visualizes the old Himalayan model house which was opened during Covid-19 lockdown and got closed once again. *Image-02* visualizes the new Rawat Bhojnalaya that was inaugurated by one of the reverse migrants from Asankhet Village. *Image-03* shows the settlement of houses in the Guniyal village of Jaiharikhal Block. *Image-04* shows the farming of onion, garlic and other vegetables inside the poly house which is one of the got. scheme for reverse migrant under MNREGA.

Ethical clearance

Acknowledgement

References

ARYA, P., ARYA, J. C. A. 2020. Urbanisation, Problems of Migration and Environmental Challenges in Uttarakhand. *IMPACT: International Journal of Research in Humanities, Arts and Literature (IMPACT: IJRHAL)*, 8(7), 35-42.

AWASTHI, I. C. 2010. Migration Patterns in Hill Economy of Uttarakhand: Evidence from Field Enquiry. *The Indian Economic Journal*, 57(4), 84-99.

AWASTHI, I., MEHTA, B. S. 2020. Forced Out-Migration from Hill Regions and Return Migration During the Pandemic: Evidence from Uttarakhand. *The Indian Journal of Labour Economics*, 63(4), 1107-1124.

BEHERA, M., MISHRA, S., BEHERA, A. R. 2021. The COVID-19-Led Reverse Migration on Labour Supply in Rural Economy: Challenges, Opportunities and Road Ahead in Odisha. *The Indian Economic Journal*, 69(3), 392-409. DOI: https://doi.org/10.1177/00194662211013216

BORA, R. S. 1996. *Himalayan migration: A study of the hill region of Uttar Pradesh*. Sage Publications India Pvt Ltd.

CHISTI, S. 2020, June 8. Explained: How many migrant workers displaced? A range of estimates | Explained News. *The Indian Express, 8 June, 2020*. [online] [cit. 2021-08-21]. Available at: <https://indianexpress.com/article/explained/coronavirus-how-many-migrant-workers-displaced-a-range-of-estimates-6447840/>

CIARNIENE, R., KUMPIKAITE, V. (2011). International labour migration: Students viewpoint. *Engineering Economics*, 22(5), 527-533. DOI: 10.5755/j01.ee.22.5.971

DE HAAN, A. 2020. Labour Migrants During the Pandemic: A Comparative Perspective. *The Indian Journal of Labour Economics*, 63, 885-900. DOI: https://doi.org/10.1007/s41027-020-00283-w

District Pauri Garhwal, NIC, Government of India. 2021. Village-Panchayats. District Pauri Garhwal. [online] [cit. 2021-04-25]. Available at: <https://pauri.nic.in/village-panchayats/>

DORIGO, G., TOBLER, W. 1983. Push-pull migration laws. *Annals of the Association of American Geographers*, 73(1), 1-17.

DPRO,GoUK. 2021, April. *Brief Description of Persons Coming from Outside in Comunity Develpment Block- Jaiharikhal, Pauri Garhwal Date-15, September, 2020*. [Offline] [cit. 2021-04-02]. Available at: Department of District Panchayat Raj Office (DPRO), Pauri Garhwal, Uttarakhand.

HAAS, H. D. 2011. *The determinants of international migration: Conceptualising policy, origin and destination effects*. International Migration Institute, University of Oxford, No. 32.

HARRIS, J. R., TODARO, M. P. 1970. Migration, unemployment and development: A two-sector analysis. The American Economic Review, 60(1), 126-142.

HASSAN, A. U., KHAN, N. P., KHAN, N., KHAN, S. 2020. Factors Affecting Migration Trend and Its Impact on the Socioeconomic Conditions of the World Community. *SSRN Electronic Journal*, 1-17. DOI: https://doi.org/10.2139/ssrn.3537239

HOFFMANN, E. M., KONERDING, V., NAUTIYAL, S., BUERKERT, A. 2019. Is the push-pull paradigm useful to explain rural-urban migration? A case study in Uttarakhand, India. *PLOS ONE*, 14(4), 1-22. DOI: https://doi.org/10.1371/journal.pone.0214511

IIPS and ORC Macro. 2000. *National Family Health Survey (NFHS-2), 1998–99: India*. Mumbai: IIPS. IIPS. [online] [cit. 2021-08-21]. Available at: <http://rchiips.org/nfhs/data/india/indch1.pdf>

International Centre for Integrated Mountain Development (ICIMOD) 2009.

International Centre for Integrated Mountain Development (ICIMOD) 2017.

Institute of Economic Growth. 2020, May. *Fighting COVID-19: Assessments and Reflection*. [online] [cit. 2021-08-21]. Available at: <http://iegindia.in/upload/uploadfiles/insight_covid_2.pdf>

JOSHI, B. 2018. Recent trends of rural out-migration and its socio-economic and environmental impacts in Uttarakhand Himalaya. *Journal of Urban and Regional Studies on Contemporary India*, 4(2), 1-14.

LEE, E. S. 1966. A theory of migration. *Demography*, 3(1), 47-57.

MAITHANI, B. P. 1996. Towards sustainable hill area development. *Himalaya: Man, Nature and Culture*, 16(2), 4-7.

MAMGAIN, R. P., REDDY, D. N. 2015. *Outmigration from hill region of Uttarakhand: Magnitude, Challenges and Policy Options*. [online] [cit. 2021-08-21]. Available at: <http://nirdpr.org.in/nird_docs/srsc/srscrr261016-3.pdf>

MIHI-RAMIREZ, A., KUMPIKAITE, V. 2014. Economics Reason of Migration from Point of View of Students. *Procedia – Social and Behavioral Sciences*, 109, 522-526. DOI: https://doi.org/10.1016/j.sbspro.2013.12.500

Ministry of Rural Development, Government of India. 202). [online] [cit. 2021-08-21]. Available at: <https://nrega.nic.in/Netnrega/writereaddata/state_out/RegCatvill_3505009_local.html>

MOHAPATRA, A. K., JHA, S. 2019. Determinants of Reverse Internal Migration in India: A Behavioural Perspective. *Indian Journal of Economics & Business*, 18(01), 383-398. DOI: https://doi.org/DOI: 10.13140/RG.2.2.11707.16166

Office of the Registrar General and Census Commissioner, India. 2021. *Census of India Website: Office of the Registrar General and Census Commissioner, India*. Census of India. [online] [cit. 2021-04-20]. Available at: <https://censusindia.gov.in/2011census/dchb/0506_PART_A_DCHB_GARHWAL.pdf>

One Five Nine. 2021, April 25. *Jaiharikhal Block*. [online] [cit. 2021-08-21]. Available at: <http://www.onefivenine.com/india/villag/Pauri-Garhwal/Zahrikhal>

PARVEEN, S., MAMGAIN, P. 2020. A study on reverse migration of human resources: A study of Uttarakhand state. *Palarch's Journal of Archaeology of Egypt/Egyptology*, 17(7), 9333-9347.

ROY, A. K., BHAGAT, R. B., DAS, K. C., SARODE, S., Reshmi, R. S. 2021. *Causes and Consequences of Out-Migration from Middle Ganga Plain*. [online] [cit. 2021-08-21]. Available at: <https://iipsindia.ac.in/sites/default/files/other_files/Project_Report_causes_and_consequences_of_out_migration_from_middle_ganga_plain.pdf>

Rural Development and Migration Commission, Uttarakhand. 2018, April. *Interim report on the status of Migration in Gram Panchayats of Uttarakhand. Rural development and migration commission, Uttarakhand, Pauri Grahwal*. [online] [cit. 2021-08-21]. Available at: <http://uttarakhandpalayanayog.com/pdf/English%20version.pdf>

Rural Development and Migration Commission, Uttarakhand. 2018, December. *Recommendations for strengthening socio-economic development in rural areas of Pauri Grahwal dis-*

trict for mitigating out-migration (No. 01). [online] [cit. 2021-08-21]. Available at: <http://www.uttarakhandpalayanayog.in/pdf/Pauri%20%20English-min3-6.pdf>

Rural Development and Migration Commission, Uttarakhand. 2019, September. *Analysis of Schemes and Programmes in the Rural Development Sector and Recommendations for Strengthening the Rural Socio-Economy in Order To Mitigate Out-Migration*. [online] [cit. 2021-08-21]. Available at: <https://spc.uk.gov.in/upload/contents/File-98.pdf>

Rural Development and Migration Commission, Uttarakhand. 2021. *Returned to the state due to the second wave of Corona-19 epidemic Migrant's data analysis and recommendations*. [online] [cit. 2021-08-21]. Available at: <http://www.uttarakhandpalayanayog.in/pdf/Covid-19 (2nd Phase) report3-6.pdf1970>

SENGUPTA, J. 2020. Reverse migration: An opportunity for the government. *ORF*. [online] [cit. 2021-08-21]. Available at: <https://www.orfonline.org/expert-speak/reverse-migration-opportunity-government-64123/>

SIMPSON, N. B. 2017. *Demographic and economic determinants of migration: Push and pull factors drive the decision to stay or move*. IZA World of Labor.

SINGH, D. 2020, July 2. *Deserted hill villages in Uttarakhand come alive due to reverse migration. Gaonconnection | Your Connection with Rural India*. [online] [cit. 2021-08-21]. Available at: <https://en.gaonconnection.com/deserted-hill-villages-in-uttarakhand-come-alive-due-to-reverse-migration/>

SRIDHAR, K. S., REDDY, A. V., SRINATH, P. 2013. Is it Push or Pull? Recent Evidence from Migration into Bangalore, India. *Journal of International Migration and Integration*, 14(2), 287-306. DOI: https://doi.org/10.1007/s12134-012-0241-9

STARK, O. 2019. Behavior in reverse: Reasons for return migration. *Behavioural Public Policy*, 3(1), 104-126. DOI: https://doi.org/10.1017/bpp.2018.27

TEDDY, A. 2019. Identification Of Push Factor, Pull Factor, And Negative Infromation Concerning To Migration Decision. (Evidence From West Nusa Tenggara). *International Journal Of Scientific & Technology Research*, 8(01), 138-144.

The Government of Uttarakhand for the Asian Development Bank. 2017. *IND: Infrastructure Development Investment Program for Tourism - Tranche 3 (Issue July)*. [online] [cit. 2021-08-21]. Available at: <https://www.adb.org/sites/default/files/project-documents/40648/40648-034-iee-47.pdf>

THET, K. 2014. *Pull and Push Factors of Migration: A Case Study in the Urban Area of Monywa Township, Myanmar*. [online] [cit. 2021-08-21]. Available at: <https://www.semanticscholar.org/paper/Pull-and-Push-Factors-of-Migration-%3A-A-Case-Study-%2C/2a5f1804aea79ac313dedd6fa9b49005ae7f724d>

ULLAAR. 2021, April. *Explore Jaiharikhal*. [online] [cit. 2021-08-21]. Available at: <https://ullaar.com/index.php/explore-jaiharikhal/>

Weather-Atlas. Com. 2021, April. *Jaiharikhal, India - July weather forecast and climate information | Weather Atlas*. [online] [cit. 2021-08-21]. Available at: <https://www.weather-atlas.com/en/india/jaiharikhal-weather-july>

„Push-pull" faktory a sociálno-ekonomické podmienky vracajúcich sa migranov počas 1. vlny Covid-19: výskum metódou „A Grass Root" v Garhwal Himalaya

Súhrn

Spätná migrácia ľudí všetkými dopravnými prostriedkami sa stala v Indii zreteľnou udalosťou počas prvej vlny Covid-19 hneď, ako centrálna vláda oznámila uzamknutie štátu. Predložená práca skúma vplyv „push" a „pull" faktorov reverznej migrácie v oblasti Jaiharikhal v okrese Pauri a jej koreláciu so sociálno-ekonomickými podmienkami a postavením vracajúcich sa migrantov počas prvej vlny Covid-19.

„Push" faktory sú premenné, ktoré nabádajú ľudí, aby sa z rôznych dôvodov presťahovali z miesta svojho terajšieho bydliska na iné miesto, najmä v dôsledku nevyhovujúcich sociálno-ekonomických podmienok terajšieho pôsobiska. Nízka produktivita práce, nezamestnanosť a nedostatočný rozvoj regiónu, všeobecne zlé sociálno-ekonomické podmienky, nedostatok príležitostí pre pokrok, vyčerpávanie prírodných zdrojov a pomerne časté prírodné katastrofy, to všetko sú typické „push" faktory. „Pull" faktory sú faktory, ktoré priťahujú migrantov do iného regiónu alebo oblasti. „Pull" faktormi sú napr. príležitosti nájsť lepšie zamestnanie, vyššie mzdy, dobrá sociálna infraštruktúra, lepšie pracovné podmienky, prírodne a kultúrne atraktívna oblasť a iné. „Push" faktory súvisiace so životnými podmienkami sú častým dôvodom nespokojnosti so súčasným miestom bývania, zatiaľ čo stimulačné „pull" faktory sú tie charakteristiky nových uvažovaných miest, vďaka ktorým tieto regióny vyzerajú lákavo v súvislosti s kvalitou života.

V predloženej štúdii sme sa snažili rozpoznať, či v súčasnom období pandémie Covid-19 ide o tlak, „push", z rozvinutých urbánnych regiónov (v dôsledku straty zamestnania, koronavírusového strachu alebo finančných nákladov v mestských oblastiach) alebo ťahanie, „pull" smerom k vidieckej oblasti (v dôsledku nízkeho počtu prípadov Covid-19, lepšou finančnou dostupnosťou potravín alebo morálnej podpory rodiny), čím by sa vysvetlil fenomén reverznej migrácie. Jaiharikhal je oblasť komunitného rozvoja (Community Development) v okrese Pauri Garhwal v štáte Uttarakhand v Indii. Jaiharikhal možno nepochybne hodnotiť ako jednu z najvyhľadávanejších destinácií kľúdnej dovolenky v Uttarakhande. Nachádza sa v strednom himalájskom regióne a má mierne až mierne teplé podnebie a je obklopené deodarovým lesom, vďaka čomu je tu príjemné podnebie počas celého roka. Nachádza sa 40 km od Kotdwary, známej aj ako „Brána Garhwalu" a 5 km od horskej stanice a posádkového mesta Lansdowne.

Emigrácia mladej populácie je kľúčovou adaptačnou reakciou na obmedzenia nízkopríjmovej ekonomiky a meniace sa klimatické podmienky a sprievodné ekologické a sociálno-ekonomické hrozby vo všetkých horských regiónoch sveta. Exodus cenných ľudských zdrojov z hôr má významné dôsledky pre ekonomický a sociálny rozvoj a kvalitu sociokultúrneho života v danej oblasti. Okresy ležiace pod úpätiami hôr sú v posledných rokoch čoraz obľúbenejším miestom migrácie. Rozvinuli sa ako hlavné priemyselné a ekonomické centrá a jadrá vzdelávacích inštitúcií, čo vedie k výraznej migrácii z horských oblastí. Celkovo 59,82 % reverzných migrantov migrovalo pred pandémiou Covid-19 do týchto ekonomicky atraktívnych oblastí v dôsledku oboch „push" aj „pull" faktorov. Len 14,29 % migrovalo v dôsledku „pull" faktorov, najmä pre dobrú možnosť nájsť zamestnanie a dobrú sociálnu infraštruktúru a 17,86 % v dôsledku „push" faktorov, ako je nezamestnanosť v regióne, slabá poľnohospodárska produkcia regiónu a ničenie poľnohospodárskej produkcie divokými zvieratami.

Počas pandémie Covid-19 sa však pozorovalo, že celkovo až 53,57 % reverzných migrantov sa vrátilo do svojich domovských horských dedín v dôsledku faktorov spadajúcich do kategórie „push" aj „pull", zatiaľ čo 27,68 % prišlo späť kvôli „push" faktorom, medzi ktoré treba zaradiť najmä stratu zamestnania, starch z nezvládnutia finančných nákladov života, strach z nakazenia korona vírusom a celkovou úzkosťou v období pandémie. Keď sa pozrieme na dôvod migrácie pred Covid-19, do centra pozornosti sa dostali poznatky, že zamestnanosť ako faktor migrácie sa zdá byť vysoký „push" faktor pre vekové skupiny 25-29, 50-54 a 65 a viac rokov. To ukazuje, že reverzný migrant z produktívnej vekovej skupiny 25-29 rokov emigroval pri hľadaní zamestnania, keďže sa zvyšovala jeho zodpovednosť za vedenie domácnosti. Reverzní migranti z vekovej skupiny 50-54 a nad 65 rokov boli nútení opustiť domov najmä z dôvodu, aby zabezpečili prežitie svojej rodiny. Sledovanie dát podľa pohlavia ukazuje, že ženy najčastejšie migrujú z dvoch dôvo-

dov, dôvodu nájdenia si zamestnania a dôvodu nasledovania rodiny. Korelačný koeficient vykazuje v obidvoch týchto prípadoch veľmi vysokú pozitívnu koreláciu s hodnotami 0,922, resp. 0,861.

Reverzná migrácia ovplyvní vidiecke hospodárstvo v horských oblastiach pozitívne aj negatívne. Aby sa tu ľudia udržali, budú musieť na „svojej pôde" realizovať poľnohospodársku výrobu, čo bude bez akejkoľvek podpory zo strany vlády veľmi náročné. To by mohlo viesť k „značnému stresu" života v týchto vidieckych oblastiach. Počas pandémie čelili reverzní migranti vážnym ťažkostiam v zamestnaní v ekonomicky rozvinutejších mestských regiónoch (strata zamestnania, zníženie príjmov). Získané výsledky ilustrujú veľmi zraniteľnú situáciu migrantov v štáte Uttarakhand. Reverzná migrácia však predstavuje vynikajúcu príležitosť pre vládu štátu Uttarakhand. Ak tých, ktorí sa vrátili počas pandémie späť do horských vidieckych oblastí dokáže vláda povzbudiť, aby zostali, napr. poskytnutím lepších pracovných možností, zlepšením sociálnej infraštruktúry, zlepšením možností získania potravín, zlepšením možností vzdelávania a zdravotnej starostlivosti, prípadne inými opatreniami, môže to prispieť k všeobecnej revitalizácii horských vidieckych oblastí.