

# Role of Male Migration in the Capability Expansion of the Left Behind Muslim Women in the Malappuram District of Kerala

## ABSTRACT

Migration has been projected as a force capable of developing economies of the labour exporting nations. Migration has the potential to improve a household's economic standing in their country of origin, which could have an impact on their lifestyle choices, level of education and health, and degree of cultural and social engagement. In the past, religious orthodoxy among the Muslims in Malabar especially in the Malappuram district prevented women from obtaining higher education and finding employment which restricted their freedom and well-being. However, there have been changes in women's perspectives in reaction to changing needs and situations, for which migration and remittances made by migrants abroad have been the important contributing factors. When the male migrates, the left-behind women have to assume increased responsibilities which increases their control over household resources, mobility and decision-making power and the foreign remittances are utilised by the left-behind women to improve their quality of living, education and information. This article explores the effects of male migration and foreign remittances on the left-behind Muslim women in the Malappuram district through the lens of the Capability approach by constructing the Women's Capability Index based on a sample survey in the Malappuram district using a multi-stage random Sampling method. The Ordinal Logistic Regression shows that the husband's migrant duration does not have a statistically significant effect on the left behind Muslim women's capability whereas the foreign remittances sent by the husbands from abroad have a positive statistically significant effect on the left behind Muslim women in the study area.

Keywords: Emigration, Malappuram, Muslim, Left behind Women, Capability, Index

## 1. INTRODUCTION

Migration is a multifaceted process with interconnected elements that affect those who move, those who remain behind, and the host country. Migration has been an integral component in Kerala's development environments since it emerged as the most dynamic element of the state's economic and social context in the late 20th century. The Malappuram district of Kerala has the distinction of sending out the greatest number of emigrants and the recipient of the highest volume of remittances from abroad among the districts [1]. The Mappila Muslims of Malabar especially in Malappuram district, were backward than other communities in Kerala as the religious orthodoxy among the Muslims in the Malappuram district hindered them from pursuing higher education or employment. The Muslims in Malabar hesitated to send their children to obtain education for which the negative attitude of Muslims towards Western liberal education was a key factor [2]. However, there have been changes in women's perspectives in reaction to changing needs and aspirations, for which migration and remittances made by migrants from abroad have been one of the most important contributing factors. When males migrate and are mostly engaged in low-paid jobs in Gulf countries, they leave their families behind in the district. While addressing the problem of family separation brought on by male migration it is argued that this type of migration has specific effects on the left behind women, especially on the spouses. These women manage a variety of opportunities and challenges while their males are going to work abroad.

In the absence of adult male members from their families, the left-behind women have to adjust to such a situation and as a result, their role and status often change. The primary causes of the significant increase in the status and authority of Gulf wives in their households were the large remittances they received in their names and their assumption of financial management responsibilities and these factors also enhanced the autonomy, independence, and expertise of the Gulf wives in handling their affairs [3]. When the male migrates overseas the left-behind women at home may have profound changes in their lives as increased responsibilities provide them more autonomy and decision-making authority, physical mobility, and participation in socio-political spheres. [4 -

7]. When living independently, women are far more likely to make independent decisions regarding day-to-day living as well as longer-term decisions and they have greater physical mobility and independence than women living with their husbands [8]. The lengthy absence of men encourages women to take major roles in managing the household and left behind women would be more than capable of handling jobs from which they were previously barred by men and they become adequately empowered in education, health care, work participation, and sharing of responsibilities [9]. When the males migrate, the women remaining behind have gained more freedom to go outside to perform their increased responsibilities, find a job, go to the city, etc. [10]. As a result of men's labour migration, the economic conditions of the households were improved and empowered the left behind females as compared to the situation before the migration of their husbands [11]. Due to male migration, there are major shifts in the family structure; self-reliance, financial autonomy, increased mobility of left-behind women in society, etc. combined with freedom of choice increases women's autonomy where they serve as the household's head [12].

In recent years, the research on the capabilities approach has also grown at an exponential rate and the capability approach has immense scope for analysing the increased agency of left behind women while utilising the opportunities of the husband's migration and remittances they sent home. Amartya Sen noted that expanding women's skills improves women's independence and well-being and the advancement of women's capabilities has numerous positive repercussions on everyone's lives- men and women, children and adults [13]. While the capabilities approach is appealing for many reasons, it has particular benefits when applied to the unique issues that women experience on a practical and intellectual level [14] and the capability approach is most appropriate to evaluate the various circumstances faced by women and to make the most helpful recommendations for dealing with it [15]. The migrant wives' agency grows, whether through an enlarged agency, enhancing autonomy, or fostering confidence when they manage families and take on new duties and obligations when men migrate to the Gulf [16].

In Kerala, the husband-wife separation ratio due to the husband's international migration, leaving the wives behind was reported highest among the Muslims and the Malappuram district has the highest husband-wife separation ratio in the state. Hence the current study seeks to assess the overall effect of husbands' out-migration on the capability expansion of left-behind Muslim women in the Malappuram district through the capability framework relating women's opportunities and freedoms by identifying the capabilities of spouses that would be influenced by the migration of their husbands.

### **1.1. THEORETICAL FRAMEWORK**

The theoretical framework is to better conceptualise the capability approach and how this approach can be used to analyse the effect of migration of husbands on the left behind women in the place of origin.

- Amartya Sen (1999) described human capability as the ability of individuals to lead lives they have good reason to value and to develop the meaningful choices they currently possess and the agency component of that freedom is their ability to take action, effect change, and pursue the objectives that are important to them.
- Preibisch et al. (2016) explored that both capabilities and development approaches are utilised to highlight migrants' agency and capability to contribute to their economic progress and alleviation of poverty, as well as that of their families, communities, and countries of origin. The concept of capabilities can be applied to illustrate how people are capable of achieving important goals for themselves and their families. Foreign remittances can help countries' economies grow and migrant employees constitute essential "agents of development". The notion of capabilities is used to demonstrate how people are capable of getting the outcome they're seeking for themselves and their families. The origin countries gain from the skills and remittances their citizens send home improving the standard of living for their families.
- Hassan & Jebin (2018) examined that migrant households have higher consumption level, higher quality housing, spend more on their children's education and health, have greater exposure to acceptance in society and communication, and compared to households without migrants, the involvement of left behind women in household decision-making is higher indicating that male migration has resulted in migrant

households having greater levels of capabilities and functioning, such as "well-being" and "social relations," when compared to non-migrant homes.

### **1.2. Statement of the problem**

Malappuram tops the district-wise emigration and foreign remittance in Kerala. Almost 70% of the district's population are Muslims and the majority of them come from immigrant homes. When the low-educated and low-skilled males migrate and are mostly engaged in manual jobs in Gulf countries, they cannot afford family visas and leave their families behind in their place of origin. These women manage a variety of opportunities and challenges while their males are leaving to work abroad. They take on numerous responsibilities and deal with intricate situations. These women's status has positively changed from that of modest housewives to effective managers of household affairs, handling a variety of duties that include caring for the family, organising their kids' education, conducting business, doing various bank transactions, and interacting with the outside society and neighbourhood to perform their responsibilities. When the women left behind obtain adequate remittances from their husbands from abroad, they may gain control over financial resources, which may increase their status and autonomy, independence, and expertise of the left behind wives in handling their affairs. In recent years, the research on the capabilities approach has also grown at an exponential rate and the capability approach has immense scope for analysing the increased agency of left behind women while utilising the opportunities of the husband's migration and remittances they sent home. If utilised in the right direction, these women can convert these situations into functioning that they have reason to value which enables them to secure better prospects for themselves and family which requires positive attitudes and a favourable family environment. Hence by using the capability approach, the study focuses on qualitative data gathered from the subjective perceptions of left behind wives of migrants who are either living with their in-laws or serving as de facto heads of the household.

### **1.3. Objectives of the study**

The objectives of the study are

- To identify the capabilities of left behind Muslim women, influenced by the migration of their husbands and generate a Women's Capability Index and examine the validity
- To analyse the role of male migration on the capability expansion of the left behind Muslim women in the Malappuram district

## **2. Methodology**

The study uses an analytical and empirical methodology. The methodology used in this study comprises a systematic approach including data collection method, variable selection procedure, application of statistical techniques, and analytical structure to effectively address the research objectives.

### **2.1 Data Sources and Sampling Design**

The study depends on both primary and secondary data. A multi-stage sampling technique was used to collect primary data for the study. The primary data involved a field survey with a structured questionnaire administered in personal interviews, to the left-behind Muslim women of male migrant who are not eligible for family visas and who are living in the Malappuram district. The sample size was fixed based on the Kerala Migration Survey 2018. The Kerala Migration Surveys are the original, most credible, and genuine source of information about international migration in Kerala. The Kerala Migration Survey 2018 was the eighth series of studies undertaken by the Centre for Development Studies on international migration based on a large-scale sample survey of 15,000 households which are distributed over the districts of Kerala. From the data sets of Kerala Migration Survey 2018, 1500 samples from the Malappuram district were extracted. From these 1500 samples, the number of Muslim married male migrants, who migrated to Gulf countries was extracted and found to be 423, hence the sample size was fixed to 423. The sample unit was Muslim married women from Malappuram district whose husbands are working in Middle Eastern countries. The primary data has been collected from randomly selected Muslim majority panchayats or municipalities in six taluks (as per the 2011 census) in the Malappuram

district and the size of the sample was fixed in proportion to the migration population as per the Kerala Migration Survey 2018. Accordingly, the number of samples from each taluk are; Ernad (78), Nilambur (50), Perinthalmanna (64), Tirur (112), Tirurangadi (76), and Ponnani (43), and a total sample of 423 were selected from Malappuram district. As the source of secondary data, Indian Migration Reports, Kerala Migration Surveys, Census Reports, Centre for Development Studies Working Papers, Reports and publications from the different departments of the Government of India and Kerala, etc. were used for the study.

## 2.2 Approaches to the Selection of Women's Capability Index (WCI)

The capability approach was used to evaluate the opportunities and freedom of left-behind Muslim women from migrant families. The capability approach suggests that well-being should be measured not according to what individuals do but what they can do. The study recognises the arguments about choosing a list of basic capabilities. Sen (2004) argues that we cannot create a single ultimate list of capabilities since various lists are used for different purposes. Nussbaum (2011) identified ten fundamental human capabilities—“(1) Life; (2) Bodily Integrity; (3) Bodily Health; (4) Senses, imagination, and Thought; (5) Practical Reason; (6) Emotions; (7) Affiliation; (8) Other Species; (9) Play; and (10) Control over One's Environment”—are listed as what a perfect political system should provide for all of its citizens. By considering the issue of the role of migration on the capability expansion of women in the study area, the study identifies those capabilities of women that would be influenced due to the migration of their husbands and remittances and tries to explore to what extent these capabilities of the left behind wives are affected by the extend of the duration of migration of their husbands and remittances sent by them. Hence the capabilities of women selected for the study are (1) Quality of living (2) Education and Information (3) Decision making (4) Control over Household Resources (5) Freedom of Mobility and (6) Participation.

After selecting the relevant capabilities of left behind Muslim women, each sub-dimension has been given equal weightage to show how vital they are in raising multi-dimensions of the capability of left behind Muslim women due to the husband's absence and remittances. Assigning identical weights prevents subjectivity and prejudice and improves the comparability and transparency of indices, despite their limitations and criticisms [17]. Hence this study proposes a multidimensional and comprehensive framework for estimating the Women Capability Index for the research context of male out-migration and left-behind women. The survey responses to the questions of various sub-dimensions of indicators were used to quantify and standardize the individual indicators of the Women's Capability Index (WCI). Hence the sub-dimensions under each indicator were aggregated using the arithmetic mean, as done in the OECD Better Life Index [18]. The steps taken to calculate indices are detailed below.

- **Quality of Living Capability (QoLC):** According to Sen (1985), someone's capability to accomplish the "beings and doings" that they have a reason to value in life should be a measure of their quality of living. These precious "beings and doings" might be anything from simple functions like having access to nutritious food and a comfortable home to more sophisticated functioning like having autonomy over one's own choices [19]. While calculating QoLC, four sub-dimensions of Quality of living; (1) Access to adequate nutritious Food (QoLC1), (2) Suitable Accommodation (QoLC2), (3) Having money that they can decide how to use (QoLC3) and (4) Having time autonomy and engage in recreations (QoLC4) were considered. Questions were formulated in a simple local language and collected responses in a Likert scale regarding QoLC1, QoLC2, QoLC3, and QoLC4. To answer the question, the respondent could choose one category out of 5 possible scales of 1= Very strongly Disagree to 5= Very Strongly Agree. Respondents were asked to choose one number between 1 to 5 according to their utilisation of opportunities concerned.
- **Education and Information Capability (EIC):** Education is one of "centrally important beings and doings" that are crucial to their general well-being [20]. According to Sen (1992) a key component of the capability approach is education. The majority of Gulf women have higher educational qualifications in the Malappuram district, and most of them are enrolled in private, self-financing universities and colleges [21]. The respondent's ability to (1) Make rational decisions (EIC1), (2) Use the internet and social media (EIC2), (3) Continue education after marriage (EIC3) and (4) Acquire a good job (EIC4) were considered as the indicators of Education and information Capability (EIC). Depending on the ability to perform the

functioning they are asked to choose one category out of 5 possible scales of 1= Very strongly Disagree to 5= Very strongly Agree.

- **Decision-Making Capability (DMC):**The decision-making processes of migrant wives, how they gained access and management of the financial resources, and what new responsibilities women had to take on after the migrant left, reflect the agency of women [23].While calculating the decision-making Capability Index, four functionings of decision-making; being able to (1) Take care of the health of self and family members (DMC1), (2) Make decisions about the education of children (DMC2), (3) Decisions regarding the visit of friends and families(DMC3) and(4) Decision regarding food habit or dress Style were considered(DMC4). Questions were asked the respondents who make the final decision regarding DMC1, DMC2, DMC3, and DMC4 in the household. To answer the question, the respondent could choose one numeral out of 5 possible options, i.e., 1 to 5 with 1 indicating no autonomy in the above decisions and 5 indicating full autonomy while making decisions. The score was given as 1 to 5 as the increasing ability of the respondents in decision-making with the increasing number.
- **Control over Household Resources Capability (CoHRC):** Women's financial status, or their relative control over vital economic resources including income, property, and other means is the most important dependent variable impacting gender relations at the family level [23]. The respondents were asked about their ability (1) to spend their husband's income(CoHRC1), (2) to purchase daily necessities (CoHRC2), (3) to purchase major household consumer goods(CoHRC3) and (4) to manage the family property (CoHRC4). Questions were asked the respondents about their ability to access and control CoHRC1, CoHRC2, CoHRC3, and CoHRC4 in the household. To answer the question, the respondent could choose one category out of 5 possible categories, i.e., (1) Never (2) slightly (3) partially (4) moderately (5) fully. The score was given as 1 to 5 by the increasing ability of the respondents in the control over household resources.
- **Mobility Freedom Capability (MFC):** Mobility Freedom Capability is necessary to make use of regional resources and assimilate into society [24]. Left behind women's financial capacity has increased due to the influx and accessibility of foreign remittances which increased mobility. [5 & 6].For the Mobility Freedom Capability (MFC), four indicators of mobility associated with freedom of mobility for (1) Going to a hospital or Clinic (MFC1), (2) Going to a Bank and performing transactions (MFC2), (3) Participation in social events and festivals (MFC3) and (4) Visit Public Offices (MFC4) were considered. The respondents were asked whether they had the autonomy to travel regarding MFC1, MFC2, MFC3, and MFC4. To answer the question, the respondent could choose one category out of 3 possible categories, i.e., (i) Never, (ii) With others, and (iii) Alone. Respondents reporting full autonomy on mobility were given a score of 3, respondents with partial autonomy on mobility were given a score of 2, while respondents with no autonomy on mobility were given a score of 1.
- **Participation Capability (PC):** Participation also has an intrinsic value as a capability, and the capability approach values the empowerment of individuals as active agents of their own development [25]. Four functionings regarding the participation of left behind women were used to estimate Participation Capability (PC) depending on their participation in (1) Social Organization(PC2), (2)RegionalPolitics (PC2), (3) Business (PC3) and (4)HouseholdManagement(PC4). Respondents were assigned a score between 1 to 5 with '1' No participation and '5' indicating Very active participation.

Each respondent's mean score for all six capability indicators was calculated by dividing the aggregate response to the subdimensions under a particular capability indicator by the number of sub-dimensions. The mean score of the indicator was used to measure the standardized score for each capability indicator by using the equation;

$$\text{Capability Index for } i^{\text{th}} \text{ respondent} = \frac{(X_i - X_{\min})}{(X_{\max} - X_{\min})} \times 100$$

$X_i$  is the observed mean individual score of the  $i^{\text{th}}$  respondent and  $X_{\min}$  and  $X_{\max}$  are the maximum and minimum scores of the particular capability indicator.

Accordingly, six indices are measured for each individual. Thus, the indices are normalized to a scale that is meaningful for interpretation, such as a scale that varies from 0 to 100, where 100 represents the highest level

of capability index and 0 represents the lowest score of capability index. Finally, a single composite index was prepared by aggregating all six capability indices and calculating the mean scores.

The final WCI was determined using the equation below:

$$WCI = \frac{QoLCI + EICI + DMCI + CoHRCI + PCI + MFCI}{6}$$

Thus, the Women's Capability Index was calculated for each respondent, the value of the index ranges from 0 to 100, where 100 represents the highest level of WCI and 0 represents the lowest score of capability.

### 3. Results and Discussion

The respondent's socioeconomic and cultural contexts offer a unique potential to explore the effects of men's international emigration on gender roles, family dynamics, and aspects of women's empowerment. The study is concentrated on married Muslim women in Malappuram district whose husbands are working abroad.

**Table 1. Demographics of Migrant Household**

Individual Characteristics	Characteristics	Number of Respondents	Percentage	Cumulative Percentage
Age	20-40	289	68.3	68.3
	40-60	134	31.7	100
Education Level	Tenth class or below	156	36.9	36.9
	Higher Secondary	116	27.4	64.3
	Graduation	112	26.5	90.8
	Post-graduation or above	39	9.2	100
Occupation Level	Salaried Job	21	4.9	4.9
	Self-employed	22	5.2	10.1
	Unemployed	363	85.8	95.9
	Student	17	4.1	100
Husband's Occupation	Self-employed	87	20.6	20.6
	Professionally employed	38	9	29.6
	Salaried Job	298	70.4	100
Family Type	Nuclear Family	284	67.1	67.1
	Joint Family	139	32.9	100
Social class	Rich	39	9.2	9.2
	Upper Middle class	113	26.7	35.9
	Lower Middle class	262	61.9	97.8
	Poor	9	2.2	100

Source: Primary Data

The table indicates that 68.3 percent of the respondents belong to the age category 20-40 while 31.7 percent of them belong to the 40-60 age category. Of the total respondents of 423, a major portion of them; 64.3 percent of the respondents are educated up to tenth class or higher secondary, only 26.5 percent of them are graduated and 9.2 percent of them have post-graduation qualifications. The work participation rate is very low among the respondents which is almost equal to 10 percent of the total respondents while 4 percent of them are students. 70.4 percent of the respondent's husbands are self-employed and only 9 percent of them are professionally employed. The majority of the respondents are living in nuclear families (67.1 percent) and 61.9 percent of them belong to the lower middle class.

#### 3.1. Women's Capability Index

The Women's Capability Index was constructed by identifying the capabilities of the respondents that would be influenced by the context of husband's migration and foreign remittances and based on primary data the value of six capability indices for each individual was calculated and a composite Women's Capability Index was also measured for each respondent. The bar diagram showing the WCI score of the respondents:

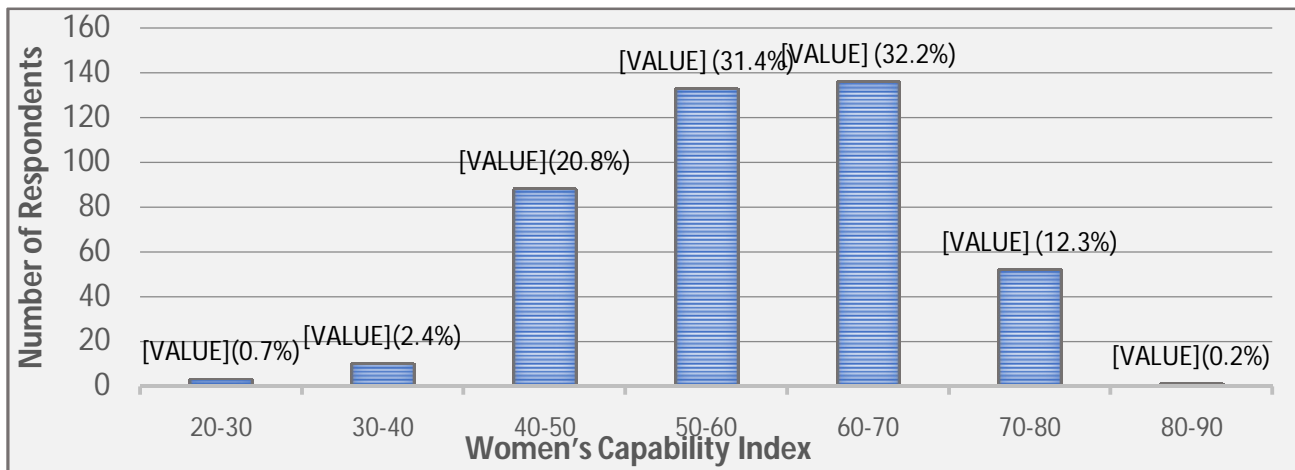


Fig. 1. Women's Capability Index

Source: Primary Data

The bar diagram shows the WCI score among the respondents. The diagram shows that the majority of the respondents have their WCI between the range of 50 to 70 (32.2+32.4=63.6 percent) and about 21 percent of them have WCI score between 40-50 and the least number of respondents have their WCI within the range 80-90 (0.2 percent) and 20-30 (0.7 percent). The average WCI score across all respondents is 58.12.

### 3.2. Validation of the WCI

The intention of the validity tests is to determine the degree to which the instrument truly measures women's capability and the Women's Capability Index was validated by criteria of reliability, construct validity, and content validity [26]. Hence the content validity, construct validity, and reliability criteria were used to validate the Women's Capability Index in the study.

**3.2.1. Content Validity:** The content validity test requires that the concepts of the questions meant to measure the capability were communicated correctly. In the questionnaire meant for the research the questions intended for the capability of the women were asked in simple local language and all the questions are ordinal. Overall, the respondents comprehended and interpreted the questions in the manner that the research had anticipated.

**3.2.2. Construct Validity:** To examine the construct validity of the measure, the relationship between the socioeconomic characteristics and the women's capability indices was examined. The univariate associations between various dimensions of WCI and socioeconomic characteristics are given in the table.

Table 2. Women's Capability Indices and Socio-Economic Characteristics

Socio-economic characteristics	Spearman's rho					
	QoLCI	EICI	DMCI	CoHRCI	PCI	MFCI
Age	0.064*	-0.140**	0.208**	0.179**	0.166**	-0.175**
Education	-0.008	0.388**	0.283**	-0.303**	0.101*	0.006
Occupation	0.098*	0.098*	0.900	0.188**	0.338**	0.238**
Husbands Education	0.071	0.280**	0.201**	0.193**	0.0526	0.079
Husband's Occupation	0.024	0.088	-0.260**	0.126**	0.433	0.108*
Family Type	0.117*	0.041*	-0.126**	0.214**	0.162**	0.032
Age at Marriage	0.016	0.033	0.108*	-0.075	0.177**	-0.054

Family Headship	0.153**	0.033*	0.160**	0.124*	0.263**	0.332**
-----------------	---------	--------	---------	--------	---------	---------

Source: Primary Survey

\*\*Correlation is significant at the 0.01 level (2-tailed). \*Correlation is significant at the 0.05 level (2-tailed).

The table presents Spearman's Rank Correlation coefficients between various socioeconomic characteristics and different indices of WCI. The Quality of Living Index (QoLCI) has a negative correlation with education and an insignificant association with the husband's education and occupation but has a positive correlation with family type, family headship, and age and occupation of the respondents indicating that with the increase in these variables, Quality of Living Capability increases. The Education and information Capability Index (EICI) has a negative significant correlation with age but has a positive significant correlation with the education and occupation of the respondents and also with the husband's education family type, and family headship. The Decision-Making Capability Index (DMCI) has a positive significant correlation with all socioeconomic characteristics except the husband's occupation and family type. Control over Household Resources Index (CoHRCI) has a positive correlation with all the socio-economic characteristics except age at marriage indicating that Control over Household Resources Capability Index enhances with the improvements in the socio-economic characteristics. The Participation Capability Index (PCI) is positively correlated with all the variables, but the correlation is insignificant with the husband's education and occupation indicating that these variables are not associated with Participation Capability. The Mobility Freedom Capability Index (MFCI) has a negative correlation with age and age at marriage but has a positive significant correlation with the occupation of the respondents and their husbands and family headship. Overall, the capability indicators have a positive significant correlation with most of the socio-economic characteristics and hence construct validity is confirmed.

**3.2.3. Reliability:** To test the reliability of the WCI, the internal consistency was examined with each dimension and across the sub-dimensions. The Spearman's Rank correlation coefficient was used to determine the correlation between each dimension and subdimension to test the consistency. To examine the indications within each dimension (consistency within dimensions), Cronbach's alpha test ( $\alpha$ ) was employed. The correlation matrix of dimensions and sub-dimensions of the WCI showing the magnitude of correlation coefficients and statistical significance of the relationship with Cronbach's alpha test ( $\alpha$ ) results are given below:

**Table. 3 Correlation matrix of dimensions and sub-dimensions of the WCIs**

Sub-dimensions	Dimensions or Indicators						Cronbach's alpha ( $\alpha$ )
	QoLCI	EICI	DMCI	CoHRCI	PCI	MFCI	
<b>QoLCI</b>							0.891
· Adequate Nutritious Food	<b>0.884**</b>	0.362**	-0.032	0.007	<b>0.555**</b>	-0.172**	
· Suitable accommodation	<b>0.859**</b>	0.373**	-0.024	-0.004	<b>0.569**</b>	-0.129**	
· Satisfy wants	<b>0.905**</b>	0.388**	0.101*	0.005	<b>0.584**</b>	-0.007	
· Time Autonomy	<b>0.851**</b>	<b>0.405**</b>	-0.032	0.067	<b>0.413**</b>	-0.073	
<b>EICI</b>							0.703
· Rational Decision	0.264**	<b>0.571**</b>	-0.140**	-0.128**	0.231**	-0.118*	
· Social media Internet use	-0.056	0.260**	<b>0.791**</b>	0.298**	-0.169**	-0.043	
· Pursue better education	0.432**	<b>0.692**</b>	-0.260**	-0.124*	0.330**	0.018	
· Acquired a Good job	0.345**	<b>0.719**</b>	-0.141**	-0.116*	0.402**	-0.138**	
<b>DMCI</b>							0.847
· Health care	-0.102*	0.130**	<b>0.726**</b>	0.312**	-0.041	-0.062	
· Education of children	-0.005	0.089	<b>0.767**</b>	<b>0.437**</b>	-0.022	-0.139**	
· Friends family visit	-0.035	0.124*	<b>0.903**</b>	0.330**	-0.158**	-0.097*	
· Food Habit/ Dress style	-0.035	0.124*	<b>0.903**</b>	0.330**	-0.158**	-0.097*	

<b>CoHRCI</b>								
· Spending husbands' income	0.086	0.02	0.344**	<b>0.696**</b>	-0.005	0.003	0.706	
· Purchase daily necessities	0.032	-0.007	<b>0.487**</b>	<b>0.805**</b>	-0.089	-0.051		
· Purchase major household consumer goods	-0.048	0.016	0.288**	<b>0.811**</b>	-0.077	0.119*		
· Manage family property	-0.003	-0.066	0.127**	<b>0.628**</b>	-0.098*	0.118*		
<b>PCI</b>								
· Social organisation participation	<b>0.727**</b>	0.346**	-0.102*	-0.018	<b>0.736**</b>	-0.018	0.633	
· Household management	<b>0.695**</b>	0.302**	-0.079	0.017	<b>0.734**</b>	-0.005		
· Business Involvement	0.034	0.170**	-0.164**	-0.204**	<b>0.551**</b>	-0.130**		
· Involvement in local politics	0.287**	0.002	-0.005	0.063	0.393**	-0.179**		
<b>MFCI</b>								
· Hospital/Clinic Visit	-0.05	-0.079	-0.169**	0.019	-0.092	<b>0.850**</b>	<b>0.812</b>	
· Visit Bank	-0.048	-0.132**	-0.132**	0.084	-0.073	<b>0.864**</b>		
· Participation in events or festivals	-0.221**	-0.198**	-0.077	0.025	-0.212**	<b>0.602**</b>		
· Visit public office	-0.0177**	-0.114*	-0.028	0.107*	-0.220**	<b>0.773**</b>		

Source: Primary Survey

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

In the table, the sub-dimension with the highest correlation coefficient across all dimensions is bolded. All, but except two sub-dimensions; 'Social media Internet use' (0.260) and 'involvement in local politics' (0.393) are found to be mostly highly correlated to the dimension that they were assigned to, with correlation coefficients of 0.4–0.9. The 'Social media Internet use' variable appeared to be more closely linked to the DMCI component than the EICI. Likewise, 'Recreational Activities', unexpectedly has a strong association with the respondent's EICI, and 'Social Organisation Participation', and 'Household management', have a high association with the QoLCI. All the sub-dimensions of QoLCI have a moderate correlation with PCI.

The 'Education of Children' component of DMCI has a moderate association with CoHRCI and the 'Purchase Daily Necessities' sub-dimension of CoHRCI has a moderate association with DMCI. Involvement in local politics of the respondents would have no association with any Capability dimensions. The MFCI dimension has a negative correlation coefficient with most of the sub-dimension of DMCI components are having a negative correlation with PC indicating the negative correlation between those dimensions and sub-dimensions.

The Cronbach's alpha ( $\alpha$ ) is a measure of internal consistency or reliability. Cronbach's alpha above 0.80 indicates excellent internal consistency. The sub-dimensions of QoLCI, DMCI, and MFCI have Cronbach's alpha ( $\alpha$ ) above 0.80 indicating excellent internal consistency. The sub-dimensions of EICI, PCI and CoHRCI have acceptable internal consistency ( $\alpha > 0.6$ ).

### 3.3. Male migration and the Capability Expansion of the Left behind women

While analysing the relationship between male migration and the family left behind, the duration of the migration and the remittances that they send to the family are crucial considerations. Regarding migration duration, the anticipated impact varies in the short and long time frames. Short-term migration can be disruptive to the family. It reduces income for the family that has to support the migrant because it is costly and does not necessarily lead to a job right away at the destination. As they are more likely to be earning more money, long-term migrants may be able to send their relatives back more money. [27].

To examine the effect of male migration on the capability expansion of left behind Muslim women, the ordinal Logistic Regression Model is used by taking the Women's Capability Index (WCI) as the dependent variable and Migration Duration and Foreign Remittance as the major independent variables. Ordinal logistic regression does not require the normality of the dependent variable which is ordinal or the independent which are continuous variables. Ordinal Logistic regression analysis is used to determine the reason-result relationship of the

independent variable with the dependent variable controlling for various individual and family characteristics of age, respondent's education and occupation, family type, and monthly income of the household. The purpose of the analyses is to discover which variable(s) has the most effect on the Women's Capability Index with 6 ordered categorical groups.

### 3.3.1 Hypothesis

Since the dependent variable (WCI) is ordinal, we can perform an Ordinal Logistic Regression analysis on the dataset. We set the alpha = 0.05 and the hypothesis are as follows:

Hypothesis 1;  $H_1$ : Husband's migration and remittance have a positive effect on the capability of left-behind wives

Hypothesis 2;  $H_1$ : The duration of a husband's stay overseas has a positive relationship with the left behind women's capability.

### 3.3.2. Parameter Estimates

The parameter estimates provide information about the effect of each predictor variable on the log odds of the ordinal outcome variable of the Women's Capability Index. As the variables have different distinct scales, it is desirable to normalise each variable before fitting the Ordinal Logistic Regression model and normalizing a variable means giving it a Mean value of 0 and a standard deviation of 1 [28]. Hence each variable is transformed to align with the same scale. Hence the variables are normalized in this study, which made the interpretation very easy.

**Table 4. Parameter Estimates**

Parameters	Estimates	Odds Ratio	Std. Error
WCI Score 20-30	-5.392***		1.116
30-40	-3.894***		0.995
40-50	-1.545		0.961
50-60	-0.073		0.958
60-70	1.775*		0.963
70-80	5.933***		1.381
Husband's Migrants Duration	0.088	1.292	0.158
Foreign Remittances	0.565**	1.759	0.129
Social Class-Rich	-0.08	0.923	0.771
Upper Middle	0.123	1.131	0.724
Lower Middle	0.256	1.092	0.709
Poor Ref.	0		.
20-40	0.235*	1.265	0.298
40-60 Ref.	0		.
Education- 10th Class	0.329	1.19	0.416
Higher Secondary	0.06	1.062	0.348
Graduation	0.373*	1.252	0.315
Post Graduation Ref.	0		.
Occupation- Salaried	-1.248*	0.287	0.611
Self-employed	-0.746	0.474	0.656
Unemployed Ref.	0		.
Husband's Occupation - Salaried	-0.418*	0.658	0.216

Professionally employed	0.495**	1.24	0.292
Self-employed Ref.	0		.
Family Type- Nuclear Family	0.647**	1.91	0.227
Joint Family Ref.	0		.

Source: Primary Survey Link function: Logit

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

The table indicates the ordered logistic regression coefficients of the effects of duration of migration and foreign remittances on the capability of Muslim left behind women with the related factors. Parameter estimates indicate whether the independent variable; men's migration duration and remittances and other factors have a significant impact on the dependent variable; women's capabilities. In this case, the respondent's age, education, occupation, husband's occupation and family type are given as factors in the relationship between the dependent and independent variables.

The predictor estimates represent the log odds of being in a higher or lower category of the dependent variable (WCI score) for a one-unit increase in the predictor. The husband's migrant duration has an estimate of 0.088 but with an insignificant  $P$ -value ( $P > 0.05$ ) indicating that the husband's migrant duration does not have a statistically significant effect on the WCI score. Another major predictor is foreign remittances sent by the husbands from abroad. The foreign remittance has an estimate of 0.565 with a significant  $P$ -value ( $P < 0.05$ ) implying that foreign remittances have a positive statistically significant effect on the WCI score indicating that with the increase in the foreign remittances sent by their husbands, the left behind women's capability also increases. This supports the study findings of Hassan & Jebin (2019).

The parameter estimate of age category signifies that the younger age category (20-40) has an estimate of 0.235 with a significant  $P$ -value ( $P < 0.05$ ) representing that the younger age (20-40) has a statistically significant effect on the WCI score compared to the older age (40-60) indicating that, the younger the age category more will be the WCI score. The parameter estimates of graduation level of education; 0.373 with a significant  $P$ -value ( $P < 0.05$ ) specify a statistically significant effect on the women's capability score representing that the graduated women will have more capability. The parameter estimate of family Type Nuclear Family is 0.647 and a significant  $p$ -value ( $P < 0.05$ ), shows that living in a nuclear family positively affects the WCI score compared to living in a joint family indicating that living in the nuclear family increases the capability score of the left behind Muslim women compared to joint family. These findings go hand in hand with the research findings of [29] & [30]

The social class does not significantly affect the WCI score indicating that whether included in the rich, upper, or lower middle class compared to the poor class does not affect the capability of left behind Muslim women. The respondent's lower education levels of tenth or below and higher secondary compared to post-graduation level, and occupation whether salaried or self-employed compared to being unemployed, do not affect the left behind Muslim women's capabilities and their husband's salaried occupation also does not significantly affect women's capabilities.

In ordinal logistic regression, the odds ratio (OR) quantifies the change in the odds of being in a higher category of the dependent variable for a one-unit increase in the predictor variable. In the case of monthly remittances from abroad, the odds ratio is 1.759 indicating that a one-unit increase in the monthly remittances from abroad is associated with a 75.9% increase in the odds of being in a higher category of the capability of women. Among the predictors, the family type of nuclear family has the highest odds ratio of 1.91. Among the predictors, foreign remittances, the age category of 20-40, graduation level of education, the husband's professional employment, and living in a nuclear family have positive statistically significant effects on the WCI score. The non-significant predictors include the husband's migrant duration, various social class categories, some education levels of the respondents, and occupation categories. Hence it is concluded that monthly remittances from abroad have a statistically significant effect on the capability of left-behind women and the family type of nuclear family has a major statistically significant effect on the left-behind women.

## Hypothesis testing 1

The foreign remittances have an estimate of 0.565 with a p-value of 0.002 signifies that foreign remittances positively affect the WCI score. Hence the null hypothesis is rejected and the alternate hypothesis exists that the monthly remittance impacts the WCI score and migration and remittance sent by the husbands have a positive impact on the capability expansion of the left behind women.

## Hypothesis testing: 2

The husband's migrant duration has an estimate of 0.088 but with a p-value of 0.577 ( $p > 0.05$ ) indicating that the husband's migrant duration does not significantly affect the WCI score. Hence accept the null hypothesis that the duration of a husband's stay overseas does not have a positive relationship with the left behind women's capability.

## 3.4 Regression model for the WCI

In an ordinal regression equation where the Women's Capability Index (WCI) is the dependent variable and migration duration and remittances are the major independent variables, and the age, education, and occupation of the respondents, occupation of their husbands, social class and family type are the factors.

Let  $Y$  (Women's Capability Index) be an ordinal outcome with  $J$  categories. Then  $(Y \leq j)$  is the cumulative probability of  $Y$  less than or equal to a specific category  $j=1, j=2, \dots, j=8$ . Note that  $(Y \leq J)=1$ . The odds of being less than or equal to a particular category can be defined as

$\frac{P(Y \leq j)}{P(Y > j)}$  for  $j=1, j=2, \dots, j=J-1$  since  $P(Y > J)=0$  and dividing by zero is undefined.

The logit is  $\log \frac{P(Y \leq j)}{P(Y > j)} = \text{logit}(P(Y \leq j))$ .

The ordinal logistic regression model can be defined as

$$\text{logit}(P(Y \leq j)) = \beta_{j0} + \beta_{j1}X_1 + \beta_{j2}X_2 + \dots + \beta_{j8}X_8 + \epsilon$$

where  $Y$  = Women's Capability Index (WCI) score (the score of WCI extends from 0 to 100 where 0 indicates the lowest WCI score and 100 indicates the highest WCI score). WCI is the multi-dimensional, composite ordinal dependent variable.  $\beta_{j0}$  represents the intercept or constant term in the regression equation which signifies the baseline value of  $Y$  when all other predictors are absent or have a value of zero.  $\beta_1, \beta_2, \beta_3, \dots, \beta_7$  are the estimated coefficients of independent variables.  $X_1$  = Migration Duration, a continuous variable,  $X_2$  = Monthly Remittances is also a continuous variable, both are independent variables.  $X_3$  = Social class (0 = Poor, 1 = Lower middle class, 2 = Upper middle class and 3 = Rich),  $X_4$  = Age (0 = 20-40 and 1 = 40-60),  $X_5$  = Education of the respondents (0 = Tenth class or below, 1 = Higher secondary, 2 = Graduation, 3 = Post graduation or above),  $X_6$  = Occupation (0 = Student, 1 = Unemployed, 2 = Self-employed and 3 = Salaried/Coolie job),  $X_7$  = Husband's occupation (0 = Salaried Job, 1 = Professionally employed and 2 = Self-employed),  $X_8$  = Family type (0 = Joint family, 1 = Nuclear family).  $\epsilon$  represents the error term. The coefficients  $\beta_1, \beta_2, \beta_3, \dots, \beta_8$  quantify the impact of each independent variable and factors on the women's capability.

## 4. Conclusion

The migrants have acted as informational channels, introducing modest ideas to their households, changing perceptions, and creating new norms for the women left behind. Malappuram district has the distinction of sending out the largest number of emigrants among the districts of Kerala. The separation of wives from their husbands due to out-migration is the highest among the Muslims in the communities and Malappuram among the districts in Kerala. When the male migrates leaving the dependent women behind in the place of origin, especially the spouses, they have to perform more functions and responsibilities that were earlier unfamiliar to them, which influences the access and freedom of opportunity of the women and utilisation of opportunities and freedom of the left behind Muslim women in the context of husband's migration is measured through the capability approach.

To measure the effect of migration of the husbands on the wives left behind, the Women's Capability Index was constructed by selecting the relevant dimensions of capabilities of women affected by the husband's migration and remittances. Ordinal logistic regression models have shown to be suitable for data analysis where the response for the dependent variable is ordinal like the Women's Capability Index and the duration of the migration and the remittances that they send to the family as the major independent variables. The result indicates that the husband's migrant duration does not have a statistically significant effect on the WCI score whereas the foreign remittances sent by the husbands from abroad have a positive statistically significant effect on the WCI score indicating that with the increase in the foreign remittances sent by their husbands, the left behind Muslim women's capability also increases. Among the factors, the age category of 20-40, graduation level of education, the husband's professional employment, and living in a nuclear family have positive statistically significant effects on the WCI score. The non-significant predictors include the husband's migrant duration, various social class categories, some education levels of the respondents, and occupation categories. Hence it is concluded that the male migration and the remittances that they send to the family have a positive significant effect on the left behind women's capabilities.

## References

1. Irudaya Rajan, S., & Zachariah, K. C. (2018). Emigration and remittances: New evidence from Kerala migration survey 2018.
2. Ali, K. T. M. (1990). The development of education among the Mappilas of Malabar. Nunes Publishers.
3. Lei, L., & Desai, S. (2021). Male out-migration and the health of left-behind wives in India: The roles of remittances, household responsibilities, and autonomy. *Social Science & Medicine*, 280, 113982. <https://doi.org/10.1016/j.socscimed.2021.113982>
4. Gardner, K. (1995). Global migrants, local lives: Travel and transformation in rural Bangladesh. Clarendon Press
5. Koirala, Saroj. (2023). Empowering Absence? Assessing the impact of transnational male out-migration on left behind wives. *Social Sciences*, 12(2), 80. <https://doi.org/10.3390/socsci12020080>
6. Desai, S., & Banerji, M. (2008). Negotiated identities: Male migration and left-behind wives in India. *Journal of Population Research*, 25(3), 337-355 Hugo, G. (2002). Effects of international migration on the family in Indonesia. *Asian and Pacific Migration Journal*, 11(1), 13-46. <https://doi.org/10.1177/011719680201100102>
7. Hadi, A. (2001). International migration and the change of women's position among the left behind in rural Bangladesh. *International Journal of Population Geography*, 7(1), 53-61.
8. Gulati, L. (1983). Impacts of male migration to the Middle East on the household: Some evidence from Kerala, India. Paper presented at the Conference on Asian Labor Migration to the Middle East, East-West Population Institute, Honolulu.
9. Yabiku, S. T., Agadjanian, V., & Sevoyan, A. (2010). Husbands' labour migration and wives' autonomy, Mozambique 2000–2006. *Population Studies*, 64(3), 293-306.
10. Iqbal, S., Idrees, B., & Mohyuddin, A. (2014). Male migration: Decision making autonomy and changing roles among females left-behind: A feminist approach (A case study of village Pindi Baha-ud-Din). *World Applied Sciences Journal*, 29(4), 480-485.
11. Kaur, A. P. (2018). International migration and impact of remittances on left behind wives: A case study of the Doaba region of Punjab. In *Migration, Gender and Care Economy* (pp. 113-133). Routledge India.
12. Zachariah, K. C., Mathew, E. T., & Rajan, S. I. (2001). Social, economic and demographic consequences of migration on Kerala. *International Migration*, 39(2), 43-71. <https://doi.org/10.1111/1468-2435.00149>
13. Sen, A. (2001). The many faces of gender inequality. *New Republic*, 35-39.
14. Nussbaum, M. (2000). Women's capabilities and social justice. *Journal of Human Development*, 1(2), 219-247. <https://doi.org/10.1080/713678045>
15. Nussbaum, M. (2005). Women's bodies: Violence, security, capabilities. *Journal of Human Development*, 6(2), 167-183. <https://doi.org/10.1080/14649880500120509>
16. Kathryn Gerry (2021) "We Become Capable of Handling Everything": Gender and Gulf Migration in Kerala, South India. ISSN 2369-8721 | The JUE Volume 11 Issue 3
17. Pandey, V. P., Manandhar, S., & Kazama, F. (2012). Water poverty situation of medium-sized river basins in Nepal. *Water Resources Management*, 26, 2475–2489.
18. OECD. (2013). OECD calculations based on OECD Income Distribution and Poverty database for socio-economic inequality. National Accounts data; Statistics New Zealand.
19. Greco, G. (2016). Setting the weights: The women's capabilities index for Malawi. *Social Indicators Research*, 135(1), 31-51. <https://doi.org/10.1007/s11205-016-1502-3>
20. Nussbaum, M. (2002). Education for citizenship in an era of global connection. *Studies in Philosophy and Education*, 21, 289–303.
21. Jafar, K. (2015). Status of Muslim women in Kerala: A study of female age at marriage in Malappuram district. *Hyderabad Social Development Papers*, 3, 2-45.
22. Lenoel, A. (2017). The "three ages" of left-behind Moroccan wives: Status, decision-making power, and access to resources. *Population, Space and Place*, 23(8), e2077. <https://doi.org/10.1002/psp.2077>
23. Sebastian, A., & Navaneetham, K. (2012). Gender, education, and work: Determinants of women's employment in Kerala.
24. Des Gasper, & Truong, T. D. (2010). Movements of the 'We': International and transnational migration and the capabilities approach. *Journal of Human Development and Capabilities*, 11(2), 339-357. <https://doi.org/10.1080/19452821003677319>

25. Clark, A. E., Flèche, S., Layard, R., Powdthavee, N., & Ward, G. (2018). *The origins of happiness: The science of well-being over the life course*. Princeton University Press.
26. Greco, G. (2013). Assessing womens quality of life in rural Malawi: A capabilities index (PhD thesis). London School of Hygiene & Tropical Medicine. <https://doi.org/10.17037/PUBS.01956170>
27. Demurger, S. (2015). Migration and families left behind. *IZA World of Labour*, 144. <https://doi.org/10.15185/izawol.144>
28. Evangeline, Lee.(2019).Ordinal Logistic Regression and its Assumptions - A detailed Ordinal Logistic Regression analysis on UN's 2019 World Happiness Report.
29. Matz, J. A., & Mbaye, L. M. (2017). Migration and the autonomy of women left behind. *WIDER Working Paper 2017/64*.
30. De Haas, H., & Van Rooij, A. (2010). Migration as emancipation? The impact of internal and international migration on the position of women left behind in rural Morocco. *Oxford Development Studies*, 38(1), 43–62. <https://doi.org/10.1080/13600810903551603>

#### **ABBREVIATIONS**

WCI	Women's Capability Index
QoLCI	Quality of Living Capability Index
EICI	Education and Information Capability Index
DMCI	Decision-Making Capability Index
CoHRCI	Control over Household Resources Capability Index
PCI	Mobility Freedom Capability Index
MFCI	Participation Capability Index

UNDER PEER REVIEW