"What Drives Workers' Reverse Migration From SMES: Economic, Social, Health or Workplace Factors Post Disasters?"

Indrajit Khandai

Centre of Excellence in Disaster Management (CEDM), Block E

GGSIP University, Dwarka, New Delhi-110078

indrajit.khandai@gmail.com

Ashish Kumar

University School of Management Studies, GGS IP University New Delhi-110078 ashishkmr059@gmail.com

Dr. S Sanjay Kumar

Associate Professor, USMS, GGSIP University, Sector 16 C, Dwarka, New Delhi-11007 sanjay.kumar@ipu.ac.in

Abstract

Reverse migration, the phenomenon where migrant workers return to their native places, has garnered significant attention, particularly in the context of small and medium enterprises (SMEs) post disasters like Covid-19. This study explores the factors influencing reverse migration from manufacturing units of SMEs, focusing on the perspectives of migrant workers from neighboring states. Drawing from primary data collected through surveys and interviews, the study identified social, health, sources of relief, and food insecurity determinants as key contributors to reverse migration decisions. The insights from the study indicate social, health, sources of relief, and food insecurity determinants have significant positive impacts on reverse migration, whereas economic and housing factors have either weak or non-significant influence on reverse migration. This is contrary to previous research studies, which focus on reverse migration of migrant workers from unorganized sectors such as construction, hospitality, tourism, and other service sectors. Pull factors such as feeling sense of relief at being in native place, a sense of sustainable life, emotional fulfillment, advance decision to travel arrangement, greater sense of relief and quality of life at home played vital role in their decision to return to their native place. The findings indicate a nuanced interplay among these factors, with the COVID-19 pandemic intensifying the reverse migration trend. The study emphasizes the need for policy interventions, such as improved accessible healthcare systems near SMEs, localized economic development, conducting mandatory disaster awareness and preparedness programs, and support systems to address the challenges and optimize the potential of migrant workers. These are initiatives that can help minimize the risks and build confidence in workers' minds to restrict reverse migration in any disaster-like situation, like a pandemic, in the future.

Keywords: Reverse Migration, Migrant Workers, SMEs, Disasters

1. Introduction

The global reverse migration of migrant workers post-pandemic emerged as a critical issue, particularly in low- and middle-income countries, where the unorganized sector dominates employment. As COVID-19 lockdowns halted economic activities, millions of internal and international migrants lost jobs and housing, triggering mass return movements to rural or native regions (Foley & Piper, 2021). In India alone, over 10 million migrants returned home within weeks of the nationwide lockdown, reflecting broader global patterns of urban-to-rural displacement (Tiwari & Majumdar, 2024). The sudden loss of income, lack of social protection, and fear of infection in densely populated urban areas acted as strong push factors (Srivastava, 2020). In India, debt levels among individuals have risen due to job losses, reduced income, financial loss and the burden of COVID-19 treatment. In addition to upsetting labor markets and remittance flows, this massive

reverse migration made clear how urgently inclusive migration governance and resilience-focused labor policies are needed (Bhagat et al., 2020).

Particularly when it comes to employees of small and medium-sized businesses (SMEs), reverse migration—the transfer of people returning to their native places, countries or regions after originally migrating for work—has drawn more attention. Finding the variables that led to migrant labor in the manufacturing sector of SMEs, particularly in a few industrial districts of Delhi, India's National Capital Territory, after the pandemic is the study's main goal. Research conducted thus far has shown that workers in unorganized industries including retail, transportation, textiles, and construction migrate backwards. Reverse migration is influenced by a number of factors, including housing, employment, health, social, and economic concerns. Poor working conditions, a lack of social integration, and economic instability in the host nation might all encourage people to return home in quest of better chances. This problem is especially common among SME workers, who frequently deal with unstable work environments, such as poor or stagnating pay, erratic work schedules, and a lack of job security, all of which exacerbate the option to return home.

Economic instability in the host country often acts as a catalyst for reverse migration, especially when workers face significant challenges in securing stable employment. Many SME workers, who are often employed in labor-intensive or low-wage sectors, may find that their earning potential diminishes during periods of economic downturns. In such cases, workers may return to their native places or countries, where they perceive economic conditions to be more favorable or where they can leverage their skills and social networks for entrepreneurship or other opportunities. Furthermore, the rising cost of living in the host country, compounded by limited access to social services, exacerbates the sense of financial insecurity among migrant workers, pushing them to reconsider their migration decisions.

Workers' decisions to migrate backwards are also heavily influenced by their social responsibilities. Family obligations, such as caring for aging parents, funding children's education, or meeting cultural or social expectations, can put pressure on workers to return home. In civilizations where family and community support are essential to an individual's well-being, the strength of these social ties may be a powerful motivator. Over time, the allure of family responsibilities and cultural standards may surpass the financial advantages of remaining in the host country or place of origin, even though for many SME workers the prospect of better pay or working conditions overseas may initially exceed these social commitments.

Lastly, SME workers' decisions to participate in reverse migration are strongly influenced by their working conditions. Workers may reevaluate their migratory plans as a result of unfavorable working conditions, such as job instability, hazardous working conditions, excessive work hours, and insufficient pay. Due to restricted access to employment benefits like social security and health insurance, as well as a lack of upward mobility, many employees in SMEs may decide to return home, where they may find greater social safety nets or be able to launch their own businesses. Reverse migration patterns are frequently shaped by the disparity between the labor circumstances in the host nation and the opportunities back home, particularly when the home countries provide better working conditions, less competitive job markets, or chances for entrepreneurship.

Reverse migration among SME migrant workers is influenced by a complex interaction of economic, social, health, and workplace variables, whereas migrant workers in the informal sector are susceptible to lockdowns, boundary closures, and abrupt loss of jobs and livelihood. The decision to return home is influenced by a number of factors, including unstable economies, duties to one's family, and unpleasant working conditions.

This study aims at finding factors of workers' reverse migration and significant factors impacting workers' reverse migration post pandemic specific to manufacturing sectors of SMEs in select industrial estate of NCT of Delhi.

2. Review of the literature and formulation of hypotheses

2.1 The theoretical foundation

An important paradigm for comprehending reverse migration patterns, especially in the context of disasters, is the Push-Pull Theory of Migration (Lee, 1966). In this idea, people's decisions to migrate are impacted by a mix of pull factors that draw people to a new place or to their native place and push forces that force them to leave their present work place. Urban push factors for reverse migration from small and medium-sized businesses (SMEs) during pandemics like the COVID-19 outbreak included abrupt job losses, salary reductions, deteriorated environment conditions around housing facilities, limited access to healthcare, and fear of disease transmission. These were made worse further by the absence of social

protection for migrant workers employed by SMEs. On the other hand, pull factors in rural communities included perceived safety and stability, access to government assistance programs, and family support networks. Numerous studies (e.g., Tiwari & Majumdar, 2024; Deshingkar & Akter, 2009) emphasize how workers' decisions to leave urban jobs and return to their home areas were impacted by a combination of economic, social, health, and workplace-related pressures. Consequently, the push-pull theory does capturing the complex factors that influence reverse migration in the wake of disasters.

An increasing problem, reverse migration has drawn interest from academics from a variety of fields, especially when it comes to small and medium-sized businesses (SMEs). Although economic push and pull variables have historically dominated most of the migration literature, more recent research has started to examine how social and occupational factors influence choices to reverse migrate. Reverse migration is a complicated and multidimensional process because SME workers, in particular, confront significant labor market problems.

Economic Factors: The most susceptible group in society that was impacted by the COVID-19 pandemic were the poor and unorganized migrant workers (Bhagat et al., 2020). Due to employment losses and fear of losing their jobs, many workers' living circumstances deteriorated. The economy's unorganized segment carried a greater risk (Khanna, 2020). Many people, especially informal laborers who were more vulnerable, returned home as a result of job losses and economic instability in metropolitan regions (Tiwari & Majumdar, 2024). Two push-pull elements that contributed to workers' reverse migration during COVID-19 were the livelihood crisis and low living expenses. Additionally, during COVID-19, both of these variables have encouraged informal migrant workers to relocate from urban to rural locations (Saha et al., 2023).

Unemployment, a competitive job market, and improved livelihood opportunities in home states are among of the reasons influencing reverse migration after the pandemic (Khan & Arokkiaraj, 2021). The disruption of urban employment prospects also contributed to job losses and reverse movement of migrant workers in the informal sector (Mukherjee, 2023). The allure of going back to their home countries, where living expenses may be cheaper and family ties may be stronger, increases when workers experience a decline in income or the loss of employment possibilities (Lee & Williams, 2021). Similar findings were made by García & Rodríguez (2022), who discovered that long-term economic instability in host nations frequently makes SME workers feel more stressed financially and encourages them to return home, where there may be less chance of unemployment or more opportunities for self-employment. The Emirates' consequent economic setbacks, including a fear of the virus and falling job and financial security, threatened the survival of Indians—the largest expatriate demographic in the world (Menon et al., 2021). The issue of wage theft has been exacerbated by the COVID-19 crisis and resulting repatriation programs. COVID-19 has amplified the highly precarious situation of temporary contract migrants and has exposed key policy gaps, inadequate institutional mechanisms and a lack of political will to address decent work deficits (Foley & Piper, 2021).

Social Factors: Weldemariam et al., (2023) highlights that social, personal, economic, and policy factors were among the major drivers of return migration, but social and personal drivers were found to be the major motivating factors of decisions to return to Sub Saharan Africa. Research study by (Anuar et al., 2021) have revealed several determinants including social aspects as the driving factors towards achieving subsistence living. Living apart from family can have a substantial emotional cost for SME workers, who frequently hold unstable jobs with little social integration. According to some research, migrant workers may prefer the social environment in their home country over their own responsibilities in the host country due to a growing sense of social and cultural alienation (Rojas & Schwartz, 2021).

Workplace Factors: Another important factor influencing reverse migration in SMEs is the work environment. Small business employees frequently deal with precarious working conditions, such as short-term agreements, inadequate pay, and a lack of job security (Hernandez et al., 2021). Low-skilled migrant workers in SMEs are especially susceptible to exploitation and frequently endure unfavorable working conditions, such as long hours, dangerous tasks, and inadequate labor protections, according to Zhang and Li's (2022) study of migrant workers in the manufacturing and service sectors. These circumstances cause burnout and job unhappiness, which encourage employees to look for better possibilities back home. These difficulties are further exacerbated by SMEs' dearth of options for upward mobility or professional advancement. According to studies, a large number of SME employees, especially those working in labor-intensive industries, go back to their home countries to either launch their own business or take advantage of the less competitive local labor markets (Park & Lee, 2022).

Government Policies and Institutional Support: Reverse migration trends are greatly influenced by government policies in both the host and home nations. Workers may feel excluded in the host nation as a result of migration laws that limit their access to social services, legal employment, and residence, which may encourage them to return (Sharma & Yadav, 2021). Conversely, policies that promote entrepreneurship or investment in domestic businesses might foster an atmosphere that supports reverse migration. For example, in certain areas, home nations provide returning migrants with small business loans or tax benefits, creating an environment that encourages reverse migration (González & Estrada, 2021). In order to benefit from these advantageous circumstances and support the local economy, migrant, especially those with expertise working for SME, may decide to return home.

Research Gaps

The majority of research examine workplace or eco-social issues separately, and migrant workers are primarily found in unorganized industries including construction, transportation, agriculture, street vending, retail, domestic work, waste management, and recycling. This study focuses on finding how these determinants interplay to drive SMEs' migrant workers of the manufacturing sector in the select industrial estates of the NCT of Delhi to return to their native places post pandemic. Research explores the interplay between these factors to provide a holistic understanding of their combined impact.

2.2 Conceptual Framework

2.2.1. Economic Factors in Workers' Reverse Migration

A study observed that a large number of reverse migrant workers reported that they had no money to survive due to termination from their jobs and were forced to come back to their village (Chavan et al., 2021). Job loss is the biggest problem faced by migrants, followed by income loss (Behera et al., 2021). Another research study observes that economic factors were among the major drivers that influence reverse migration in Social, personal, economic, and policy factors were among the major drivers of return migration, but social and personal drivers were found to be the major motivating factors of decisions to return to SSA, compared to policy and economic issues (Weldemariam et al., 2023). A study by Tiwari & Majumdar (2024) found an important result: that the second wave of migration was for economic reasons as households continued to struggle in urban areas. The return phenomenon is observed when relocated individuals fail to achieve the anticipated income levels, positioning returning migrants as perceived losers in the labor market competition at the destination (Ma et al., 2024). Based on these studies, we present the following hypothesis.

Hypothesis 1. Economic factors positively impact workers' reverse migration.

2.2.2. Social Factors to Workers Reverse Migration

A research study by Weldemariam et al., (2023) highlights that social, personal, economic, and policy factors were among the major drivers of return migration, but social and personal drivers were found to be the major motivating factors of decisions to return to SSA, compared to policy and economic issues. Another study observes evidence that family support and rural social institutions such as self-help groups played a crucial role in providing support systems during the pandemic, even to those who migrated back from urban areas. (Tiwari & Majumdar, 2024). Since most of the migrant workers had neither any source of income nor any social security, they had to return to their hometown/village to avoid miseries. (Tripathi & Agrawal, 2022). Findings of a research study by (Anuar et al., 2021) have revealed several determinants: following family, career, environment, economic reasons, quality of life, and social aspects as the driving factors towards achieving subsistence living. Research by Khanna (2020) has highlighted that the migrant population with low income has no social security and experienced fear of recession during Covid-19. These studies on social aspects form the basis for the following hypothesis:

Hypothesis 2. Social factors positively impact workers' reverse migration

2.2.3. Health Factors to Workers' Reverse Migration

A research study by (Chavan et al., 2021) highlights that among the reverse migrant workers moving back to their native homes, nearly 16.4% feared getting a Covid-19 infection. Another research study. Maiti et al.'s (2024) findings highlight that most of the reverse migrant workers are susceptible to mental illnesses and received barely any medical facilities from the government during Covid-19. Choudhari (2020), in her mental health challenges faced by migrant

workers during Covid-19, concludes that internal migrant workers are a vulnerable community for the development of severe, acute, and chronic adverse mental health consequences due to the Covid-19 pandemic. Based on these studies, we present the following hypothesis:

Hypothesis 3. Health factors positively impact workers' reverse migration.

2.2.4. Housing Factors to Workers' Reverse Migration

The sudden lockdown due to Covid-19 left lakhs of migrant workers in India stranded and on the road, having lost jobs and being left without income, food, and accommodation (Suresh et al., 2020). Overcrowded accommodations significantly contributed to the spread of the recent COVID-19 infection among migrant worker populations (Samant et al., 2025). Matters related to inadequate housing of vulnerable migrant workers need to be addressed before a pandemic. It is seen that migrants who went back to their hometowns during the pandemic have a higher percentage of those who live alone in the city or share the housing/rooms with someone else in the city of New Delhi. (Raman Development Consultants Private Limited, 2023. "Impact of Covid-19 on internal migration, labor markets and urbanization in New Delhi – New Delhi Quantitative Results Report." KNOMAD, World Bank. Washington, 2023). Incentives to migrate away from the urban areas may have increased during the pandemic for several reasons: housing costs in the cities remained high and provided an incentive, especially for families, to move to suburban and rural settings with more affordable housing. (Stawarz et al., 2022). Koh (2020), in his research findings, highlights that inadequate housing of vulnerable migrant workers during Covid-19 needs to be addressed. Based on these studies, we present the following hypothesis:

Hypothesis 4. Housing factors positively impact workers' reverse migration.

2.2.5. Food Insecurity Factors to Workers' Reverse Migration

India has seen the second largest reverse migration due to the Covid-19 pandemic. This has worsened the food security status in the country with negative impact on its dimensions, viz., food availability, accessibility, affordability, and utilization (Triandafyllidou Editor, 2022) (Salunkhe et al., 2022). A research study by Ahmed et al., 2023) reveals that the spread of the pandemic has vastly increased food insecurity among international migrants through financial, legal, and other pathways. The findings of the study by Saha et al., (2023) revealed that the COVID-19 pandemic fueled informal job holders' returning to their homeland due to a low level of preparedness and mobilized resources. The study found that most respondents were at a severe level of unemployment. As a result, they could not start new income-generating ventures and encountered food insecurity due to unexpected price hikes. The findings in this report come from a household survey conducted by SAMP in mid-2021. A report argues that years of crisis living in a hyperinflationary environment in Zimbabwe left many households in a pre-pandemic state of food insecurity and vulnerable to the pandemic shock (Migration & Series, 2022).

Hypothesis 5. Food Insecurity factors positively impact workers' reverse migration.

2.2.6. Sources of Relief Factors to Workers' Reverse Migration

With the support of like-minded NGOs and church-based organizations like Guwahati Social Service Society, Assam Christian Forum, Joint Action Committee of Kharghuli, and other religious institutions, NEDSSS was in the forefront for relief activities. 43738 families were supported with dry rations, hygiene kits, sanitizer, and face masks during this Covid-19 lockdown. 1204 migrant workers who were returning from other states were provided with cooked food at different railway stations (Bhatt, 2020). The CSOs reacted swiftly to the lockdown by collectively shifting their focus to emergency food relief in order to address what they saw as an acute need. At the grass roots level, individuals and street committees spontaneously mobilized to raise resources and set up food distribution sites and community kitchens. Individual volunteers came together to form self-organizing Community Action Networks (CANs) (Adelle & Haywood, 2021).

Hypothesis 6. Sources of Relief Factors positively impact workers' reverse migration.

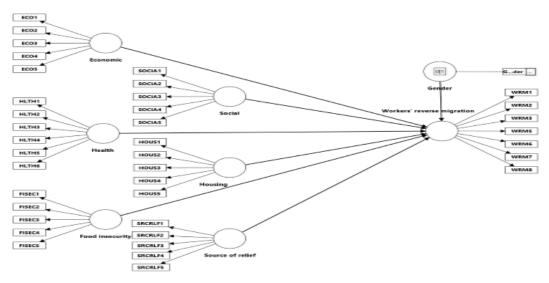


Fig 1. Proposed conceptual model with gender as control variable

3. Research Methodology

3.1 Sample statistics and survey

This study is based on a survey conducted using mixed-method structured questionnaires to examine the impact of economic, food insecurity, health, housing, social, and source of relief factors on workers' reverse migration. The research design is descriptive, and data were collected through a cross-sectional survey using purposive sampling (Tongco, 2007; Etikan, 2016) in select industrial areas of the National Capital Territory of India. A total of 165 responses were received through offline mode, which were complete in all respects and were used for analysis and interpretation. The total sample size requirement at a 5 percent significance level with a power of 0.95 (Faul et al., 2009), effect size (f2) of 0.15, and number of predictors of 6 using G*Power was 146. Our sample of 165 was found to be appropriate. In a pilot study, 35 responses from equal migrant workers validated the reliability of the survey instrument used in the study.

3.2 Statistical methods

The study has employed the nonparametric variance-based partial least squares structural equation method (PLS-SEM) using SmartPLS 4.0 for statistical application and hypotheses testing (Ringle et al., 2015).

4. Results and analysis

Descriptive Statistic

Table 1 indicated the highest mean value of 3.72 was shown by Source of Relief, followed by Health and Source of Relief with 0.711. The variable under study represented the highest association between Source of Relief and Workers' Reverse Migration, with 0.734 (coefficient of correlation R), indicating the highest positive correlation among associations of other latent variables of PLS-SEM modelling.

Table 1
Descriptive statistics and correlations

	Mean	Stdev	Eco.	Fisec.	Hlth.	Hous.	Socia.	Srcrlf.	Wrm.
Economic	2.24	0.569	1						
Food insecurity	3.25	0.683	0.553	1					
Health	3.71	0.693	0.262	0.461	1				

Housing	2.80	0.576	0.381	0.498	0.170	1			
Social	3.39	0.700	0.188	0.310	0.378	0.017	1		
Source of Relief	3.72	0.627	0.356	0.627	0.711	0.292	0.454	1	
Workers Reverse Migration	3.61	0.652	0.347	0.598	0.656	0.274	0.509	0.734	1

Measurement Model Assessment—First-Order

Hair et al. (2022) provide guidelines for first-order evaluation in measurement model assessment in the study. Table 2 lists the reliability of indicators of all latent constructs, followed by internal consistency (RhoA and composite reliability) and convergent validity (average variance extracted—AVE). Indicator loadings of all constructs are above the critical value of 0.70 (Sarstedt et al. 2017), indicating that indicators of each construct are reflective of their associated constructs. Values of AVE for all the constructs are above the threshold value of 0.50 (Hair et al., 2022).

Table 2
Reliability and validity of the constructs.

Constructs	Coding	Factor Loadings	Cronbach's alpha	RhoA	Composite Reliability	AVE
Economic	Eco1	0.800	0.876	0.905	0.909	0.668
	Eco2	0.765				
	Eco3	0.933				
	Eco4	0.791				
	Eco5	0.788				
Food	Fisec1	0.772	0.862	0.884	0.901	0.647
Insecurity	Fisec2	0.793				
	Fisec3	0.780				
	Fisec4	0.745				
	Fisec5	0.921				
Health	Health1	0.775	0.882	0.891	0.910	0.628
	Health2	0.781				
	Health3	0.770				
	Health4	0.838				
	Health5	0.805				
	Health6	0.784				
Housing	Hous1	0.835	0.920	0.933	0.939	0.756
	Hous2	0.897				

		T		1		
	Hous3	0.801				
	Hous4	0.928				
	Hous5	0.882				
Social	Socia1	0.830	0.844	0.898	0.902	0.601
	Socia2	0.732				
	Socia3	0.720				
	Socia4	0.741				
	Socia5	0.844				
Sources of	Srcrlf1	0.843	0.882	0.889	0.914	0.679
Relief	Srcrlf2	0.853				
	Srcrlf3	0.781				
	Srcrlf4	0.871				
	Srcrlf5	0.768				
Workers'	Wrm1	0.850	0.913	0.919	0.931	0.658
Reverse Migration	Wrm2	0.728				
Wingration	Wrm3	0.823				
	Wrm5	0.814				
	Wrm6	0.754				
	Wrm7	0.801				
	Wrm8	0.898				

Table 3 lists the discriminant validity of the constructs in the proposed PLS-SEM model. All the heterotrait-monotrait (HTMT) ratio values, which establish the discriminant validity of constructs, are below the threshold value of 0.85 (Henseler et al. 2015), indicating sufficient discriminant validity of all the latent variables.

Table 3

Discriminant validity

HTMT correlations between constructs	HTMT
FISEC <-> ECO	0.608
HLTH <-> ECO	0.283
HLTH <-> FISEC	0.509
HOUS <-> ECO	0.409
HOUS <-> FISEC	0.551
HOUS <-> HLTH	0.182
SOCIA <-> ECO	0.210
SOCIA <-> FISEC	0.316

SOCIA <-> HLTH	0.390
SOCIA <-> HOUS	0.073
SRCRLF <-> ECO	0.388
SRCRLF <-> FISEC	0.706
SRCRLF <-> HLTH	0.792
SRCRLF <-> HOUS	0.316
SRCRLF <-> SOCIA	0.490
WRM <-> ECO	0.365
WRM <-> FISEC	0.655
WRM <-> HLTH	0.718
WRM <-> HOUS	0.278
WRM <-> SOCIA	0.511
WRM <-> SRCRLF	0.806

Structural model assessment

Hair et al.'s (2019, 2022) recommendations are utilized to analyze structural model results for hypothesis testing. Problems with collinearity are identified by VIF (Variance Inflation Factor) values below 3.33 (Hair et al., 2019), which indicate that multi-collinearity problems are not present. The study displayed relationship between the constructs that is displayed in table 4. The coefficient of determination (R²) of Workers' Reverse Migration (WRM) is 64%. Standardized Root Mean Square Residuals (SRMR) are used to evaluate the badness of fit measure in SEM used. The value of SRMR for the estimate model is 0.078, which is less than the critical value of 0.08 (J. F. Hair et al., 2019; et al., 2022).

The significant predictors impacting workers' reverse migration positively are source of relief (β =0.330, p<0.003 supports H6) followed by health (β =0.250, p<0.008 supports H3). In addition, social (β =0.204, p<0.001 supports H5) and food insecurity (β =0.183, p<0.009 supports H2) also have a positive impact on workers' reverse migration. Economics and housing both have no significant impact on workers' reverse migration, as indicated in Table 4. Gender was negatively related to workers' reverse migration (β =-0.162, p>0.05), but this effect was not statistically significant, suggesting that gender did not have a meaningful impact on workers' reverse migration. Alternatively, gender does not appear to be a significant predictor of workers' reverse migration.

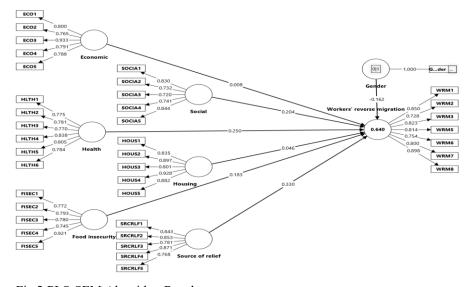


Fig 2 PLS-SEM Algorithm Results

Table 4
Hypothesis Testing

Нур	othesis	Beta	SM (M)	SD	t- statistics	p- values	CI[2.50:97.5	Significanc e?	VIF	f^2
Н1	ECO -> WRM	0.008	0.007	0.053	0.110	0.883	[- 0.102:0.104]	No	1.475	0.000
Н2	FISEC -> WRM	0.192	0.188	0.071	2.692	0.009	[0.045:0.327	Yes	2.351	0.043
Н3	HLTH -> WRM	0.250	0.251	0.095	2.572	0.008	[0.071:0.450]	Yes	2.050	0.080
H4	HOUS -> WRM	0.046	0.036	0.048	0.673	0.371	[- 0.061:0.141]	No	1.407	0.002
Н5	SOCIA -> WRM	0.204	0.208	0.059	3.456	0.001	[0.094:0.326	Yes	1.307	0.087
Н6	SRCRLF -> WRM	0.336	0.332	0.109	3.083	0.003	[0.114:0.546	Yes	2.799	0.111
C V	GENDER -> WRM	- 0.162	- 0.166	0.144	1.128	0.260	[- 0.462:0.101	No	1.000	

Note: ECO= Economic; FISEC= Food Insecurity; HLTH= Health; HOUS= Housing; SOCIA= Social; SRCRLF= Source of Relief; WRM= Workers' Reverse Migration

Table 5

Model Fit

	Saturated model	Estimated model
SRMR	0.077	0.078

5. Discussion and Implications

The results indicate that economic and housing factors have no significant impacts on the workers' reverse migration, which means that migrant workers have neither changed their employment status nor have their salary stopped or decreased even though they left the place of work during multiple lockdowns, even though they experienced stagnant wages. They did not have a social security issue as far as economic conditions are concerned. This is contrary to the research findings on reverse migration of migrant workers in informal sectors like construction, textiles, hospitality, etc. They did not face any housing-related issues while staying near their place of work. Answers to qualitative housing related questions indicate the majority of the migrant workers were living in the factory premises during and after Covid-19 and did not have issues of no access

to housing facilities, threat of evacuation, or compulsion to move to shelter homes. Control variable Gender has no significant impact on reverse migration (J. Hair & Alamer, 2022). Indicators like health problems, mental issues, fear of contracting disease, and access to public health facilities towards health factors played a significant role in contributing to the reverse migration. Family care, social obligation, lack of social support, social discrimination at the workplace, and family pressure to return were key indicators towards social factors, which significantly contributed towards reverse migration. The food insecurity factor had a positive impact on the reverse migration, indicating concerns about food quality, assistance from government and non-government organizations for essential food supplies, difficulty in accessing essential food supplies, and regular market access to food supplies. Sources of relief from employers, government agencies, civil society, private individuals, and community kitchens could not check migrant workers from going to their native places. This could be due to their priority on dignity of life. Responses to qualitative questions to migrant workers as to the necessity of returning back to native places indicate some migrant workers of SMEs decided not to leave the place of workplace, stating it was not necessary, whereas most who had returned to their native places responded that their going back was necessary due to pull factors like they had already intimated to their family and friends to return, for emotional stability, increase in overall quality of life, for already making arrangements to return, and being the best option to return in the prevailing situation. The study implied that the various government policies, specifically financial support policies, helped migrant workers in the informal economy. A strategic approach to include mandatory disaster-oriented awareness programs and policies at the SME level will certainly help mitigate reverse migration as well as the chances of virus spread and casualty in any similar pandemic in the future.

6. Conclusion

The majority of migrant workers of small and medium enterprises in the select industrial areas of the national capital have been pushed by social, health, and food insecurity factors and sources of supply to return to their native places along with pull factors of reverse migration. Economic and housing factors have not been able to influence their decision to move to their place of origin. The COVID-19 pandemic triggered significant disruptions across industries, with the manufacturing sector within small and medium enterprises (SMEs) experiencing acute labor shortages due to reverse migration. This study examined the key factors prompting migrant workers employed in SME manufacturing units to return to their native places in the post-pandemic period.

In conclusion, the post-pandemic return of migrant workers from SME manufacturing units is not a short-term response but a reflection of deeper structural issues. To ensure labor stability and sustainable industrial recovery, stakeholders must focus on improving working conditions, strengthening labor rights, and creating incentives for workers to return and remain in industrial employment hubs. A proactive awareness program on disasters at the employer's level in the initial stages of employment will help build confidence for workers and restrict reverse migration to a great extent.

Ethical Considerations

- **Informed Consent**: Participants are fully informed about the research purpose, their rights, and the voluntary nature of participation.
- Confidentiality: All personal information is kept confidential. Data are anonymized and securely stored to
 prevent unauthorized access.
- Right to Withdraw: Participants are informed of their right to withdraw from the study at any time without any negative consequences.

Limitations

- Sample Bias: The study is limited by the availability and willingness of SME workers to participate. Additionally, the study's findings may not be fully generalizable to all migrant workers, as SME workers' experiences can vary greatly depending on the sector, industrial estate, its location, and country.
- **Self-Reporting**: Since the data rely on self-reports, there is a risk of social desirability bias or inaccurate recall by participants.

References:

- 1. Adelle, C., & Haywood, A. (2021). Food Security Governance in the emergency food relief during Covid. 1–68.
- 2. Ahmed, D., Benavente, P., & Diaz, E. (2023). Food Insecurity among International Migrants during the COVID-19 Pandemic: A Scoping Review. *International Journal of Environmental Research and Public Health*, 20(7). https://doi.org/10.3390/ijerph20075273
- 3. Anuar, A., Huzeima, N., Hussain, M., Mohd, T., Masrom, S., & Byrd, H. (2021). A icQoL2021BukitTinggi AMER International Conference on Quality of Life Reverse Migration Determinant Factor: A systematic literature review. 17–18.
- 4. 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. *Indian Economic Journal*, 69(3), 392–409. https://doi.org/10.1177/00194662211013216
- 5. 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.
- 6. Bhatt, M. R. (2020). Impact of COVID-19 on Humanitarian Actions in India. *All India Disaster Mitigation Institute, India, 190*, 1–28. southasiadisasters.net
- 7. Harishchandra Patel, "Impedance Control in HDI and Substrate-Like PCBs for AI Hardware Applications" (2024). Journal of Electrical Systems, 20(11s), 5109-5115.
- 8. Chavan, B. S., Sidana, A., Arun, P., Rohilla, R., Singh, G. P., Solanki, R. K., Aneja, J., Murara, M. K., Verma, M., Chakraborty, S., Singh, C., Sharma, H., Sharma, R., Bahri, S., & Bhanwra, D. (2021). Factors Leading to Reverse Migration Among Migrant Workers During the COVID-19 Pandemic: A Multicenter Study From Northwest India. *Primary Care Companion for CNS Disorders*, 23(2). https://doi.org/10.4088/PCC.20m02810
- 9. Choudhari, R. (2020). COVID 19 pandemic: Mental health challenges of internal migrant workers of India. *Asian Journal of Psychiatry*, *54*(June), 2018–2021. https://doi.org/10.1016/j.ajp.2020.102254
- 10. Deshingkar, P., & Akter, S. (2009). Priya Deshingkar and Shaheen Akter. Human Development.
- 11. Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior research methods*, 41(4), 1149-1160.
- 12. Foley, L., & Piper, N. (2021). Returning home empty handed: Examining how COVID-19 exacerbates the non-payment of temporary migrant workers' wages. *Global Social Policy*, 21(3), 468–489. https://doi.org/10.1177/14680181211012958
- 13. Hair, J., & Alamer, A. (2022). Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics*, *1*(3), 1–16. https://doi.org/10.1016/j.rmal.2022.100027
- 14. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. https://doi.org/10.1108/EBR-11-2018-0203
- 15. Ilker Etikan, Sulaiman Abubakar Musa, Rukayya Sunusi Alkassim. Comparison of Convenience Sampling and Purposive Sampling. American Journal of Theoretical and Applied Statistics. Vol. 5, No. 1, 2016, pp. 1-4. doi: 10.11648/j.ajtas.20160501.11
- 16. Khan, A., & Arokkiaraj, H. (2021). Challenges of reverse migration in India: a comparative study of internal and international migrant workers in the post-COVID economy. *Comparative Migration Studies*, 9(1). https://doi.org/10.1186/s40878-021-00260-2
- 17. 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. https://doi.org/10.1177/0972063420935542
- 18. Koh, D. (2020). Migrant workers and COVID-19. *Occupational and Environmental Medicine*, 77(9), 634–636. https://doi.org/10.1136/oemed-2020-106626
- 19. Kumar, S. (2025). Debt and Despair: Exploring the Factors Pushing From Debt to Suicide During the Covid-19 Pandemic in India. OMEGA-Journal of Death and Dying, 00302228251366730.
- 20. Lee, E. S. (1966). A Theory of Migration. In Demography (Vol. 3, Issue 1).
- 21. Ma, L., He, Q., Long, H., Zhang, Y., & Liao, L. (2024). Rural return migration in the post COVID-19 China: Incentives and barriers. *Journal of Rural Studies*, 107. https://doi.org/10.1016/j.jrurstud.2024.103258
- 22. Maiti, S., Sharma, D., & Gupta, T. (2024). Unfolding the Impact of COVID-19 on Reverse Migrants in Uttar Pradesh. *Journal of Asian and African Studies*, 59(1), 292–306. https://doi.org/10.1177/00219096221106080

- 23. Menon, D. V., & Vadakepat, V. M. (2021). Migration and reverse migration: Gulf-Malayalees' perceptions during the Covid-19 pandemic. *South Asian Diaspora*, 13(2), 157–177. https://doi.org/10.1080/19438192.2020.1820668
- 24. Migration, S., & Series, P. (2022). Pandemic Food Precarity, Crisis-Living and Translocality: Zimbabwean Migrant Households in South Africa during COVID-19 (Issue 85).
- 25. Mukherjee, S. (2023). COVID-19 and impact on income inequality: the Indian experience. In COVID-19 pandemic and global inequality: Reflections in labour market, business and social sectors (pp. 295–303). Springer.
- 26. Raman Development Consultants Private Limited, 2023. "Impact of covid-19 on internal migration, labor markets and urbanization in New Delhi New Delhi Quantitative Results Report." KNOMAD, World Bank. Washington, D. 20433. (2023). Impact of covid-19 on internal migration, labor markets and urbanisation in New Delhi.
- 27. Ringle, C. M., Wende, S., & Becker, J. M. (2015). SmartPLS 3. Bönningstedt: SmartPLS.
- 28. Saha, A., Dutta, A., Rezvi, M. R., Sifat, R. I., Sultana, N., Nuruzzaman, & Hasan, M. (2023). Adapting to change: Exploring reverse migration as a coping strategy among internal migrants in Bangladesh. *Heliyon*, 9(9). https://doi.org/10.1016/j.heliyon.2023.e19479
- 29. Salunkhe, R., Lal Meena, M., & Vhanalakar, S. (2022). Covid 19: Impact and Response Volume Xi. In *NBER Working Papers*. http://www.nber.org/papers/w16019
- 30. Samant, Y., Fabregat, M. R., & Seneviratne, M. (2025). Europe's Overlooked Health and Hygiene Issues in Migrant Worker Housing: A Call for Action. *Safety and Health at Work*, 16(2), 255–257. https://doi.org/10.1016/j.shaw.2025.04.001
- 31. Sarstedt, M., Ringle, C.M., Hair, J.F. (2017). Treating Unobserved Heterogeneity in PLS-SEM: A Multi-method Approach. In: Latan, H., Noonan, R. (eds) Partial Least Squares Path Modeling. Springer, Cham. https://doi.org/10.1007/978-3-319-64069-3 9
- 32. Shiva, A., Kushwaha, B. P., & Rishi, B. (2023). A model validation of robo-advisers for stock investment. *Borsa Istanbul Review*, 23(6), 1458–1473. https://doi.org/10.1016/j.bir.2023.09.005
- 33. Srivastava, R. (2020). COVID-19 and circular migration in India. Review of Agrarian Studies, 10(1).
- 34. Stawarz, N., Rosenbaum-Feldbrügge, M., Sander, N., Sulak, H., & Knobloch, V. (2022). The impact of the COVID-19 pandemic on internal migration in Germany: A descriptive analysis. In *Population, Space and Place* (Vol. 28, Issue 6). https://doi.org/10.1002/psp.2566
- 35. Suresh, R., James, J., & R. S.j, B. (2020). Migrant Workers at Crossroads—The Covid-19 Pandemic and the Migrant Experience in India. *Social Work in Public Health*, 35(7), 633–643. https://doi.org/10.1080/19371918.2020.1808552
- 36. Tiwari, P., & Majumdar, S. (2024). Examining the Impact of Socio-economic, Demographic and Policy Factors on Reverse Migration in India During COVID-19 Pandemic. *Environment and Urbanization ASIA*, 15(2), 226–240. https://doi.org/10.1177/09754253241278767
- 37. Tongco, M. D. C. (2007). Purposive Sampling as a Tool for Informant Selection. Ethnobotany Research and Applications, 5, 147–158. Retrieved from https://ethnobotanyjournal.org/index.php/era/article/view/126
- 38. Triandafyllidou Editor, A. (2022). *IMISCOE Research Series Migration and Pandemics* (A. Triandafyllidou (ed.)). Springer Nature. https://doi.org/https://doi.org/10.1007/978-3-030-81210-2
- 39. Tripathi, A. P., & Agrawal, N. (2022). COVID-19, Reverse Migration and Crisis Management: A Study of the Model of Government of Uttar Pradesh (India). *Indian Journal of Public Administration*, 68(1), 84–99. https://doi.org/10.1177/00195561211058392
- 40. Weldemariam, L. F., Ayanlade, A., Borderon, M., & Möslinger, K. (2023). Dynamics and factors influencing return migration to Sub-Saharan Africa: A systematic review. In *Heliyon* (Vol. 9, Issue 8). Elsevier Ltd. https://doi.org/10.1016/j.heliyon.2023.e18791