# MOVING TOWARDS RECOVERY: A POST-LOCKDOWN ANALYSIS OF INDIAN INTERNAL MIGRANTS

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**Article History: Received:** 12.12.2022 **Revised:** 29.01.2023 **Accepted:** 15.03.2023

**Abstract:**

There is no denying that the COVID-19 pandemic has raved worldwide, and developing countries like India are no exception. Similarly, the same has disrupted global human mobility dynamics. In India, which has a sizeable number of migrants, the impact of COVID-19 has been more pronounced in the sub-section of 'migrant workers, particularly in socioeconomic and demographic terms. Thus, the present paper attempts to analyze the multifaceted impact of COVID-19 on Indian migrants' income, employment and consumption expenditure patterns. Moreover, the article also investigated some pulling and pushing forces responsible for post-lockdown internal migration in Indian Punjab. For empirical analysis, the study uses mainly primary data from 400 internal migrants collected from eight major cities of Punjab between May-November, 2022. The socioeconomic and demographic profile of migrants has been analyzed using chi-square and Mann-Whitney U test or Wilcoxon Rank-Sum Test. Major determinants responsible for migratory decisions have been discovered using the logistic regression model. The post-lock-down empirical results of internal migrations show that urban-urban movement was also one of the leading migration streams besides rural-urban migration. The recent internal migration trend in Punjab is basically from economically backward regions of India. Most migrants were male, young, educated/skilled, and from lower (SCs) and upper communities (GCs). More precisely, bigger household sizes, better employment/income opportunities, marriage, modernization and better education and hospitality facilities are the principal motivating/pulling reasons for migration. In contrast, loss of employment, poverty, low agricultural productivity, unequal distribution of land holdings, and monthly per capita expenditure are chief pushing factors for migratory force. Since the COVID-19 pandemic has affected internal migrants disproportionately, it needs to be given high priority with specific policy intervention.

**Keywords:** Internal Migration, Post-lockdown, COVID-19 Pandemic, Socioeconomic Conditions, Recovery, Reasons for Migration

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**DOI: 10.31838/ecb/2023.12.s3.157**

## 1. Introduction

Migration is generally defined as the movement of an individual or group of persons to a new place/region/state within the country (Internal Migration) or to a foreign country which is not his/her/their usual place of residence (International migration) either permanently or temporarily for getting better work/employment, attaining better educational opportunities, joining of new/old family obligations, forced or persecuted ones (International Organization of Migration, 2011 and United Nations, 2015). In other words, it is the process of moving from one location to another to establish a permanent or semi-permanent habitation based on the predetermined goals of migrants to define the trends and patterns of migration.

An overview of various migration studies (Harris & Todaro, 1970; Chenery, 1975; Todaro, 1976; Oberai & Singh, 1983; Bhagat & Mohanty, 2008; Srivastava et al., 2020; Rajan et al., 2020) advocated that while, internal migration, plays a dominating role in the urban transformation of emerging markets and developing economies (EMDEs), at the same time it is also responsible for various challenges originate due to over urban population. Hence, Kuznets's theory (1966) of structural changes, which predicted a significant shift of rural labor to industrial sites located in or nearby urban settings, applied profoundly in India (Kuznets & Murphy, 1966).

Migration is an integral part of the Indian economy and constitutes a significant share of the country's GDP. As per the census of India (2011), every year, around 9 million people move from economically backward states (Uttar Pradesh, Bihar, Bengal and Assam.) to economically advanced states/UTs (New Delhi, Chandigarh, Maharashtra, Punjab and Haryana) of India in search of better employment, high wages and improved education. That is why India's internal migration pattern is mostly skewed (Acharya & Acharya, 2020). Smilarly, The COVID-19-led migration is the second-largest mass migration in India's history after the partition, when 14 million people were displaced (Inamdar & Thusoo, 2020). Internal migrant workers who usually work in informal, low-skilled and arduous working conditions were found to be affected worse due to the COVID-19 pandemic outbreaks. Moreover, the stringent countrywide lockdown further aggravated their socioeconomic problems. Thus, the COVID-19 pandemic has been regarded as one of the greatest examples of the unpredictable factor that altered internal migration trends and patterns and devastated the livelihood of the people associated with it (Deshpande, 2020; Gopinath, 2020; Nayar, 2020). Recent studies have also predicted that the disproportionate effects of COVID-19 are not short-term; rather, these will have a long-term impact on unorganized sectors worldwide (Sengupta and Jha, 2020, Monitor ILO, 2020). The current projections revealed that around 1.7 million people returned to their origin from the total of 2.03 million enrolled industrial labourers in Punjab. Although the relaxation in Covid-19 restraints led 0.78 million workers to join back their jobs in urban areas and 0.41 million labourers in rural areas yet 0.83 million labourers are suffering an intense challenge in migrating due to the pandemic (ILO, 2020).

Since its beginning, this pandemic has created multiple impacts on the socioeconomic life of the people along with the political emergencies, which led the researchers to work on it from diverse facets. Developing countries, like India, which are generally not only over-populated and led mainly by the informal sector, have limited real-time data availability. Despite the constraints of the unavailability of internal migrant data and insufficient information, there is an increasing number of empirical studies proving that the informal sector was the most severely hit by the COVID-19 pandemic. Moreover, internal migrants, in particular, had to endure unimaginable suffering due to lockdown while returning to their native places. (Nayar, 2020 and Ray & Subramanian,2020).

Although the existing studies have provided some insights into the loss during the first and the second phases of COVID-19, however, since economic activities have resumed and the mobility restrictions have also been forsaken, it has been recorded that a large number of migrants has again started their journey towards economically advanced states in search of better employment and high wages. Thus, so far, just a few studies have tried to assess the Post-lockdown impact on the socioeconomic livelihoods of internal migrants. Various Studies (Bertrand et al., 2020; Singh & Kumar, 2020) provided real-time insights into the spread of COVID-19 and policy responses in Punjab. However, these studies have analyzed socioeconomic circumstances along with income and employment changes during the lockdown in Punjab. On the contrary, the present study sheds light on post-lockdown trends and patterns of internal migrants. These are some missing aspects from the existing literature. Thus, to fill the research gap, the present study attempts to analyze the striking reasons for internal movements in Punjab in the post-lockdown period. The study is primarily a primary survey-based study conducted between May-November, 2022 from the eight major cities of Indian Punjab.

The paper has been essentially divided into five different sections. The significance of the study is explained in Part I, which also

provides some background information about the state's prevalent internal migration. Part II discusses the study's methodology and data sources. In Section III, the socioeconomic and demographic variables of internal migrants using the Pearson Chi-square test and the key trends and patterns of internal migration are illustrated with tables and graphs. In Section IV, various factors/determinants for internal migration have been estimated using the Logit Regression Model. Part V presents the summary, key findings, and public policy implications.

## 2. Data Sources and Methodology

To understand the disproportionate impacts of the COVID-19 outbreak on the livelihood of internal migrants of Punjab, the study uses a multi-stage stratified random sampling technique and purposive sampling technique were used to achieve specific research objectives. For example, a multi-stage stratified random sampling technique was used to choose wards/blocks and households, considering certain strata. On the other hand, the purposive technique was used to select the research region. Further, within each urban stratum, internal migrant households were selected randomly and collaborated with a sampling frame prepared from mapping and listing households in primary migrant destination places. In the present study, for research design and methodology, a total of eight cities of Punjab, Ludhiana, Bathinda, Jalandhar, Patiala (Class-I cities/towns having more than one lakh population) and Kharar, Suman, Gurdaspur and Tarn Taran (Class-II cities/towns having more than 50 thousand but less than one lakh population) were selected for the study.

**Categorization of Sampled Internal Migrants' Households**

Finally, a total of 432 internal migrant's households of Indian Punjab were approached with a questionnaire-cum-schedule for collecting the primary information. Further, all these migrants working/employed in the informal sector were divided into two broad categories by type of employment, i.e., self-employed and salary/wage earner. Out of these 400 migrant households, 200 migrants (50 per cent) were classified as a migrant who was working as self-employed such as rickshaw pullers, Auto Driver, Taxi Driver Street Vendors etc. (Self Employed), whereas 200 migrants (50 per cent) were those migrants who were earning salary or income from an employer often monthly or quarterly (Salary/Wage Earners). Further, within the broad occupation category, a wide variety of occupations of self-employed migrants and salary/wage earner migrants were found to work in various professions. The data in Table 1 revealed that among the self-employed migrants, street vending occupation cornered a maximum share (15 per cent), whereas, in the case of salaried/wage earner migrants, construction workers formed a leading share (17 per cent). Similarly, cobbler and tailoring/stitching (5 per cent) and Professionals (5 per cent) constitute a minor percentage share the self-employed migrants and salaried/wage earner migrants, respectively.

Table 1: Occupational Distribution of Internal Migrants of Punjab

| Occupational Distribution of Internal Migrants of Punjab | | | | | |
|---|---|---|---|---|---|
| Self Employed Migrant | Number | % | Salary/Wage Earner Migrant | Number | % |
| Street Vending | 30 | 15.00 | Construction Workers | 34 | 17.00 |
| Own Auto Rickshaw | 13 | 6.50 | Factory Workers | 29 | 14.50 |
| Own Cycle Rickshaw | 12 | 6.00 | Domestic Workers (Maids, etc.) | 18 | 9.00 |
| Own Business/Shopkeepers | 15 | 7.50 | Hotel-cum-Restaurant Workers | 16 | 8.00 |
| Own Taxi Operators | 10 | 5.00 | Helpers/Attendants | 19 | 9.50 |
| Professionals (Lawyers, Doctors, etc.) | 11 | 5.50 | Office Worker (Typist, Data Entry Operator, etc.) | 18 | 9.00 |
| Independent Mechanics | 13 | 6.50 | Loaders/De-loaders | 12 | 6.00 |
| Loading/Re-Loading Work | 11 | 5.50 | Salesman at Shops | 15 | 7.50 |
| Hair Cutting/Making Services | 11 | 5.50 | Repair Shop Workers | 14 | 7.00 |
| Tailoring/Stitching | 10 | 5.00 | Transport Worker | 15 | 7.50 |
| Own Construction Work | 22 | 11.00 | Professionals (Doctors, teachers, etc.) | 10 | 5.00 |
| Office Work (Typist, Operator, etc.) | 17 | 8.50 | Total | 200 | 100.00 |
| Cobblers | 10 | 5.00 | | | |
| Cleaning/Sweeping, etc. | 15 | 7.50 | | | |

| | | | | | |
|---|---|---|---|---|---|
| Total | 200 | 100.00 | | | |

**Source:** Primary Survey.

### 3. The Socioeconomic and Demographic Variables of Indian Internal Migrants

Table 2 presents the distribution of internal migrants by location of their present work. Among the 400 sampled internal migrants, most migrants were found as self-employed as street vendors, small factory units/workshops/shop/dhaba owners, followed by salary/wage earners at the time of their migration. This supports the widespread belief that self-employment and salary/wage earners were the primary reasons behind the rising numbers of internal migration in the state. The Chi-square value ($\chi2 = 21.011$ and p-value = 0.000) was found to be significant at a 1 per cent level, indicating a difference in the number of people in various workplaces among self-employed migrants and salaried/wage-earner migrants.

**Post-Lockdown Internal Migration in Punjab: Occupational Differentials**

Similarly, the income level was grouped into six categories starting from 5000, 5001 – 10000, 10001 – 15000, 15001 – 25000, 25001 – 45000, 45001 and above. The monthly income of self-employed and salaried/wage earners show a significant difference. Only 9.50 per cent of self-employed migrant's income ranges between 15001 to 45000+, and 91.50 per cent of them goes from 5000 to 15000. While in the case of salaried/wage earners, 51.50 per cent ranges from 5000 to 15000, and the remaining 48.50 per cent goes from 15001-45000+. Surprisingly, there is a tremendous difference in the migrant's income in the fifth and sixth income categories (Above 45000). For instance, only 0.50 self-employed migrants earn more than 45000, while at the same time, four per cent of salaried/wage earners make more than 45000. The Chi-square test was done to statistically prove the difference in the monthly income of self-employed migrants and salaried/wage-earner migrants. $\chi2$ value 98.7145 and P- value 0.000 was found to be significant at 1 per cent, indicating a difference in the income distribution among self-employed migrants and salaried/wage-earning migrants.

Table 2: Distribution of Internal Migrants of Punjab by Economic Variables

| Economic Variables | Self Employed Migrants | | Salaried/Wage Earners | | Total | |
|---|---|---|---|---|---|---|
| Post-Lockdown Occupation Distribution | | | | | | |
| Factory/Workshop/ Showroom/Shop | 49 | 24.50 | 58 | 29.00 | 107 | 26.75 |
| Hotel/Restaurant/Dhaba | 15 | 7.50 | 16 | 8.00 | 31 | 7.75 |
| Office/Department of Institution | 28 | 14.00 | 43 | 21.50 | 71 | 17.75 |
| Own Home/Residential Space | 21 | 10.50 | 37 | 18.50 | 58 | 14.50 |
| Public Open Space* (road, street, etc.) | 87 | 43.50 | 46 | 23.00 | 133 | 33.25 |
| Total | 200 | 100 | 200 | 100.00 | 400 | 100.00 |
| Pearson $\chi2 = 21.011$ $P\leq0.000$ *** Significant | | | | | | |
| Post lockdown Monthly income (in Rs.) | | | | | | |
| Up to 5000 | 40 | 20.00 | 2 | 1.00 | 42 | 10.50 |
| 5001-10000 | 111 | 55.50 | 67 | 33.50 | 178 | 44.50 |
| 10001-15000 | 30 | 15.00 | 34 | 17.00 | 64 | 16.00 |
| 15001-25000 | 12 | 6.00 | 47 | 23.50 | 59 | 14.75 |
| 25001-45000 | 6 | 3.00 | 42 | 21.00 | 48 | 12.00 |
| 45000+ | 1 | 0.50 | 8 | 4.00 | 9 | 2.25 |
| Total | 200 | 100.00 | 200 | 100.00 | 400 | 100.00 |
| Pearson $\chi2 = 98.7145$ $P\leq0.000$, *** Significant | | | | | | |

**Source:** Author Calculation from Survey Data
**Note***** p<.01, ** p<.05, * p<.1

**Post-Lockdown Internal Migration in Punjab: Average Monthly Income Earnings**

The study found fifteen specified works in the case of self-employed migrants and twelve different selected works in the case of salaried-wage earners, which migrants were engaged in before the lockdown, during the lockdown and after the lockdown. The income in February 2020 is considered income before the lockdown, the income in June 2020 is taken as the lockdown effect, and the income in April 2021 is regarded as the post-lockdown effect. A 'Pre-during-lockdown

variance assessment in average income/earnings found that in the case of self-employed, the maximum decline was faced by cobblers and own auto rickshaw workers, which was around 70 per cent. In contrast, the minimum deterioration in income was experienced by professionals such as doctors and lawyers, which was about 23 per cent only. On the other hand, in the case of salary/wage earners, mechanics or repair shops faced the highest decline in monthly earnings (60 per cent). In contrast, the minimum reduction was experienced by helpers and attendants, around 17.58 per cent (Table 3).

Table 3: Occupational Distribution of Self-Employed Migrants of Punjab

| Nature of Employment | Average Monthly Income Pre-lockdown) | Average Monthly Income During lockdown) | Average Monthly Income Post-lockdown) | Absolute Change (Pre-During lockdown) | Percentage Change (Pre-During lockdown) | Absolute Change (Post-Pre lockdown) | Percentage Change (Post-Pre lockdown) |
|---|---|---|---|---|---|---|---|
| Street Vending | 4612 | 2108 | 8723 | -2504 | -54.29 | 4111 | 47.13 |
| Own Auto Rickshaw | 6526 | 3678 | 17877 | -2848 | -43.64 | 11351 | 63.49 |
| Own Cycle Rickshaw | 4211 | 1178 | 7886 | -3033 | -72.03 | 3675 | 46.60 |
| Own Business/Shopkeepers | 12774 | 4589 | 23313 | -8185 | -64.08 | 10539 | 45.21 |
| Own Taxi Operators | 7646 | 3336 | 28647 | -4310 | -56.37 | 21001 | 73.31 |
| Professionals (Lawyers, Doctors, etc.) | 38563 | 29658 | 47625 | -8905 | -23.09 | 9062 | 19.03 |
| Independent Mechanics | 12787 | 5133 | 18865 | -7654 | -59.86 | 6078 | 32.22 |
| Loading/Re-Loading Work | 8256 | 2793 | 11235 | -5463 | -66.17 | 2979 | 26.52 |
| Hair Cutting/Making Services | 3189 | 1593 | 8900 | -1596 | -50.05 | 5711 | 64.17 |
| Tailoring/Stitching | 4555 | 1839 | 14730 | -2716 | -59.63 | 10175 | 69.08 |
| Own Construction Work | 5667 | 2399 | 13478 | -3268 | -57.67 | 7811 | 57.95 |
| Office Work (Typist, Operator, etc.) | 6833 | 3421 | 17896 | -3412 | -49.93 | 11063 | 61.82 |
| Cobblers | 5080 | 1245 | 7000 | -3835 | -75.49 | 1920 | 27.43 |
| Cleaning/Sweeping, etc. | 3765 | 2700 | 11863 | -1065 | -28.29 | 8098 | 68.26 |
| Miscellaneous | 4933 | 1756 | 12801 | -3177 | -64.40 | 7868 | 61.46 |
| Total | 5245 | 2771 | 7896 | -2474 | -47.17 | 2651 | 33.57 |

**Source:** Author Calculation from Survey Data

Similarly, the 'Pre-Post- lockdown' variance assessment in average income/earnings of migrant households showed (Table 4) that there were wide variations in the earnings of migrants by type of employment and occupation/work. During the post-lockdown, the income-earning differentials are higher than in the pre-lockdown phase. For instance, the highest percentage increase was recorded in the income of taxi operators (73.31 per cent); followed by tailoring/stitching and cleaning/Sweeping etc. (68 per cent); whereas the migrants working as professionals such as doctors or lawyers had minor income increment, which was around 19.03 per cent only. Likewise, in the case of

salaried/wage earners, the maximum increment (70 per cent) was experienced by the salesman at the shop and transport workers, followed by construction workers, domestic workers, hotel/restaurant workers, and repair shop workers, around 60 per cent. On the contrary, the migrants with high skills, such as doctors and lawyers, faced the lowest increment, approximately 30 per cent.

Table 4: Occupational Distribution of Salary/Wage Earner Migrants of Punjab

| Nature of Employment | Average Monthly Income Pre-lockdown (2018-19) | Average Monthly Income During lockdown (2020-21) | Average Monthly Income Post-lockdown (2022-23) | Absolute Change (Pre-During lockdown) | Percentage Change (Pre-During lockdown) | Absolute Change (Post-Pre lockdown) | Percentage Change (Post-Pre lockdown) |
|---|---|---|---|---|---|---|---|
| Construction Workers | 4646 | 2526 | 12333 | -2120 | -45.63 | 7687 | 62.33 |
| Factory Workers | 6082 | 4066 | 11770 | -2016 | -33.15 | 5688 | 48.33 |
| Domestic Workers (Maids, etc.) | 2997 | 1523 | 9560 | -1474 | -49.18 | 6563 | 68.65 |
| Hotel/Restaurant Workers | 5432 | 3622 | 13750 | -1810 | -33.32 | 8318 | 60.49 |
| Helpers/Attendants | 5186 | 4278 | 12214 | -908 | -17.51 | 7028 | 57.54 |
| Office Workers (Typists, Data Entry Operators, etc.) | 8696 | 6089 | 17625 | -2607 | -29.98 | 8929 | 50.66 |
| Loaders/De-loaders | 5686 | 4217 | 13458 | -1469 | -25.84 | 7772 | 57.75 |
| Salesman at Shops | 6026 | 3985 | 26666 | -2041 | -33.87 | 20640 | 77.40 |
| Repair Shop Workers | 5853 | 2370 | 18968 | -3483 | -59.51 | 13115 | 69.14 |
| Transport Workers | 10675 | 7586 | 35896 | -3089 | -28.94 | 25221 | 70.26 |
| Professionals (Doctors, teachers, etc.) | 31929 | 25782 | 47625 | -6147 | -19.25 | 15696 | 32.96 |
| Miscellaneous | 6583 | 4863 | 14365 | -1720 | -26.13 | 7782 | 54.17 |
| Total | 5381 | 3684 | 14788 | -1697 | -31.54 | 9407 | 63.61 |

**Source:** Author Calculation from Survey Data

**Post-Lockdown Internal Migration in Punjab: Consumption Expenditure Estimation using Mann-Whitney U Test (Wilcoxon Rank-Sum Test)**

Undoubtedly, there are significant differences in the monthly income/salary earnings of both the occupations that are self-employed and salaried/wage earners, as shown in the table. Further, for more details, a Mann-Whitney U test (sometimes called the Wilcoxon rank-sum test) is used to compare the income earnings differences between both two sample groups (self-employed and salaried/wage earners) when the sample distributions are not normally distributed. It is considered the nonparametric equivalent of the two-sample t-test.

Thus, the results of the Mann-Whitney U test suggest that if the monthly income of 400 internal migrants is compared (200 self-employed and 200 salaried/wage earners), the results showed the monthly income earnings difference between both the groups is significant as one per cent level of significance ($z = -10.091$, $p = 0.000$) at a significance level of 0.01. Based on these results, the null hypothesis (H0): No significant difference in monthly income earnings of the internal migrants involved in two different occupation groups) can be rejected.

Table 5. Results of the Two-sample Wilcoxon Rank-Sum (Mann-Whitney) Test

| **Occupation** | **Observation** | **Rank Sum** | **Expected** |
|---|---|---|---|
| Self Employed Migrants | 200 | 28449 | 40100 |
| Salary/Wage Earner Migrants | 200 | 51751 | 40100 |
| Combined | 400 | 80200 | 80200 |

Unadjusted variance 1336666.67
Adjustment for ties - 3612.53
---
adjusted variance 1333054.14
Ho: Salary(Occupation= Self Employed Migrants) = Salary(Occupation= Salary/Wage Earner Migrants)
z = -10.091
Prob > Z

In the table 5, it has been observed that the individual's economic status is determined by nature, place and income from their occupation. The table indicates that although salaried/wage earners work in average and better working conditions, their income tends to be low compared to self-employed earners in the pre-lockdown phase. Still, during the lockdown and Post lockdown phases, the recent trends show that salaried/wage earners' income earnings were more significant than self-employed internal migrants. This may be because although most temporary salary/wage earners working in factories, offices or institutions were suspended from work during the pandemic lockdown, they received a specific monthly compensation.

Moreover, many offices or institution workers were found to be working online from their homes during the lockdown period. Whereas on the other hand, migrants involved in self-employed occupation were not able to run their businesses due to lockdown restrictions; at the same time, they were forced to pay for their rental spaces, which further led them to borrow from financial institutions, friends or relatives to pay for their dues. Regardless of the facts, the self-employed migrants involved in delivery services could still earn some amount from their daily work even during the lockdown since they provided home delivery to the population residing in urban regions, yet, they could not earn as they used to do before the COVID-19 phase.

**Post-Lockdown Internal Migration in Punjab: Consumption Expenditure Preference Index Using Wilcoxon Signed Rank test**

A preference index was framed to analyze the consumption expenditure priorities of various migrants. The top ten principal expenditure particulars included were; day-to-day expenditures, expenditures on education, health expenditure, entertainment expenses, shopping expenditure, purchase of durables, expenditures on rent or expenditure bills, repayment of loans and debts, and costs for saving and investment. Migrants in self-employed and salaried-wage earners occupations rank these items according to their preferences. These ranks were scored as follows: rank one is shown a score of 10, rank two is given a score of 9, and so on, rank ten is given a score of 1; if they have not ranked the item, it is given a score of zero. After providing the score average score was worked out, which was taken as the preference index. As the index is higher, the preference for that item will be more. So based on the preference index, they were ranked to identify which item they prioritized.

The results in table 6 represent that almost all the respondent's first five preferences were the basic needs of human beings; food, housing, education, health and clothes. For instance, ranked first was given to the daily expenses (Day-to-day expenditure) regardless of their occupation. Second preference was given to the repayment of debt/loans. Likewise, the third preference was for the repayment of rent/ bills. Forth, preference was given to the education expenditure in both occupations. Similarly, the least preference was given to the entertainment expenditure in the self-employed domain, whereas it was the purchase of durables for salaried/wage-earner migrants. Thus, the items the respondents rank higher in are education, health, house construction, clothes, debt repayments, etc.

Further, the significant results of The Wilcoxon Signed Rank test (z-value = 5.396; p-value = 0.000) show that the tendency to various expenditure items in both occupations was significantly different. Thus, the Null hypothesis (H0) that there is no difference in consumption expenditure preferences of both professions is rejected. The results also acknowledge that the choices of the migrants are not identical but differ according to their needs.

Apart from the consumption expenditure, the economic status of the self-employed migrant and salaried/wage-earner migrant households was also calculated. Out of 400 internal migrants, overall, every migrant in both professions has had some savings in their bank accounts or cash in hand reserved for emergencies like nationwide lockdowns. Similarly, only 65 internal migrants (16.25 per cent) have invested some of their money in some assets. At the same time, 335 migrants (83.75 per cent) reported having no investment plan. Moreover, it was reported that out of 400 internal migrants, 225 internal migrants (56.25 per cent) were in debt.

Table 6: Distribution of Internal Migrants of Punjab by Consumption Expenditure Preference Index

| Social-Economic Variables | Self Employed Migrants | Salaried/Wage Earners |
|---|---|---|
| Mean | 8978.8 | 12499.15 |

| Std. Deviation | 464.0934 | | 572.904 | |
|---|---|---|---|---|
| t-value | 4.7747 | | Significant at 0.05 level | |
| p-value | 0.000 | | | |
| Expenditure Priority | Rank % | Rank Score | Rank % | Rank Score |
| 1. Day-to-Day Expenditure | 23.54 | 10 | 23.62 | 10 |
| 2. Expenditure on Self/Children Education | 7.01 | 7 | 10.01 | 7 |
| 3. Health Care/Medical Expenditure | 5.94 | 5 | 4.98 | 4 |
| 4. Entertainment Expenditure | 2.51 | 1 | 3.87 | 2 |
| 5. Shopping Expen. (Clothing/Bedding) | 4.37 | 2 | 5.02 | 5 |
| 6. Purchase of Durables | 4.69 | 4 | 3.85 | 1 |
| 7. House Rent and Other Bills | 20.16 | 8 | 17.33 | 8 |
| 8. Loan/Debt Repayment | 21.27 | 9 | 19.68 | 9 |
| 9. Saving/Investment | 6.05 | 6 | 4.80 | 3 |
| 10. Miscellaneous | 4.47 | 3 | 6.86 | 6 |
| Total | 100.00 | 55 | 100.00 | 55 |
| Z-value = 5.396; p-value = 0.000 | | | | |
| Saving/Investment/Debt | | | | |
| Savings | 200 | 100.00 | 200 | 100.00 |
| Investment | 12 | 6.00 | 53 | 26.50 |
| Pearson $\chi 2$ value = 34.15 P≤ 0.000, *** Significant | | | | |
| Debt/Loan | 128 | 64.00 | 97 | 48.50 |
| Pearson $\chi 2$ value = 9.76 P≥0.001, s*** Significant | | | | |

**Source:** Author Calculation from Survey Data

In contrast, 175 migrants (43.75 per cent) reported no debt or loan. The Pearson chi-square test was done to establish the above matter statistically. Thus the $\chi 2$ results show the difference among self-employed and salaried/wage-earner migrants in the investment and debt/loan status was found significant at a 1 per cent significance level. Thus, it is clear from the survey data that respondents' status regarding investments and debt varied widely in both professions (Table 6).

## 4. Empirical Results and Analysis

Here, logistic regression has been used to identify the socioeconomic determinants of internal migration in the post-lockdown phase to learn who migrates and why. The dependent variable in logistic regression is binary or dichotomous, indicating that it only contains data that is classified as 1 (Ready to move, success, migrant, etc.) or 0 (not present) (Not ready to move, failure, non-migrant, etc.). Logistic regression generates the coefficients (and its standard errors and significance levels) of a formula to predict a logit transformation of the probability of the presence of the characteristic of interest:

**The logit model is defined as:**

$$Pi = E\left(y = \frac{1}{X1}, X_2, \dots, X_k\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} + \beta_{13} X_{13} + \beta_{14} X_{14} + \beta_{15} X_{15} \quad (1)$$

Y=1 if at least one member of the household migrates during the year, and 0 otherwise

$$Pi = E\left(Y = \frac{1}{X_1}, X_{2,} \dots, X_{15}\right) = \frac{1}{1+e^{-(\beta 0+\beta 1X1+\beta 2X2,\dots,\beta 15X15)}} \quad (2)$$

For ease of exposition, we can write the Equation (2) as

$$Pi = \frac{1}{1+e^{-Zi}} = \frac{e^Z}{1+e^Z} \quad (3)$$

Where $Zi = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} + \beta_{13} X_{13} + \beta_{14} X_{14} + \beta_{15} X_{15}$

Equation (3) represents the cumulative logistic distribution function. Here, our explanatory variable (X) is a household and individual character vector. In the individual character, gender, marital status, age at the time of migration, year of education, a decline in income, poverty or debt, low agriculture interest, better employment or income opportunities, marriage, better/advanced lifestyle, better education, monthly per capita consumption, per capita land holding, dependency ratio and household size have been taken as the explanatory variable. Among the household character, we include the (log) value of per capita land passed (in hectares), log per capita monthly consumption expenditure, size of the household, SC, ST, OBC and, lastly, the dependency ratio of the household (ratio of non-working members to a total member of the household).

The regression has been analyzed among the dependent and explanatory variables using the logit method. It has been assumed that the migrants with higher monthly per capita expenditure, more land holdings, and greater dependency ratio tend to migrate less than otherwise. On the other hand, the people finding it hard to get employment at their destination, earning low wages, struggling with debt trap or poverty are more inclined towards internal movement. In the present model male, married, moved due to a decline in income, moved due to poverty or debt, moved due to having a low agriculture interest, moved in search of better employment or income opportunities, moved to accompany spouse/marriage, moved in search of better/advance lifestyle, moved for better education, have been taken as one, otherwise zero.

The logistic regression result shows at the individual level, gender, marriage, age, year of education, move due to decline in income/poverty/debt/marriage, the search for better employment/income/education, and household size are significantly associated with internal migration. For example, the results show that males are 3.63 times more likely to migrate out than females. Married individuals are 1.82 times more likely to migrate than others. Internal migration is considered a male-dominated activity; younger people are more likely to migrate than older ones simply because they can work harder. In the study area, education is associated with internal migration in analysis, as migrants had significantly higher levels of education than non-migrants. From Table 12, we find a statistically significant relationship between years of formal education and internal migration.

As hypothesized, larger-sized households have a positive effect on raising migration. Since casual labour is the primary input in agriculture and allied production activities, many family members act as more working or earning hands. Thus, household size is hypothesized to determine migration positively in one or another ways. Results show that there is a positive association between migrations of household size. This positively affects the flow of migration from one place to other.

Ceteris paribus, the likelihood odd ratio discloses a negative association between monthly per capita consumption, per capita land holdings, dependency ratio, and lack of agriculture interest. Preferences for other occupations are 0.390 greater than choosing agriculture and allied activities. In household character, monthly per capita consumption expenditure, per capita landholding, and dependency ratio significantly affect internal migration. Land is one of the essential assets of people's livelihoods in native regions. Land ownership, in particular, is the basis of relative wealth comparisons between rural households and a source of rural employment. This asset is of specific interest to study the determinants of internal migration in this and other contexts.

The logistic regression analysis shows a significant negative relationship between land ownership and internal migration; the more land owned by a household, the less the household is likely to migrate. The scarcity of farmland is an essential factor in the out-migration of rural people seeking wages and related employment opportunities. About 93 per cent of migrant households have small landholding. Families having more land are 0.384 times less likely to migrate. In other words, an increase in (log) land by one unit decreases the probability of migration by a factor of 0.384 (Table 7).

Further, households with more per capita monthly consumption expenditures are less likely to migrate. The odds ratio in the model shows that other things remaining constant, an increase in (log) monthly per capita consumption expenditure by one unit decreases the probability of migration by a factor of 0.034. Similarly, it has been identified that the higher the dependency ratio, the more individual is 0.209 times less likely to migrate, ceteris paribus. This means an increase in the ratio of non-working family members to total family members in a household also decreases the relative likelihood of migration by nearly 0.209 times (Table 14). The study shows that the highest internal migration rates post-lockdown period are from households with no land or small landholdings with low agricultural potential.

Table 7: Logistic Regression Result

| Variables | Odds Ratio | St. Err. | Z | p-value | Sig |
|---|---|---|---|---|---|
| Gender | 3.731 | 1.582 | 3.11 | 0.002 | *** |
| Married | 2.269 | 0.922 | 2.01 | 0.044 | ** |
| Age | 3.442 | 1.606 | 2.65 | 0.008 | *** |
| Year Education | 0.423 | 0.205 | 1.77 | 0.076 | * |
| Moved due Decline in Income | 3.652 | 1.835 | 2.58 | 0.01 | *** |
| Moved due to Poverty/Debt | 4.546 | 2.044 | 3.37 | 0.001 | *** |
| Moved Due to Marriage | 0.129 | 0.059 | 4.52 | 0 | *** |
| In Search of Better Emp/Income | 3.042 | 1.381 | 2.45 | 0.014 | ** |
| In Search of a Better/Advance Life Style | 0.477 | 0.210 | 1.68 | 0.092 | * |

| | | | | | |
|---|---|---|---|---|---|
| In Search of Children's Better Education | 4.377 | 2.138 | 3.02 | 0.003 | *** |
| Household Size | 2.515 | 1.256 | 1.85 | 0.065 | * |
| Monthly Per Capita Consumption | 0.043 | 0.023 | -5.87 | 0.001 | *** |
| Per Capita Land Holdings | 0.370 | 0.211 | -1.74 | 0.082 | * |
| Dependency Ratio | 0.170 | 0.099 | -3.04 | 0.002 | *** |
| Lack of Agri Interest | 0.264 | 0.130 | -2.71 | 0.007 | *** |
| Constant | 2.310 | 2.962 | 0.65 | 0.514 | |

| | | | |
|---|---|---|---|
| Number of observation | 400 | LR chi2(15) | 361.65 |
| Pseudo R2 | 0.6522 | Prob > chi2 | 0.0000 |
| Log-likelihood | -96.431991 | Significance | *** p<.01, ** p<.05, * p<.1 |

**Source:** Author Calculation from Survey Data

## 5. Conclusion

Undoubtedly, the COVID-19 pandemic has brought disproportionate socioeconomic and welfare impacts on the economy and residents' livelihoods, especially the internal migrants. With the imposition of the lockdown, all economic activities were also temporarily closed down. The internal migrants, who were solely dependent on the monthly wages, were hit the most adversely compared to other residents. It cannot be underestimated that these internal migrants were also found to be deprived of various social security schemes since they did not come through any registered employment agency; instead, they were either self-motivated or supported by their friends or relatives. That is why their harsh surviving conditions remained unnoticed during the lockdown period, and consequently, they endured unimagined socioeconomic and psychological problems due to a lack of proper records.

The empirical findings from the logistic regression model demonstrated that a decline in monthly income, poverty or debt, low agriculture productivity and lack of interest in allied agricultural activities, monthly per capita consumption, per capita land holding, dependency ratio and household size at native places were significant push factors for internal migration. At the same time, better employment or income opportunities, marriage, better/advanced lifestyle, better education and hospitality were chief pull factors responsible for the migration during the post-lock-down period. These findings indicate that the recently shifted migrants are from poor households involved in physically laborious jobs with unfavourable environmental conditions. Family members, mainly children and senior citizens accompanying their migrant parents, are found to be the most vulnerable and risk-prone from their education and health perspectives, respectively.

Now, as the restriction on movement is plummeting and the economic activities are recovering, most migrants from economically backward regions have found to shift towards urban areas. Though people have started their monthly earnings with the recovery of economic activities, they still have difficulty making ends meet due to the depletion of their reserve savings, unexpected expenditure and repaying their loans. Due to lenders' limited ability to extend credit, the currently available borrowing alternative is also under significant stress. It was further observed it could take a while for the income and employment of the residents to return to pre-pandemic levels in India due to several implicit and explicit factors; in such cases, it is suggested that the government must develop a thorough strategy to address the effects of COVID-19 on the socioeconomic livelihood of residents, including their job and income losses. The government should continue distributing free grains and other necessary non-food goods to provide a minimum food support system.

Moreover, the employment plans, such as the Mahatma Gandhi National Rural Employment Guarantee Scheme, with a job guarantee, should be implemented in urban regions since it was reported that employment or salary loss was more adversely affected in the metropolitan regions as compared to the rural areas. Thus, a comprehensive employment scheme in urban regions could help provide the residents with a minimum level of job security and monthly earnings at the destination. It is further suggested that various NGOs may also be employed at different levels to find COVID-19's most affected homes and support them with food and other essentials.

Lastly, a proper understanding of the magnitude and severity of the socioeconomic problems of internal migrants, particularly in the post-lockdown period and suggesting a robust policy framework for managing the state's immigration process is essential for mitigating the impacts of the COVID-19 pandemic. Since the effects of the COVID-19 outbreak on internal

migration and migrants are extensive and yet to be analyzed, the suggestions mentioned above, if implemented effectively, could help to alleviate the adverse effects of the COVID-19 pandemic, particularly in the context of internal migration.

**Acknowledgement:**

Dr Gurwinder Singh Badal is an ICSSR Post-Doctoral Fellowship recipient (F. No: 3-186/2021-22/PDF/SC).). The Indian Council of Social Science Research's Post-Doctoral Fellowship (ICSSR) significantly contributed to the creationof this study. However, the author is responsible for the information provided, the views expressed, and the conclusions formed.

## 6. References

Abiad, A., Platitas, R., & Pagaduan, J. (2020). The Impact of Covid-19 on developing Asia: The pandemic extends into 2021.

Abreu, A. (2012). The new economics of labour migration: Beware of neoclassical bearing gifts, Forum for social economics, 41(1), 46-67.

Acharya, A., & Acharya, N. (2020). COVID-19: Can reverse migration help revive rural economy of Odisha. Opinions (May 7, 2020). URL: https://www. Cbga India. org/blog/covid-19-can-reverse-migration help-revive-rural-economy-Odisha.

Adda, J. (2016). Economic activity and the spread of viral diseases: Evidence from high frequency data. The Quarterly Journal of Economics, 131(2), 891-941.

Adolph, J. (2022). New Country, New (s) Habits: How does migration affect news consumption and avoidance behavior?: A case study on young millennial immigrants living in Stockholm, Sweden.

Afridi, F., Dhillon, A., & Roy, S. (2020). How has the Covid-19 crisis affected the urban poor? Findings from a phone survey—I. Ideas for India. https://www. ideas for India. In/topics/poverty-inequality/how-has-covid-19crisis-affected-the urban-poor-findings-from-a-phone-survey.html

Aggarwal, V., Singh, P., & Mitra, R. (2020). How state governments disenfranchise interstate migrants in India.

Arya, S., & Roy, A. (2006). Poverty, Gender and Migration, Sage Publications, New Delhi.

Barro, R., Ursua, J., & Weng, J. (2020). Coronavirus meets the great influenza pandemic. VoxEU. org, 20.

Bartik, A. W., Bertrand, M., Cullen, Z. B., Glaeser, E. L., Luca, M., & Stanton, C. T. (2020). How are small businesses adjusting to COVID-19? Early evidence from a survey (No. w26989). National Bureau of Economic Research.

Basole, A., Abraham, R., Lahoti, R., Kesar, S., Jha, M., Nath, P., ... & Narayanan, R. (2021). State of working India 2021: one year of Covid-19.

Bertrand, M., Krishnan, K., & Schofield, H. (2020, May 11). How are Indian households coping under the COVID-19 lockdown? 8 key findings. The University of Chicago, Becker Friedman Institute for Economics. https://www.chicagobooth.edu/research/rustandy/ blog/2020/how-are-Indian-households-coping-under-the-covid19-lockdown

Beshers, J. M., & Nishiura, E. N. (1961). A theory of internal migration differentials. Social Forces, 39(3), 214-218.

Bhagat, R. B. (2008). Assessing the measurement of internal migration in India, Asian and Pacific Migration Journal, 17(1), 91-102.

Bhagat, R. B. (2022). Population and the Political Imagination: Census, Register and Citizenship in India. Taylor & Francis.

Bhagat, R. B., & Mohanty, S. (2008). Trend and pattern of urbanization in India: a demographic assessment, Annual meeting of the Population Association of America, New Orleans, 16-19.

Bhagat, R. B., Keshri, K., & Ansary, R. (2018, July). Internal migration in India: Intensity, flows and impact. In the workshop on "Comparing Internal Migration in the Countries of Asia.

Bhagat, R. B., Reshmi, R. S., Sahoo, H., Roy, A. K., & Govil, D. (2020). The COVID-19, migration and livelihood in India: challenges and policy issues. Migration Letters, 17(5), 705-718.

Bigsten, A. (1996). The circular migration of smallholders in Kenya. Journal of African Economies, 5(1), 1-20.

Bloom, N., Floetotto, M., Jaimovich, N., Saporta-Eksten, I., & Terry, S. J. (2018). Really uncertain business cycles. Econometrica, 86(3), 1031-1065.

Brodeur, A., Clark, A. E., Fleche, S., & Powdthavee, N. (2020). Assessing the impact of the coronavirus lockdown on unhappiness, loneliness, and boredom using Google Trends. arXiv preprint arXiv:2004.12129.

Byerly, C. R. (2010). The US military and the influenza pandemic of 1918–1919. Public health reports, 125(3_suppl), 81-91.

Campbell, E. K. (2010). The role of remittances in Botswana: Does internal migration really reward sending families? Population, Space and Place, 16(2), 151-164.

Centre for Equity Studies. https://centreforequitystudies.org/reports/ Singh et al. 411

Chakraborty, D., & Kuri, P. K. (2017). The household level determinants in the choice and level of migration: A micro study in West Bengal. Environment and Urbanization ASIA, 8(1), 94-104.

Chenery, H. B. (1975). The structuralist approach to development policy. The American Economic Review, 65(2), 310-316.

Cheong, I. (2020). The experience of South Korea with COVID-19. In Mitigating the COVID economic crisis: Act fast and do whatever it takes (pp. 113-120). CEPR Press.

Coibion, O., Gorodnichenko, Y., & Weber, M. (2020). The cost of the Covid-19 crisis: Lockdowns, macroeconomic expectations, and consumer spending. Working Paper No. 27141. NBER. https://doi.org/10.3386/w27141

Da Silva Costa, D. K. (2022). Labour Migration and Covid-19 pandemic: The Socioeconomic Impacts of the Crisis on Tajik and Kyrgyz Migrants' Remittances.

Damani, I. (2020). Ethnology in the German Democratic Republic (GDR):(Re-) Migration and Transfer of Knowledge behind the "Iron Curtain ". Bérose-Encyclopédie internationale des histoires de l 'anthropologie.

Day, R. H., Dasgupta, S., Datta, S. K., & Nugent, J. B. (1987). Instability in rural-urban migration, The Economic Journal, 97(388), 940-950.

De Haan, A. (2002). Migration and livelihoods in historical perspective: A case study of Bihar, India. Journal of development studies, 38(5), 115-142.

De Haas, H. (2006). Migration, remittances and regional development in Southern Morocco. Geoforum, 37(4), 565-580.

De Haas, H. (2007). Turning the tide? Why development will not stop migration. Development and change, 38(5), 819-841.

De Haas, H., & Fokkema, T. (2010). Intra-household conflicts in migration decision-making: Return and pendulum migration in Morocco. Population and Development Review, 36(3), 541-561.

Deaton, A. (2004). Health in an Age of Globalization.

Deshingkar, P., & Akter, S. (2009). Migration and human development in India.

Deshpande, A. (2020). The Covid-19 pandemic and lockdown: First effects on gender gaps in employment and domestic work in India. Discussion Paper No. 30. Discussion Paper Series in Economics. Ashoka University, Department of Economics. ftp://52.172.205.73/ash/wpaper/paper30.pdf

Ellis, F. (2003). A livelihoods approach to migration and poverty reduction.

Fairlie, R. W., Couch, K., & Xu, H. (2020). The impacts of COVID-19 on minority unemployment: First evidence from April 2020 CPS Microdata. Working Paper No. 27246. NBER. https://doi.org/10.3386/w27246

Garret, H. E., & Woodworth, R. S. (1969). The reliability and validity of test scores. Statistics In Psychology and Education, 337-370.

Gill, S.S. (2001), "Changing of land relations of Punjab and implications for land reforms", Dhindsa, K.S. and Sharma, A. (eds.), Dynamics of agricultural development, New Delhi, Concept publishing company, pp. 115-116.

Gimba, Z., & Kumshe, M. G. (2011). Causes and effects of rural-urban migration in Borno state: a case study of Maiduguri Metropolis. Asian Journal of Business and Management Sciences, 1(1), 168-172.

Gopinath, G. (2020). Limiting the economic fallout of the coronavirus with large targeted policies. In R. Baldwin & B. W. di Mauro (Eds.), Mitigating the COVID economic crisis: Act fast and do whatever it takes. CEPR Press. https://voxeu.org/content/ mitigating-covid-economic-crisis-act-fast-and-do-whatever-it-takes

Greenwood, M. J. (1997). Internal migration in developed countries. Handbook of population and family economics, 1, 647-720.

Gupta, D., Biswas, D., & Kabiraj, P. (2021). COVID-19 outbreak and Urban dynamics: Regional variations in India. GeoJournal, 1-19.

Hale, T., Angrist, N., Kira, B., Petherick, A., Phillips, T., & Webster, S. (2020). Variation in government responses to COVID-19.

Harris, J. R., & Todaro, M. P. (1970). Migration, unemployment and development: a two-sector analysis, The American economic review, 126-142.

Hull, J. R. (2007). Migration, remittances and monetization of farm labour in subsistence sending areas. Asian and Pacific Migration Journal, 16(4), 451-484.

ILO. (2020). COVID-19: Labour market measures (India). https://labordoc.ilo.org/ discovery/fulldisplay/alma995096592102676/41ILO_INST:41ILO_V2

Inamdar, V., & Thusoo, S. (2020). COVID-19 reverse migration calls for long-term rural development planning. The Wire, 16.

International Labour Organization. http://www.ilo.org/global/topics/ corona virus/impacts-and-responses/WCMS_740877/lang--en/index.htm

IOM International Organization for Migration. (2011). Glossary on Migration, International migration law series No. 25.

Irudaya Rajan, S., Sivakumar, P., & Srinivasan, A. (2020). The COVID-19 pandemic and internal labour migration in India: A 'crisis of mobility. The Indian Journal of Labour Economics, 63(4), 1021-1039.

Jain, V., & Singh, L. (2020). Global spread & determinants of the initial phase of COVID-19 pandemic. Discussion Paper No. 18; CDIES. Centre for Development Economics and Innovation Studies (CDEIS), Punjabi University.

Johnson, D. G. (1948). Mobility as a field of economic research, Southern Economic Journal,152-161.

Jothy, K., & Kalaiselvi, S. (2013). Reproductive and Child Health Status Differentials in Tamil Nadu. Research Journal of Humanities and Social Sciences, 4(2), 223-230.

Kandhare, S. S., Bharadi, H. H., & 15. (2019). Internal labour migration in India: Its trends and patterns. J. of Econ. Soc. Dev, 15, 78-85.

Keshri, K., & Bhagat, R. B. (2012). Temporary and seasonal migration: Regional pattern, characteristics and associated factors. Economic and Political Weekly, 81-88.

Khanna, A. (2020). Impact of migration of labour force due to global COVID-19 pandemic with reference to India. Journal of Health Management, 22(2), 181-191.

Kone, Z. L., Liu, M. Y., Mattoo, A., Ozden, C., & Sharma, S. (2018). Internal borders and migration in India. Journal of Economic Geography, 18(4), 729-759.

Kumar, M. Cultural Migration from Pakistan and Impact of these Cultures on Northern Haryana after the Partition of India.

Kumar, N., & Sidhu, A. S. (2005). Pull and push factors in labour migration: a study of brick-kiln Workers in Punjab. Indian Journal of Industrial Relations, 221-232.

Kuznets, S., & Murphy, J. T. (1966). Modern economic growth: Rate, structure, and spread (Vol. 2). New Haven: Yale University Press.

Larson, D., & Mundlak, Y. (1997). On the intersectoral migration of agricultural labor. Economic Development and Cultural Change, 45(2), 295-319.

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

Lewis, W. A. (1954). Economic development with unlimited supplies of labour.

Lucas, R. E. (1997). Internal migration in developing countries. Handbook of population and family economics, 1, 721-798.

Lusome, R., & Bhagat, R. (2006, June). Trends and patterns of internal migration in India, 1971-2001. In the Annual conference of Indian Association for the Study of Population (IASP) during (Vol. 7, p. 9). Thiruvananthapuram: Indian Association for the Study of Population (IASP).

Malhotra, N. (2015). Factors in internal labour migration in India. ENVISION-International Journal of Commerce and Management, 9, 47-55.

Malhotra, N., & Devi, P. (2016). Analysis of factors affecting internal migration in India. Amity Journal of Economics, 1(2), 34-51.

Misra, S. N. (1998). Dynamics of rural-urban migration in India (No. Ed. 1). Anmol Publications.

Mohapatra, N. K. (2013). Migration and Its Impact on Security of Central Asia. India Quarterly, 69(2), 133-157.

Monitor, I. L. O. (2020). COVID-19 and the world of work. Updated estimates and analysis, 27.

Nations, U. (2015). Department of Economic and Social Affairs, population division. Int Migr Rep.

Nayar, P. K. (2020). The long walk: Migrant workers and extreme mobility in the age of Corona. Journal of Extreme Anthropology, 4(1), E1–E6. https://doi.org/10.5617/ jea.7856

Oberai, A. S. (1987). Migration, urbanization and development (No. 5). International Labour Organisation.

Oberai, A.S. and H.K. Manmohan Singh (1983). Causes and Consequences of Internal Migration: A Study in the India Punjab, Oxford University Press, Delhi.

Prebisch, R. (1959). Commercial policy in the underdeveloped countries. the American economic review, 49(2), 251-273.

Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. General psychiatry, 33(2).

Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. General psychiatry, 33(2).

Rahul. (2021). Migration and Urbanization in Haryana: Patterns, Characteristics and Correlates. Unpublished Dissertation, Presented and Submitted at International Institute for Population Science, Mumbai.

Ranis, G., & Fei, J. C. (1961). A theory of economic development. The American economic review, 533-565.

Rapone, R. L. (2020). Identity and Intergenerational Transmission of Culture: A Study of the Italian Diaspora Across Three Countries (Doctoral dissertation).

Ravenstein, E. G. (1885). The laws of migration. Journal of the statistical society of London, 48(2), 167-235.

Ray, D., & Subramanian, S. (2020). India's lockdown: An interim report. Working Paper No. 27282. NBER. https://doi.org/10.3386/w27282

Rele, J. R. (1969). Trends and significance of internal migration in India. Sankhyā: The Indian Journal of Statistics, Series B, 501-508.

RGI (2001). Census of India 1981, Series 1, India, Migration Tables, Registrar General and Census Commissioner, India, New Delhi.

RGI (2005), Census of India 1981, Series 1, India, Migration Tables, Registrar General and Census Commissioner, India, New Delhi.

RGI (2011). Census of India 2001, Series 1, India, Migration Tables, Registrar General and Census Commissioner, India, New Delhi.

Rojas, F. L., Jiang, X., Montenovo, L., Simon, K. I., Weinberg, B. A., & Wing, C. (2020). Is the cure worse than the problem itself? Immediate labour market effects of COVID-19 case rates and school closures in the U.S. Working Paper No. 27127. NBER. https:// doi.org/10.3386/w27127

Sengupta, S., & Jha, M. K. (2020). Social policy, COVID-19 and impoverished migrants: challenges and prospects in locked down India. The International Journal of Community and Social Development, 2(2), 152-172.

Sidhu, M. S., Rangi, P. S., & Singh, K. (1997). A study on migrant agricultural labour in Punjab. A study on migrant agricultural labour in Punjab.

Singh, G., & Singh, S. (2016). Pattern and determinants of internal migration in Punjab: Evidence from population census data, Splint International Journal of Professionals, 3(8), 48.

Singh, I., & Kumar, N. (2020). Punjab's fight against COVID-19: Hopes, Fears and the Balancing Act. University Practice Connect, Azim Premji University. https:// practiceconnect.azimpremjiuniversity.edu.in/punjabs-fight-against-covid-19-hopes fears-and-the-balancing-act/

Singh, K. (1991). Internal Migration in a Developing Economy, National Book Organization, 22-26.

Singh, M., & Shandilya, S. (2012). Internal migration in India. Journal of Business Management & Social Sciences Research, 1(3), 66-69.

Singh, R. P., & Chauhan, A. (2020). Impact of lockdown on air quality in India during the COVID-19 pandemic. Air Quality, Atmosphere & Health, 13(8), 921-928.

Singh, V. K., Kumar, A., & Yadava, K. N. S. (2016). Distance and Marriage Migration. International Journal of Management and Development Studies, 5(3), 76-83.

Srivastava, R., Keshri, K., Guar, K., Balakrushna, P., & Jha, A. K. (2020). Internal migration in India and the impact of uneven regional development and demographic transition across states: A study for evidence-based policy recommendations. Delhi.

Stark, O., & Bloom, D. E. (1985). The new economics of labor migration. The American Economic Review, 75(2), 173-178.

Stark, O., & Levhari, D. (1982). On migration and risk in LDCs. Economic development and cultural change, 31(1), 191-196.

Swain, A. (2020). COVID-19 strategy—The Swedish model and lessons for India.

Taylor, J. E., Rozelle, S., & De Brauw, A. (2003). Migration and incomes in source communities: A new economics of migration perspective from China. Economic Development and Cultural Change, 52(1), 75-101.

Todaro, M. P. (1976). Internal migration in developing countries; a review of theory, evidence, methodology and research priorities.

Tognotti, E. (2013). Lessons from the history of quarantine, from plague to influenza A. Emerging infectious diseases, 19(2), 254.

Tsegai, D. (2007). Migration as a household decision: What are the roles of income differences? Insights from the Volta basin of Ghana. The European journal of development research, 19(2), 305-326.

Verikios, G. (2020). The dynamic effects of infectious disease outbreaks: The case of pandemic influenza and human coronavirus. Socioeconomic Planning Sciences, 71, 100898.