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The Push and Pull Factors of Migration – A Study of Migrant Workers in the Purse Seine Fishing Sector of Ratnagiri, Maharashtra

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Migration is defined as the movement of people from less endowed to more endowed resource areas in search of better income, employment, food and better socio-economic conditions. Labour migration is a crucial workforce for labour-intensive businesses, driven by factors such as limited local opportunities, environmental challenges and economic necessity. A study was conducted to assess the push and pull factors which were responsible for the migration of labourers working in purse seine fishing sector along Ratnagiri district of Maharashtra. The information regarding push and pull factors migrants employed in the purse seine fishing sector was collected by using Interview schedule conducting interviews with 109 migrants. The push and pull factors were analysed by weighted average method and Chi-square test was used to analyse the significant difference between the responses received against each factor at the 5% level of significance. The results revealed that lack of employment opportunities at the native place, very low income, lack of investment or capital and persuasion by friends were the major push factors of migration of migrant labourers, whereas job opportunities, sustained income from the fisheries sector and higher wages in the fisheries sector were the main pull factors of migration. The main implication of this study is lie in the policy implication of the study which suggested tackling to push factor, which forces people to migrate.

(***Key words:*** *Migrant labour, Pull factors, Push factor, Ratnagiri*)

Migration is an integral part of the survival strategies of the poor. The right to mobility for employment is an important human right; especially where local economies offer limited livelihood alternatives. Intervention strategies should, therefore, be directed at reducing the vulnerability of migrants, not at reducing migration itself. The decision to move is based on certain felt deprivations, stress, constraints, aspirations, and motivations at the place of origin (Hussain *et al.*, 2004). Migration is defined as the movement of people from less endowed to more endowed resource areas in search of better income, employment, food and better socio-economic conditions (Shyam *et al.*, 2021). Migratory behavior is of two types *i.e.* outward and inward migration. Outward migration is a process which involves movement of individuals outside their revenue villages in search of employment opportunities, and inward migration is movement of the labourers into the native villages from any other place (Lekshmi *et al.*, 2011).

Marine fisheries, as one of the country's most important sectors, contributes significantly to food security and employing approximately 1.5 million people (DoF, 2022). This sector also supports numerous indirect dependents involved in the primary, secondary, and tertiary sectors related to fishing. Nonetheless, disguised unemployment (a condition in which people appear to be working but are forced to labour less than their potential) is widespread in the country, prompting fishermen to migrate to areas with superior resources and earning potential (Shyam *et al.*, 2021).

Migrant workers within the food system faced precarious working and living conditions, such as uncertain legal status, excessive working hours, unsafe environments, mobility restrictions, limited healthcare access, substandard housing, physical and psychological abuse and mental health challenges (Marschke, 2021).

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Over time, the most frequently heard explanation for migration has been the so called "push-pull theory", which depicts that some people move because they are pushed out of their former location, whereas others move because they have been pulled or attracted to some place elsewhere. This concept was first given by Revenstoein in 1989 (cited by Rafique, 2003). According to him, the living conditions are "push factors" and attractions of better living conditions are "pull factors". The migration from farming to fisheries sector causes labour displacement in the agrarian sector and on the other, it leads to labour gain in the fisheries sector. Improvements in technologies in the fisheries sector has led to unbridled capital investment in this sector and has attracted more and more people from the adjacent coastal transects who necessarily do not belong to the fishing community (Sathiadhas *et al.*, 2009). In 2017, an estimated 40.1 million people worldwide worked on fishing boats (Berger, 2020). There were approximately 58.5 million full-time, part-time, occasional or unspecified workers in fisheries and aquaculture in 2020, with approximately 21% of them being women. By sector, 35% were employed in aquaculture and 65% in capture fisheries (FAO, 2022). The migration of fishing labourers brings several potential advantages that can significantly impact both the regions they move to and the broader fishing industry. The immigration of fishing labourers can effectively address labour shortages in the fishing industry (Kadfak, 2024). This movement can ensure sustained production and foster economic growth within the fishing sector. Additionally, immigrant labourers often contribute to regional economic growth by spending their earnings locally, thereby stimulating various sectors of the economy. The purse seiner was the most prominent in terms of marine landings in Maharashtra, accounting for approximately 36%. The purse seiner had the highest catch per unit at 97 kg trip^{-1}. Mirkarwada emerged as a major base of operation for these purse seiners (Nakhawa *et al.*, 2018). There were 167 purse seiners operated from Mirkarwada fishing harbour along Ratnagiri coast. Against this background, a study was initiated to assess the push and pull factors which were responsible for their migration of migrant labourers working in purse seine fishing sector along Ratnagiri district of Maharashtra.

MATERIALS AND METHODS

The current study was carried out in Mirkarwada landing centre from Ratnagiri district of Maharashtra, as this landing centre is renowned for its active purse seine fishing (Fig. 1). A total of 109 migrant labourers from Mirkarwada landing centre in Ratnagiri. A thorough review of the literature and discussions with an expert group including researcher, key informants and DoF officials were conducted in order to identify the various push and pull factors that migrant workers face at workplace.

The interview schedule was developed based on a review of relevant literature and preliminary fieldwork, with the aim of collecting information on the push and pull factors influencing migrant labourers at their workplace. The push and pull factors were analysed by weighted average method (Kant *et al.* 2015; Shehrawat *et al.* 2016; Yadav *et al.* 2017) and Chi-square test was used to analyse the significant difference between the responses received against each factor at the 5% level of significance. The chi-square statistic was calculated using the formula given by Karl Pearson in 1900 (Magnello, 2005). The response of each migrant for each question was recorded on a 3-point scale: "Agree", "Neither agree or disagree" and "Disagree". Response for "Agree" was scored 2, response for Neither agree or disagree" was 1 and response for "Disagree" was 0. The frequency of each response for each question was calculated and these frequencies were multiplied by the corresponding numerical values to get the weighted values for each category. The weighted average for each reason was then calculated by summing the weighted values and dividing by the total number of responses. Ranks were assigned accordingly, from highest to lowest weighted average. The weighted average was calculated as given below:

Weighted average = $\text{Sum}(X_0.W_0+X_1.W_1+X_2.W_2)/\text{Sum}(W_0+W_1+W_2)$

Where,

X_0, X_1, X_2 = Frequency of the respective reasons

W_0, W_1, W_2 = Weighted values *i.e.*, 2,1,0

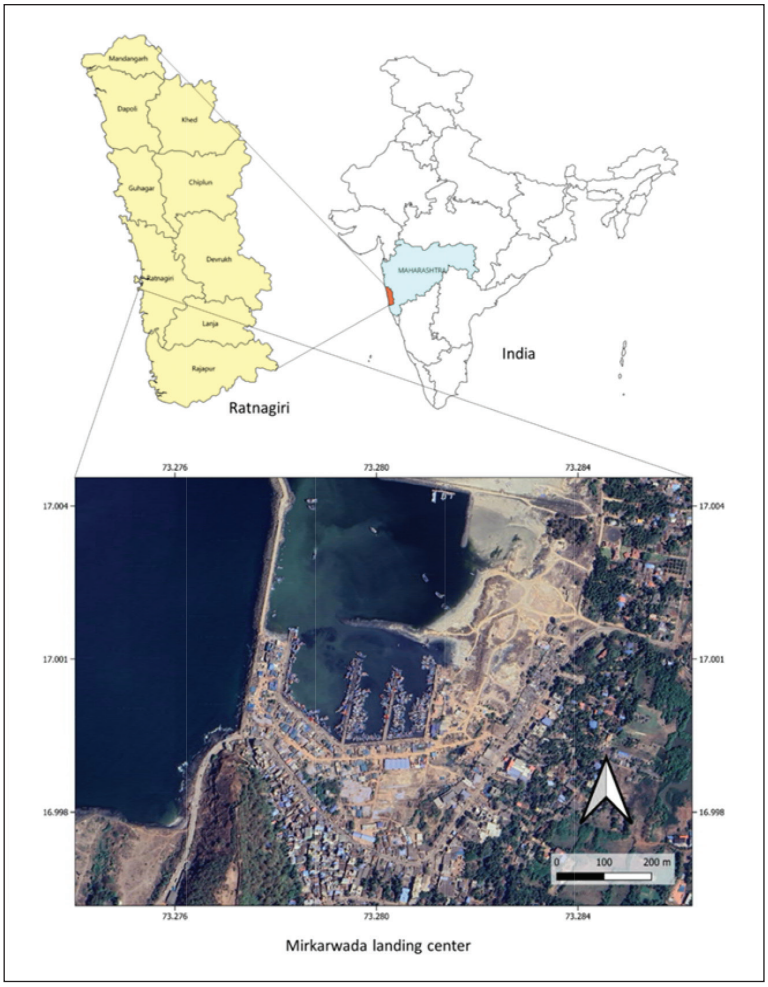

Fig. 1. *Study Area*

RESULTS AND DISCUSSION

Socio-economic characteristics

The major findings about the socio-economic characteristics of the migrant labour are depicted in Table 1 from which it can be clearly noted that the majority of migrant workers are male. It was also found that about 55.05% migrants working on purse seine is unmarried whereas 44.95% are married. The findings indicate that majority of migrant labourers (72.48%) working in the purse seine fishing sector belongs to the young age group, followed by the middle age group (22.02%), and the old age group (5.50%). All of the migrants were belonging to Hindu religion with 69.72% of them belonging to Open caste. While analyzing the education status, it was found that about 32.11% of the respondents are possessing higher secondary and secondary education, 28.44% is having primary education and 7.34% of the respondents are illiterate. It was observed that 42.2% of migrants had 1-5 years of experience followed by 26.61% migrants had 5-10 years of experience, 15.60% migrants had 10-15 years of experience. Similar type of results was reported Swathilekshmi (2017) and Shyam *et al.* (2018, 2021).

Push factors of labour migration

The push factors influencing labour migration were studied by using the weighted average method to rank these factors based on their significance, and these results are presented in Table 2 and depicted in Fig 2. The study revealed that a lack of employment opportunities at the native place was the major push

Table 1. *Socio-economic characteristics of the migrant labourers*

Sl. No.	Characters	Category	Frequency	Percentage (%)
1	Gender	Male	109	100
2	Age	Young age (Below 30)	79	72.48
		Middle age (31 -50)	24	22.02
		Old age (Above 51)	6	5.50
3	Religion	Hindu	109	100
4	Caste/sub caste	Open	76	69.72
		SC	6	5.50
		ST	11	10.09
		OBC	15	13.76
5	Education status	Illiterate	8	7.34
		Primary	31	28.44
		Secondary	35	32.11
		Higher secondary	35	32.11
6	Experience (year)	< 1	16	14.68
		1-5	46	42.20
		5-10	29	26.61
		10-15	17	15.60
		> 15	1	0.92
7	Marital status	Married	49	44.95
		Unmarried	60	55.05

factors, ranking first with a score of 39.00. Whereas the very low income with a weighted average of 38.67, ranked second. The lack of investment or capital was the third most significant factor, with a weighted average of 38.33 followed by persuasion by friends ranked (37.00), Less wages at the native place (35.00), poverty (33.67) and disguised employment (26.33). Other significant factors included the current job not being profit-making (21.00), lack of alternative livelihoods (20.67) and having technical skills in the field (20.33).

The findings of the present study are similar to other studies on push factors of migration. Swathilekshmi (2017) and Ge *et al.* (2020) found that the primary reason pushing the labours to migration was a lack of employment at their native places. Shyam *et al.* (2018) and Raju *et al.* (2021) also reported that lack of income at the native place was the prominent reason in their studies. The Pearson correlation analysis revealed several significant relationships between age of migrant labourers and the reasons driving their migration. The relationship between age group and push factors of migration is given in Table 3. Significant negative correlations were observed for key push factors, including lack of employment, incidents of drought, lack of investment and persuasion by friends. These findings suggest that as the age of migrant labourers increases, the impact of these adverse conditions on their decision to migrate decreases. In contrast, factors such as technical skill in the field, low education, lack of own land, crop failure and poverty exhibited moderate positive correlations with age, though these were not statistically significant.

Pull factors of labour migration

The study examined the pull factors influencing labour migration using the weighted average method to rank these factors based on their significance is

Table 2. *Push factors of labour migration in Purse seine fishing sector, Ratnagiri district, Maharashtra*

Sl. No.	Push factors	Weighted average	Rank
1	Lack of employment at native place	39.00	I
2	Income is very low	38.67	II
3	Lack of investment or capital	38.33	III
4	Persuasion by friends	37.00	IV
5	Less wages at native place	35.00	V
6	Poverty	33.67	VI
7	Disguised employment	26.33	VII
8	Current job is not profit making	21.00	VIII
9	Lack of alternatives livelihoods	20.67	VIIII
10	Having technical skills in the field	20.33	X
11	Low level of education	19.00	XI
12	Debts and Financial commitments	18.33	XII
13	Lack of own land for cultivation	17.00	XIII
14	Crop Failure	13.33	XIV
15	Incidence of drought	6.00	XV

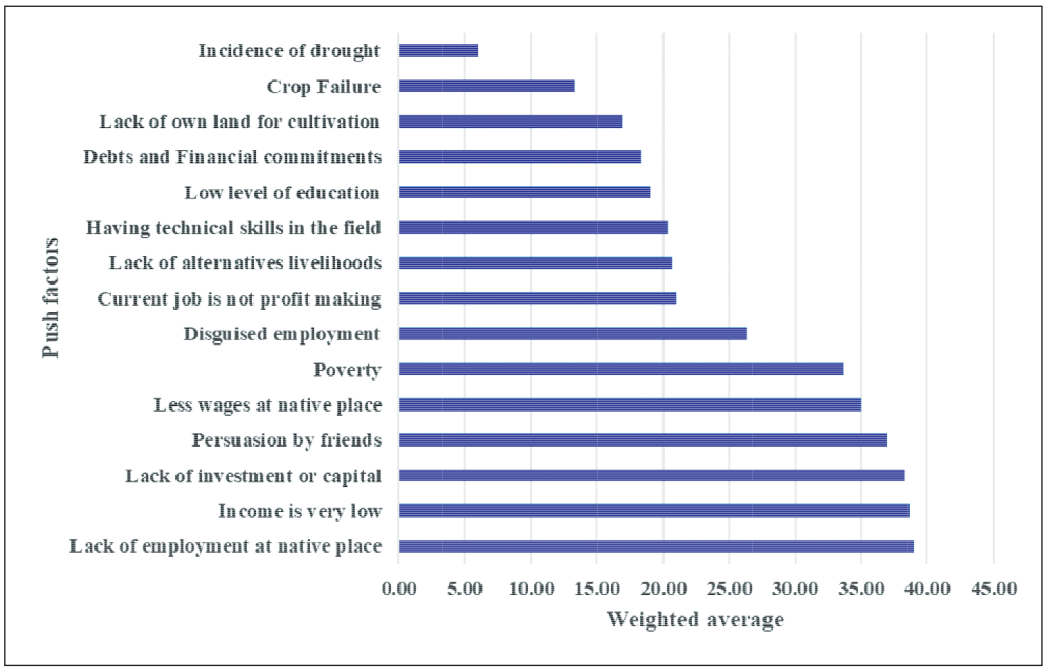

Fig. 2. *Ranking of push factors of labour migration in Purse seine fishing sector, Ratnagiri district, Maharashtra*

Table 3. *Relationship between age group and push factors of migration*

Sl. No.	Factors	Correlation coefficient (r)	P-value (Significance value)	Significance
1	Lack of employment	-0.952*	0.013	Significant
2	Technical skills in the field	0.781	0.119	Not Significant
3	Incidents of drought	-0.921*	0.026	Significant
4	Low education	0.786	0.115	Not Significant
5	Low income	-0.252	0.682	Not Significant
6	Debts and financial commitments	-0.258	0.675	Not Significant
7	Less wages	-0.699	0.189	Not Significant
8	Lack of own land	0.586	0.299	Not Significant
9	Crop failure	0.682	0.205	Not Significant
10	Poverty	0.566	0.32	Not Significant
11	Disguised employment	-0.427	0.473	Not Significant
12	Lack of investment	-0.903*	0.036	Significant
13	Job not profit making	0.217	0.726	Not Significant
14	Persuasion by friend	-0.974**	0.005	Significant
15	Lack of alternative livelihoods	-0.631	0.253	Not Significant

depicted in Table 4 and Fig 3. The most critical pull factor identified was job opportunities, with a weighted average of 49.33, ranking first. This was closely followed by better income (47.33), ranked second. Sustained income from the fisheries sector (43.33) was the third most significant factor followed by higher wages in the fisheries sector (43.00). The ability to maintain family ranked fifth, with a weighted average of 39.67. High labour demands (37.67), low cost of living (34) and travel opportunities (30.33) were also notable factors, ranked sixth, seventh and eighth, respectively. Other significant factors included better job prospects (28.33), the ease of obtaining more money than in the native place (21.67) and security (16.00).

The findings of the present study are similar to other studies on push factors of migration. Lekshmi (2017) reported that the chances for sustained income is major push factor followed by proportionate increase in wages and increased wages. Similarly, Njock and Westlund (2010) reported that availability of alternate employment pulls the migrants towards the destination place. While Rungtaweechai (2021) and Sunam *et al.* (2021) stated that labour shortage and demand for low-skilled and inexpensive labour are responsible for labour migration. It was also found that significant negative correlations were observed for key push factors, including lack of employment, incidents of drought, lack of investment and persuasion by friends. These findings suggest that as the age of migrant labourers increases, the impact of these adverse conditions on their decision to migrate decreases.

Pearson correlation analysis revealed significant relationships, consistent with the patterns observed for pull factors. The relationship between age group and pull factors of migration is given in Table 5. The ability to maintain family exhibited a very strong positive correlation with age group, suggesting that older migrant labourers were more likely to be motivated by the need to support their families. Similarly, the ease of obtaining money showed a robust positive correlation which also shows the importance of this reason for older age group. Low cost of living and travel opportunities demonstrated significant negative correlations, suggesting that these factors became less influential as the age of the migrant

Table 4. *Pull factors of labour migration in Purse seine fishing sector, Ratnagiri district, Maharashtra*

Sl. No.	Factors	Weighted average	Rank
1	Job opportunities	49.33	I
2	Better income	47.33	II
3	Sustained income from fisheries sector	43.33	III
4	Higher wages in fisheries sector	43.00	IV
5	Able to maintain family	39.67	V
6	High labour demands	37.67	VI
7	Low cost of living	34.00	VII
8	Travel opportunities	30.33	VIII
9	Better job	28.33	IX
10	Easy to get more money than native place	21.67	X
11	Security	16.00	XI
12	Good living standards	8.33	XII
13	Peaceful society	2.33	XIII
14	Good environment	0.33	XIV

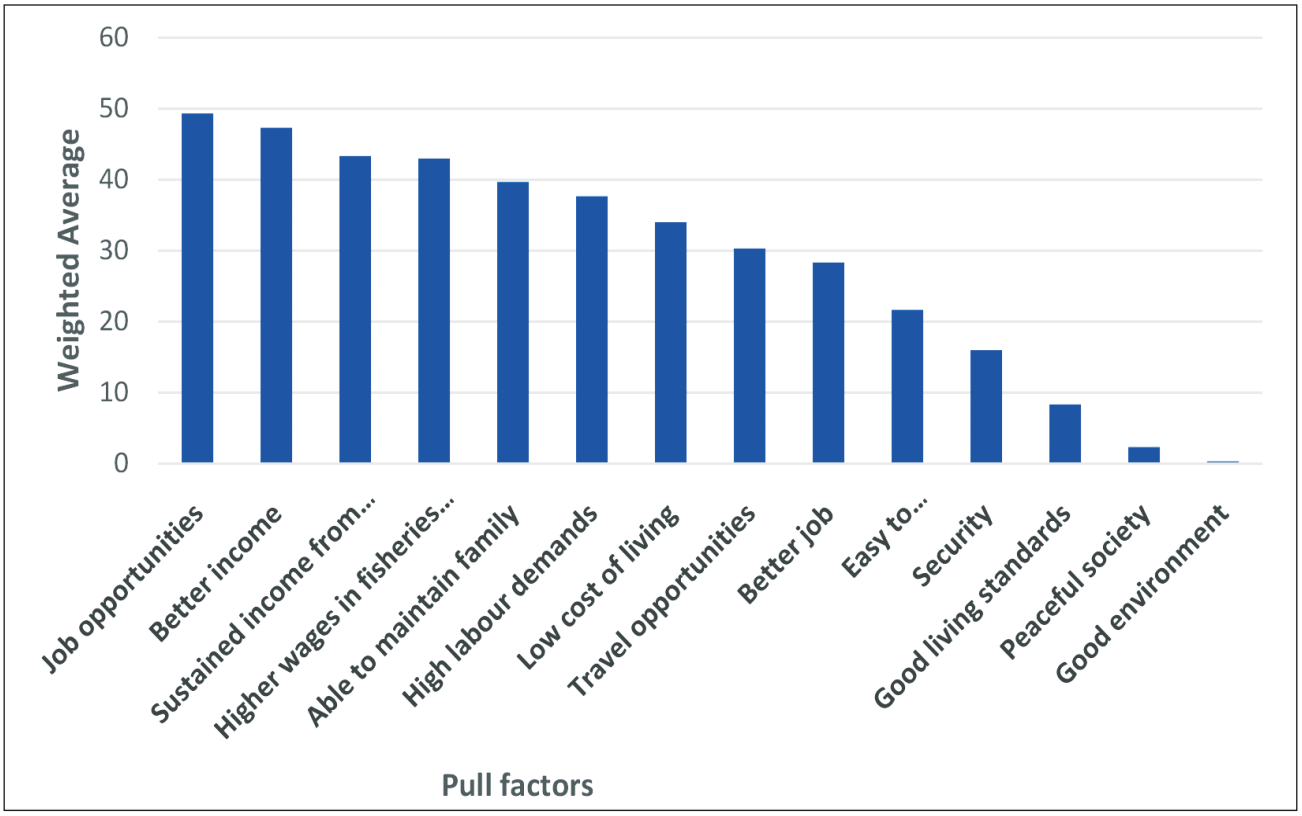

Fig. 3. *Ranking of pull factors of labour migration in Purse seine fishing sector, Ratnagiri district, Maharashtra*

Table 5. *Relationship between age groups and pull factors of migration*

Sl. No.	Factors	Correlation coefficient (r)	P-value (Significance value)	Significance
1	Better income	0.793	0.109	Not Significant
2	Better job	-0.132	0.833	Not Significant
3	Higher wages in fisheries sector	-0.570	0.316	Not Significant
4	Able to maintain family	0.965**	0.008	Significant
5	Good living standards	0.436	0.463	Not Significant
6	Job opportunities	-0.532	0.357	Not Significant
7	Easy to get more money than native place	0.920*	0.027	Significant
8	High labour demands	0.170	0.785	Not Significant
9	Security	-0.859	0.062	Not Significant
10	Sustained income from fisheries sector	-0.172	0.782	Not Significant
11	Low cost of living	-0.899*	0.038	Significant
12	Travel opportunities	-0.887*	0.045	Significant

labourers increased. While better income, good living standards and high labour demand exhibited positive correlations which are not statistically significant. Conversely, factors like better jobs, higher wages, job opportunities, security, sustained income, and a peaceful society showed negative correlations, indicating that these factors also did not influence migration decisions across different age groups which are not statistically significant.

CONCLUSION

The present study confirms that the push factor plays a significant role in migration. The major cause of migration was lack of employment opportunities in the native place, very low income, and limited investment or capital. Apart from the push factor, a pull factors such job opportunities, better income, and sustained earnings in the fisheries sector also play a significant role in migration. It was also found that significant negative correlations were observed for key push factors, including lack of employment, incidents of drought, lack of investment and persuasion by friends. These findings suggest that as the age of migrant labourers increases, the impact of these adverse conditions on their decision to migrate decreases. The main implication of this study is lie in the policy implication of the study which suggested tackling to push factor, which forces people to migrate. This study underscores the need for targeted interventions, policy reforms and stakeholder collaboration to mitigate these factors and ensure a more equitable working environment for migrant workers in the fisheries industry of Maharashtra.

CONFLICTS OF INTEREST

The authors do not report any conflicting interests.

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