



Multivariate Analysis of Drivers of Migration, Challenges, and Prediction of Future Scenarios of Female Ethiopian Return Migrants From the Middle East

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The Migration of Ethiopians to Middle Eastern countries has become a common phenomenon. Research emphasizing aspects of Migration in Ethiopia has focused on the causes of Migration and the situation in the host country. But there has been no focus on future intentions of forced mass return. The internal instability of Ethiopia is also another issue for returnees staying in their homeland. Thus, this cross-sectional mixed research reveals the causes, challenges, and expectations of forced female returnee migrants in the Amhara region while they were in Migration to the Middle East, during work, and upon arrival to the homeland, as well as their future intention/plan/ after return in the homeland by applying factor analysis and binary logistic regression model. The study participants in this research were 346 forced female returnees from the Middle East selected with multistage sampling and two key informants from each study area's labor and social affairs office. Findings indicate that robbery, extortion, and lack of accommodation were challenges during Migration; verbal abuse, restricted mobility, and communication, no days off at work, and not receiving a wage for work were challenges during work in the Middle East. Besides, lack of happiness, lack of employment and support, and feeling inferiority and low self-esteem are challenges for return migrants after coming to their homeland. Most return migrants received continuous social counseling training, skill training, and entrepreneurship training. The study also reveals that currently married returnees have a significant positive intention to live in their homeland. Though, deprived economic and joblessness-related factors are statistically significant as the negative chance to live in the homeland. Lastly, the study recommends that close cooperation between all parties, governmental and non-governmental institutions, UN organizations like IOM, ILO, and other NGOs are needed to better reintegration and living of these forced returnees.

Keywords: return migrants, logistic regression analysis, forced returns, multivariate analysis, factor analysis

INTRODUCTION

Background of the Study

Migration is recognized as the movement of people from one geographic place to another geographic place within a country or from one country to another for different reasons [1, 2]. According to the United Nations DESA [3] report, the number of international migrants worldwide has continued to grow over the past 15 years. The number of international migrants living in a country other than where they were born reached 244 million in 2015 worldwide, which is an increase of 71 million, or 41 percent, compared to 2000.

This indicates that there has been a significant increase in the size of the global labor force over the past two decades, with some indicators suggesting it has risen fourfold. This expansion is expected to continue in the coming years. According to the UN, there will be a 40 percent increase in the world's working-age population by 2050, and trade openness will continue to grow, especially in service and related occupations. Tentative projections expect the global labor supply to be more than double by 2050 [4].

Currently, women make up nearly 50% of all international refugees, including Ethiopian women. Experts recognize this high rate of Migration as characteristic of a new stage in the development of international labor migration. It is highly related to structural changes in the world labor economy associated with the globalization processes [5–7]. Commonly, unequal division of labor has created a niche for women in the global labor market.

Universally, Africans have traditionally migrated to Europe. Pushed by different factors, human migration is a phenomenon that has existed throughout human history. A marked tendency in the present day is the increased number of women migrants due to the changing labor demand caused by globalization. In recent decades, women's employment has shifted to the service sector and the informal economy. The availability of an informal economy leads women to migrate from developing countries to relatively developed countries mainly for the promise of better economic opportunities [8].

The Ethiopian women migrate to other countries looking for better job opportunities to get away from poverty and improve their life circumstances and that of their families. Migration of Ethiopians was becoming a daily legal or illegal activity and consideration due to multiple crises of territorial and gender inequality, famines, political instability, conflicts with neighboring states, injustice, and a high unemployment rate [4].

Esubalew [9] also asserts that push factors, mainly poverty/unemployment and generally the impoverished living conditions in Ethiopia, were principal factors in sending young women to Middle Eastern countries. The push factors combined with advice from friends, families, and other community members motivated many Ethiopians to go to the Middle East.

Ethiopian culture favors men over women, despite there being equal legal status between men and women. Due to this patriarchal structure of Ethiopian society, women are overwhelmingly susceptible to cheap and unprotected labor. The result of such unequal standing and interest facilitates women to practice and seek jobs in nearby Middle East countries

through both legal and illegal means. Migration has essentially become a strategy to cope with problems like unemployment and poverty [10].

Fernandez [4] states that although the migration of women domestic workers shows a rising pattern in many developing countries, the Horn of Africa, primarily the people of Ethiopia, provide a unique example. Ethiopia has been a significant source of labor migration to the Arabian Peninsula and Middle Eastern countries. According to MoLSA (Ministry of Labor and Social Affairs) figures, between July 2012 and July 2013, 161,787 Ethiopian migrant workers processed their Migration to Saudi Arabia through PEAs. The majority (96%) were women, with only (4%) being men. This figure only includes regular, registered labor migration. ILO estimated that irregular Ethiopian Migration to Saudi Arabia was double the size of regular Migration. The US Department of State reports that MoLSA even estimated that the 200,000 regular labor migrants in 2012 represent just 30 to 40% of all Ethiopians migrating to the Middle East, implicating that the remaining 60 to 70% (around 350,000) are either trafficked or smuggled with the facilitation of illegal brokers.

Ethiopian women working in Middle Eastern countries are vulnerable to several problems during their journey to the Middle East and while working there. Domestic workers are often denied freedom of movement and are either locked inside or forbidden to leave the home without permission. Violence against maids includes physical attacks ranging from rape to slapping; other forms of violence include overwork, including forcibly working in more than one household and refusing days off, non-payment of wages, or a reduced salary. Maids also often experience poor living conditions, such as a lack of food and privacy. Physical violence is usually utilized by the female employer or madam of the household. Most workers have reported suffering from more than one type of violence during their employment. Many are so traumatized by the experience that it even negatively affects their ability to reintegrate into society upon returning home [11]. It was known that more than 165,000 Ethiopian migrant workers were deported from Middle Eastern countries, mainly following the Saudi Arabian government's crackdown on irregular migrants. Even though returnees were from the whole country, the Amhara region was the major contributor. Despite the problems they reported, the returnees are inclined to return again to Middle Eastern countries [12].

This study is timely and pertinent because of none of the previous studies dealt with the largest group of returns, the case where migrants were obliged to go back home by compulsory forces, mostly after a new law was put in place in Saudi Arabia. Besides, there were very few studies conducted previously on return migration. Even those few studies [8–10] conducted concerning migrants to the Middle East considered more of the economic impact of Migration and did not take into account those issues such as health impacts and psychosocial impacts upon return home to impact strong policy intervention related to Migration. The previous studies were again depending on only a small sample size, which was more of descriptive analyses and not generalizable to the larger populations. At the same time, studies on returnees did not consider the future intention

of Migration, whether the migrants are interested in staying at home or re-migrating. That is why this paper has tried to address such mentioned gaps by incorporating the health and psychosocial condition of mass deported migrants and including a larger population to maximize the benefits of including the larger sample size for generalization. The following research questions were addressed.

- Which drivers of Migration have significantly forced women to immigrate to the Middle East?
- What challenges have been faced by migrants during emigration, working in the Middle East, and during deportation and after return to Ethiopia?
- In what ways do the government organizations and NGOs help migrants in adjusting the socio-economic situations of returnees post returning to Ethiopia?
- What is the future intention of migrants to return to the Middle East countries?

RESEARCH MATERIALS AND METHODS

Description of Study Area

Location

The study area is located in the northwestern and north-central part of Ethiopia; the Amhara Region is found between 9° 20' and 14° 20' North latitude and 36° 20' and 40° 20' East longitude. The Amhara Region has an estimated land area of about 170,000 square kilometers. The region borders Tigray in the North, Afar in the East, Oromia in the South, Benishangul-Gumuz in the Southwest, and the country of Sudan to the west.

Topography and Climate

The geographical surface contours of Amhara regional state land can be classified into two main parts, namely the highlands and lowlands. The historic Amhara Region contains much of the highland plateaus above 1,500 meters with rugged formations, gorges, and valleys. The highlands are over 1,500 meters above sea level and comprise the largest part of the northern and eastern parts of the region. Chains of mountains and plateaus also characterize the highlands. Ras Dejen (4,620 m), the highest peak in the country, Guna (4,236 m), and Choke (4,184 m) are among the mountain peaks which are located in the highland parts of the region.

The lowland part of the state encompasses mainly the western and eastern regions with an altitude between 500 and 1,500 meters above sea level. The Dega, Woina Dega, and Kolla parts of the region constitute 25, 44, and 31% of the region's total area, respectively.

Population

According to the Ethiopian Statistical Association report, the total population estimate for the Amhara Region in mid-2008 was 20,136,000, with an almost equal number of men and women. Of these 2,408,000 (12%) were urban residents. The percentage of the urban population is below the national average. A sub-Regional analysis for the 105 Woreda in the Amhara Region shows the unevenness of population distribution. Amhara Region has 169 urban centers with a population of 2,000 or

more. Urban areas with more than 40,000 populations in 2008 were Gondar, Dessie, Bahir-Dar, Debre Markos, Kombolcha, Debre-Birhan, Woldya, and Debre Tabor.

Major Economic Activities in Ethiopia

About 85% of the people are engaged in agriculture (mainly farming), and the remaining people are engaged in trade and other small-scale economic activities. Domestic grain is one of Ethiopia's major Teff (staple food) producing areas. Besides, many of the world's common grass types and cereal crops are cultivated in different parts of the country. The irrigation resources near Lake Tana in Amhara regional state and all the rivers found in the district provide high potential for irrigation development.

Target Population of the Study

The study was conducted in Amhara Regional State, Ethiopia. The target population for this study was the Amhara region, female returnee migrants in late 2014 EC from the Middle East countries irrespective of their migration date to the Middle East.

Research Design

A cross-sectional study, a one-shot basis of data collection with a mixed research approach (both quantitative and qualitative), was followed to conduct this study.

Sampling Techniques and Procedures

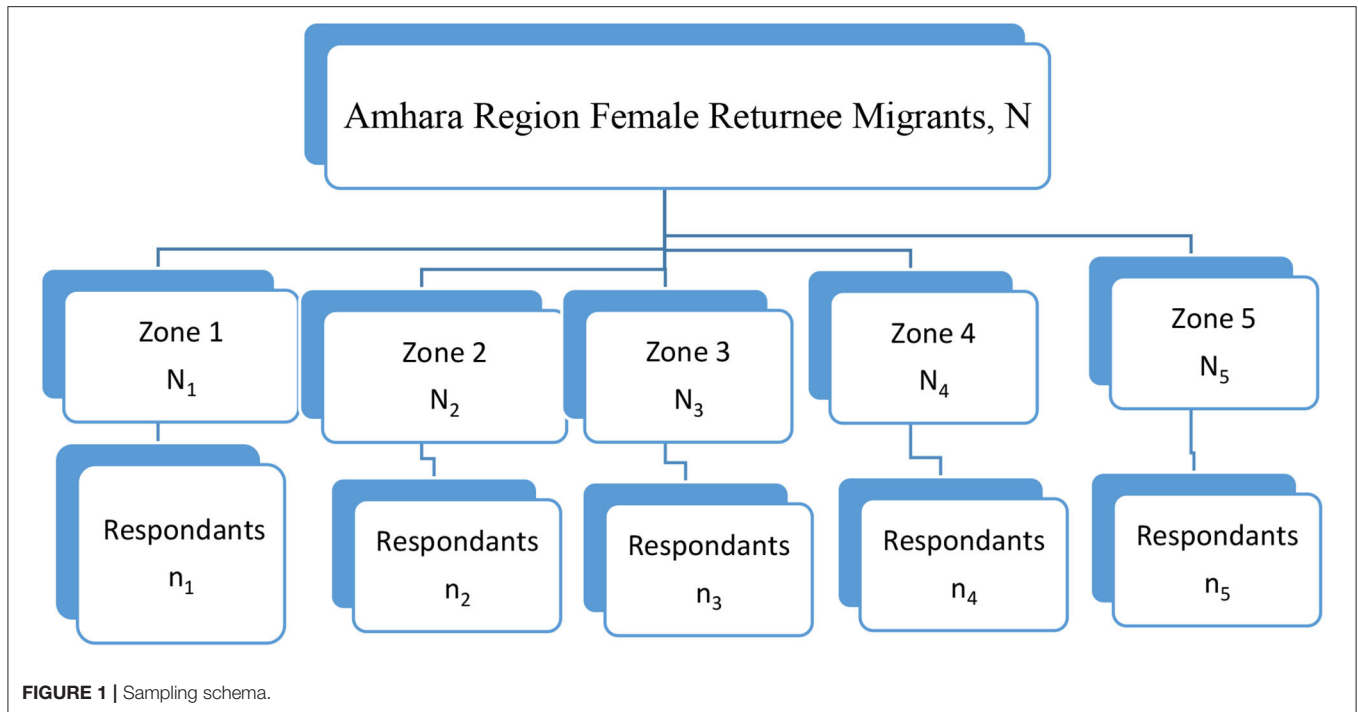
Female migrant returnees were grouped among different Zones/urban areas of the region; the urban centers were selected because although migrants appear from rural areas, most of them were and are concentrated in urban areas before Migration and post-returning to Ethiopia. Then sample respondents of the selected zone were determined using proportional allocation to the total number of migrants in the site. While migrants returned from the Middle East in late 2014 and past 2013/2014 Ethiopian Calendar, each district of the country received the number of returnees with the recorded list. Then, the list of returnee migrants was transferred to each zone, and the list of returnees was available at zonal and Woreda labor and social affairs offices. Appropriate numbers of migrants were selected using a systematic random sampling technique at each center from the list. The sampling procedure is diagrammatically designed as a multistage process, shown in **Figure 1**.

Sample Size Determination

The total female returnee migrants in the Amhara region in the past November 2014 Ethiopian Calendar was $N = 5669$ approximately, which is the Target population of the selected five sites/zones/towns. The Proportion of Ethiopian permanent returnees was $p = 0.60$, and the Proportion of temporary returnees was $q = 0.40$ [13]. Then, the sample size was determined by using the following formula:-

$$n_0 = \frac{Z_{\alpha/2}^2 \times p(1-p)}{d^2},$$

Where, n_0 is the minimum estimated sample size.



P = Proportion of female returnees who intend to live permanently in their homeland.
 q = Proportion of female returnees who do not intend to live permanently in their homeland.
 N = Total number of female returnees in the target sites.

$$n_j = \left(\frac{N_j}{N} \right)$$

n = sample size for each site/ town/ zone/and $d=0.05$ is the absolute precision term defined as $d = Z_{\alpha/2} \times E$, where E is the standard error and $\alpha = 0.05$ level of significance. Then,

if sampling is from a finite population of size: $n = \frac{n_0}{(1 + \frac{n_0}{N})}$ [14].

Thus, $n_0 = \frac{(1.96)^2 \times 0.6 \times 0.4}{(0.05)^2} = 368.793 \approx 369$ and considering the finite population size $N = 5669$, $n = \frac{369}{(1 + \frac{369}{5669})} = 346.44 \approx 346$

The population of female returnees for each selected zone/ town/ with the proportional allocation sample size determined for each selected site was as follows.

After determining the total sample and the sample size for each site n_j , systematic sampling was applied, as shown in **Table 1**. In the case the selected respondent in the systematic sample was lost or not available during data collection for the interview due to any reason, a random replacement of the respondent was done in the list next to the lost. The study has been conducted in the northwestern and north-central parts of Ethiopia, Amhara Regional state, as shown in **Figure 2**.

Data Sources

Primary data were collected from the migrants, and secondary data were collected from the respective offices of Migration in the regional states or zones.

Methods of Data Collection (Instruments)

The instruments for this study were questionnaires, key informant interviews, focus group discussion (FGD), and document examination or file inquiry. This is because of the inclusion of these instruments, the collection of full information and data reliability was improved for the study and to triangulate the information.

Questionnaire

The questionnaire included both structured and semi-structured questions. It was first prepared in English and translated into the local language of the people, i.e., Amharic, and then, a back-translation to English was made.

Key Informants Interview

Information *via* key informant’s interview was collected from officials of labor and social affairs of Amhara regional state, zonal and Woreda levels of labor and social affairs office, from mayor’s and micro and small-enterprise officers who work to employ the returnees on such provision of different pieces of training and organizing into small scale business.

Focus Group Discussion

Focus group discussion was again conducted to enrich data collected through other methods. The group compositions included trainers of migrants and returnee migrants.

TABLE 1 | Proportional allocation of sample.

Site/Zone/town	Total female returnees size/site	Sample calculated	Sample	Allocation
Bahir Dar/Zenzelima	1,161	70.8601	71	$BD = 50, Zen = 21$
Debre Tabor/Woreta/Simada	975	59.5078	60	$DT = 20, W = 20, S = 20$
Woldiya/ Mersa /Wurgesa	1,055	64.3905	64	$Wol = 30, M = 20, Wu = 14$
Dessie/Kombolcha	1,325	80.8696	81	$D = 40, Ko = 41$
Kemissie/Batti	1,153	70.3718	70	$K = 40, B = 30$

BD, Bahir Dar; Zen, Zenzelima; DT, Debre Tabor; W, Woreta; S, Simada; Wol, Woldiya; M, Mersa; Wu, Wurgesa; D, Dessie; Ko, Kombolcha; K, Kemissie; B, Batti.

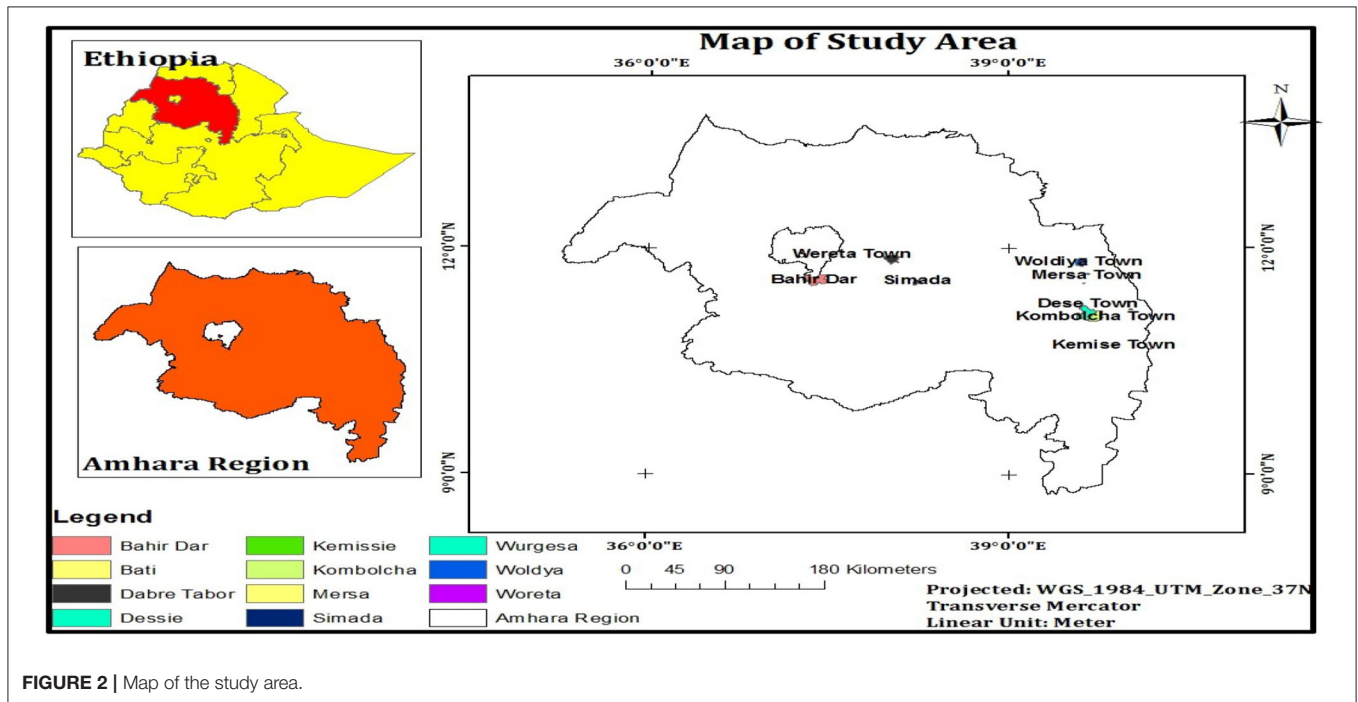


FIGURE 2 | Map of the study area.

Document/File/ Review

The total number of returnee migrants was collected from the regional labor and social affairs Bureau. Other information that could be convenient was gathered again from the published or unpublished documents of regional, zonal as well as Woreda offices.

Variables Under Study

Dependent Variable

The dependent or response variable is returnees’ future intention to live permanently in their homeland (intended to live here = 1) or needs to re-migrate (plan to re-migrate = 0), which is a dichotomous variable.

Explanatory or Independent Variables

The study considered **socio-economic and demographic** variables such as the economic situation of migrants, family background (whether educated or not), current age, age at the time of first migration, current marital status, marital status at the first Migration, educational status, religion, future

aspiration before Migration, current aspiration, reasons for return, drivers of Migration (push factors of Migration, pull factors of Migration), working condition abroad and at home, working hours at the middle east, nature of the contract, future aspiration/intention (permanent return to their homeland, temporary return but wish to migrate), **psychological variables** such as depression, self-esteem, current feeling by a return to the homeland (satisfied, not satisfied), and **health-related** such as whether returnees have been affected by acute physical illness including physical beating, malaria, and any other related diseases. Such variables were measured by using the Likert scale tests. Besides, the result factors of the factor analysis with their factor scores were used as additional predictor variables.

Methods of Data Analysis

The information or data collected *via* different methods for the study was analyzed using both descriptive and inferential statistical analysis. Summary measures, percentages, diagrams, and proportions were computed as descriptive analysis. Factor analysis with principal component was used to reduce the

number of drivers of Migration as the potential factor that caused Migration to the Middle East among the migrants. Moreover, descriptive statistics were also employed to analyze the socio-economic situation and the characteristics of migrants. In addition to this, theme analysis was employed to analyze qualitative data. Then, triangulation analysis was made to augment data collected in different methods. Based on the results of factor analysis (FA), Logistic regression analysis was employed to identify the key challenging and motive factors of the migrants as they return to Ethiopia. The data were analyzed by using the appropriate statistical package of SPSS and Minitab software.

Factor Analysis and The Orthogonal Factor Model

Factor analysis is a multivariate statistical technique for modeling observed variables and their description as the covariance relationships structure in terms of a smaller number of underlying unobservable (latent) quantities called “factors.” Considering O observable vector of traits with P dimension that has a population mean vector and covariance Σ . The orthogonal factor model postulates that O is linearly dependent upon a few hidden (latent) variables called common factors with sizes q ($q < p$) and p additional sources of variation $\epsilon_1, \epsilon_2, \epsilon_3, \dots, \epsilon_p$ called specific factors. The model is given by: $O = WF + \epsilon$

Where $W_{p \times q}$ is a matrix of unknown constants called factor loading

$$W_{p \times q} = \begin{bmatrix} w_{11} & w_{12} & \dots & w_{1q} \\ w_{21} & w_{22} & \dots & w_{2q} \\ \dots & \dots & \dots & \dots \\ w_{p1} & w_{p2} & \dots & w_{pq} \end{bmatrix} F = \begin{bmatrix} f_1 \\ f_2 \\ \dots \\ f_q \end{bmatrix} \epsilon = \begin{bmatrix} \epsilon_1 \\ \epsilon_2 \\ \dots \\ \epsilon_p \end{bmatrix}$$

Here, w_{ij} is the factor loading of the i^{th} observed variable on the j^{th} common factor.

Basic Assumptions

1. The specific factors, ϵ or random errors, all have a mean of zero
2. The common factors, the f 's, also have a mean of zero
3. The common factors have a variance of 1
4. The common factors are uncorrelated from one another
5. The specific factors are uncorrelated with one another
6. The specific factors are uncorrelated with the common factors

Covariance Structure

1. The covariance of the observed data matrix will give $WW^T + \psi$
2. The variance is the i^{th} an observed trait that will give the sum of m loadings with is the i^{th} specific factor.

Methods of Estimation of Factor Loading and Factor Scores

If the off-diagonal elements of sample covariance S are small or those of the sample correlation matrix R are essentially zero (identity matrix), the variables are not related. This implies that a factor analysis might not prove useful, and in these circumstances, the specific factor plays a dominant role. Suppose the covariance matrix appears to deviate significantly from a diagonal matrix. In that case, a factor model can be entertained,

and the initial problem is one of estimating the factor loading l_{ij} and specific variance Ψ_i . There are two popular methods of parameter estimation, the Maximum Likelihood (ML) Method and the Principal Component Method. However, for this study, we consider the principal component method, which decomposes the covariance matrix into Eigen values and Eigen vectors by maximizing the variance structure. It is considered as a convention that Eigenvalues of sample correlation matrix R are larger than one.

Rotated factors with the Varimax rotation method and factor score values for the unobserved random factor vectors were obtained and used for further analysis in a binary logistic regression model.

Binary Logistic Regression

There was an observed average variation of cheating rates among students of different structures in universities, faculties, departments, and beaches.

In logistic regression analysis, it is assumed that explanatory variables affect the response through a suitable transformation of the probability of success, P_i . The model is known as the logit transform function of P_i , defined as:

$$\text{Logit}(P_i) = \text{Log} \left(\frac{P_i}{1 - P_i} \right) = B_0 + B_1x_{1i} + B_2x_{2i} + \dots + B_kx_{ki} \quad (1)$$

Where are the model parameters and for this study, the dependent and explanatory variables are defined as:

$$Y_i = \begin{cases} 1 & \text{if the individual female returnee intended to live in homeland.} \\ 0 & \text{otherwise.} \end{cases}$$

Therefore, the dependent variable Y_i is the returnee's future intention/plan and the k explanatory (predictor variables) are observed and unobserved socio-economic, psychological, health-related, and other push and pull factors.

$$\text{The model } \theta(x) = \frac{e^{\beta_0 + \beta_1x_{1i} + \beta_2x_{2i} + \dots + \beta_kx_{ki}}}{1 + e^{\beta_0 + \beta_1x_{1i} + \beta_2x_{2i} + \dots + \beta_kx_{ki}}}$$

An alternative form of the logistic regression equation is $\log it [\theta(x)] = \log \left[\frac{\theta(x)}{1 - \theta(x)} \right] =$

$$\text{Logit}(P_i) = \beta_0 + \beta_1x_{1i} + \beta_2x_{2i} + \dots + \beta_kx_{ki} = X^T \beta$$

With the same understanding, some arrangements of equation [1] in the above model or relationship can be written as: $P_i = P(Y_i = 1/x_1, x_2, \dots, x_k) = \frac{e^{\eta_i}}{1 + e^{\eta_i}}$ (logistic regression function).

Where, $\eta_i = \sum_{i=0}^K B_i X_i$ and $X_0 = 1$; Odd ratio, the probability of an event happening is $\left(\frac{P_i}{1 - P_i} \right)$ for the i^{th} event as a success. That is $Odd(Y_i = 1) = \left(\frac{P_i}{1 - P_i} \right) = e^{\eta_i} \quad i = 1, 2, 3$

The coefficient can be interpreted as the change in the log-odds associated with a one-unit change in the corresponding independent variable, or the odd increases multiplicatively for every one unit change increase in x . The ratio of success to failure is called the odds of success.

Assumption of Logistic Regression Model

- Logistic regression does not assume a linear relationship between the dependent variable and the independent variable.
- The dependent variable need not be normally distributed (but does assume); its distribution is within the range of the exponential family such as normal, poison, binomial, and gamma.
- The dependent variables need not be homoscedasticity for each level of independent variables; that is, there is no homogeneity of variance assumptions.
- Normally distributed error terms are not assumed.

Model Building Technique

There are different methods of feature or variable selection depending on the type of analysis and model. The more variables included in a model, the greater the estimated standard errors become, and the more dependent the model becomes on the observed data. There is a different step to someone follow to select of variable in the logistic regression model. Of those

Step 1. The selection process should begin with a Univariate analysis of each variable.

Step 2. Selection of variables for the multivariate analysis was followed based on the results in the Univariate analysis was done along with all variables of importance; finally, the importance of each variable included in the multivariate model should be verified by different model assessment techniques.

Model Adequacy Checking Method

Once the model has been developed through the various steps indicated in the above section, it is essential to know how effective the model is in describing the outcome variable at this point. This is what is referred to as goodness-of-fit. The model fits well when summary measures of the distance between the observed response variable $y = (y_1, y_2, \dots, y_n)$ and its fitted values are small $\hat{y} = (\hat{y}_1, \hat{y}_2, \dots, \hat{y}_n)$ and the contribution of each pair (y_i, \hat{y}_i) , $i=1, 2, 3, \dots, n$ to these summary measures are unsystematic and is the small testing hypothesis that the model fits the data. The two common approaches are Pearson's χ^2 statistic and the likelihood ratio statistic (G^2), which are based on comparing the fitted and the observed counts. When the fit is poor, residuals and other diagnostic measures describe the influence of individual observations on the model fit and highlight reasons for the inadequacy.

The likelihood-ratio statistic (G^2) is given by $G^2 = -2 \log \left(\frac{\text{LikelihoodRatio}}{\text{LikelihoodFit}} \right) = -2 (L_0 - L_1)$.

The chi-square is used to statistical test whether including a variable reduces goodness of fit measures. Pearson's χ^2 statistic is given by $\chi^2 = \sum \frac{(\text{Observed} - \text{fitted})^2}{\text{fitted}}$.

The Hosmer-Lemeshow test is another alternative for checking model fitness. If the Hosmer-Lemeshow goodness-of-fit test statistic (p -value) is $> 5\%$, we cannot reject the null hypothesis that there is no difference between observed and model-predicted values implying that the model estimates are adequate to fit the data at an acceptable level. The Wald statistic is an alternative test that is commonly used to test the significance of individual logistic regression coefficients for each independent variable, i.e., $H_0: \beta_i = 0$ VS $H_A: \beta_i \neq 0$. for a dichotomous independent variable, the Wald statistic is the squared ratio of the unstandardized logit coefficients to its standard error,

$$Z^2 = \frac{\hat{\beta}_i^2}{SE(\hat{\beta}_i^2)}$$

RESULT AND DISCUSSION

Results of Descriptive Analyses With Qualitative Analysis

Out of 346 total samples, two questionnaires were lost, and 0.6% were non-response. Of the sample returnees, 156 respondents (45.3%) were planning to re-migrate, while 188 (54.7%) were planning to live in their native country. Moreover, from the pie-chart in **Figure 3**, about 58% of the returnee migrants were born and grew from rural while 42% were from urban areas. However, returnees did not want to go to their original homeland birthplace, instead living in a nearby town.

Problems Experienced by Females During Migration to the Middle East

There are a lot of problems that migrants encountered during their illegal Migration to the Middle East countries. Such problems are clearly shown in **Table 2**.

As noted in **Table 2** above, migrants were asked whether they were affected by challenges while they migrated to the Middle East. They responded to several problems that they encountered during their illegal emigration to the countries of the Middle East. Robbery and extortion was the major problem reported by 65.7% of respondents. The migrants reported that forcefully or through intimidation, they were charged a greater amount of money by illegal brokers than they were initially told. Lack of accommodation/shelter was another major problem reported by 61.6% of respondents. They replied that they passed several days in the informal houses in a desert field without any protection from the sunlight. Physical abuse, including suffering from violence such as being hit or kicked, was also reported by 21.5% of respondents. Some others also reported they were affected by rape and sexual abuse, 16.9% of respondents reported this problem. However, rape and sexual abuse are likely higher than the report given by the respondents. The respondents were in fear of directly talking to the researchers because Ethiopian societies do not have such a kind culture as to manifest all such personal information. Indirectly, they replied that they had seen that others were affected by such kinds of rape and sexual abuse. In addition to this, the migrants reported that they encountered problems such as lack of water and food, and many of them were in prison while migrating to Middle Eastern countries.

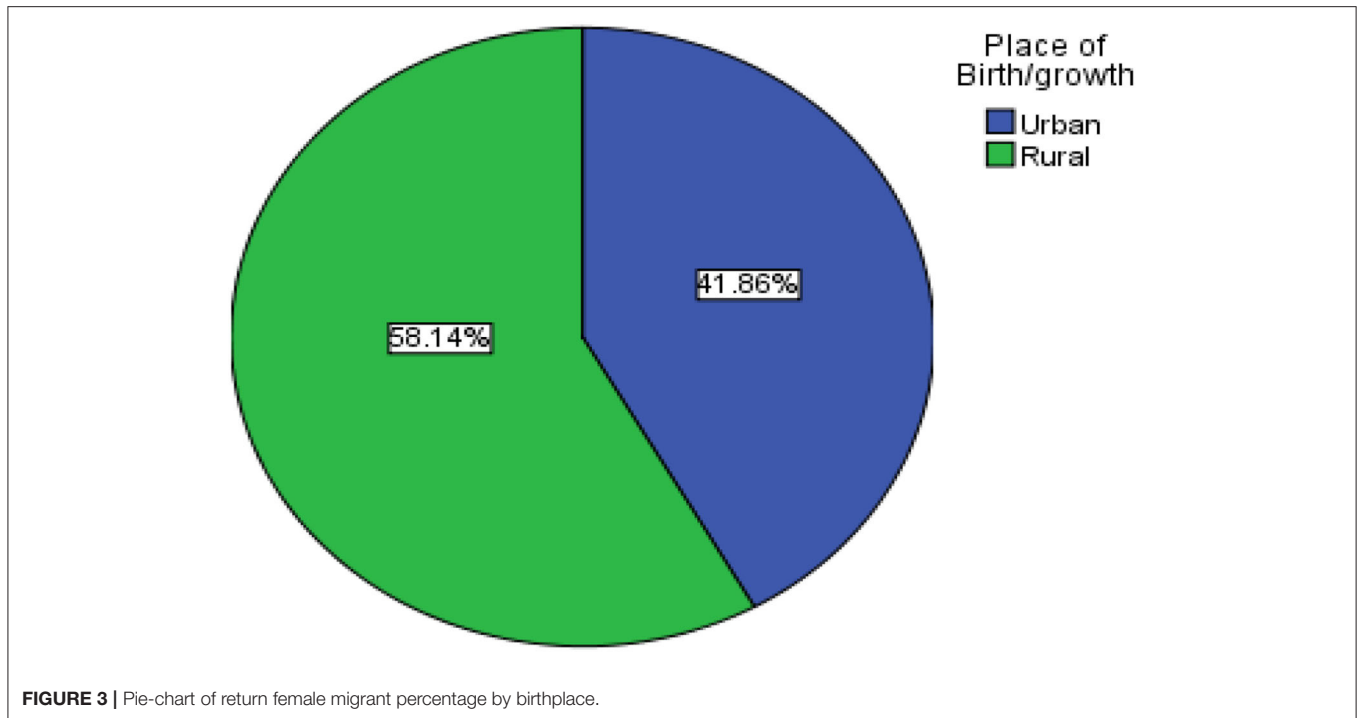


FIGURE 3 | Pie-chart of return female migrant percentage by birthplace.

Challenges of Female Emigrants During Their Work in the Middle East

One of the concerning issues in this study was to explore what problems returnee migrant women suffered while working in the Middle East. They were exploited by more number of problems as listed and explained.

The Ethiopian migrant female returnees also asked whether they were affected by several problems while working as housemaids in the Middle East. In this case, Table 3 showed that the major problem was being given no days off from work, which was reported by 84.9% of respondents. They replied that even though they completed work on a house, they were forced to do it at another house, either at a relative's house or doing the son and/or daughter's housework. This indicated that they were working overburdened. Because of this overburden of work, some of them reported they were at risk of health problems. Migrants were also prevented from moving out of the house of their employers, and their mobility and communication were restricted. This problem was reported by 67.4% of migrants.

Migrants were also victims of verbal abuse, including the aggressive behaviors and inappropriate language employers. Employers were showing their superiority through abusive language, which hurts the migrant workers. This, in turn, causes different psychological problems for migrant workers. This problem was reported by 59.3% of respondents. Migrants reported another major problem they encountered during their work in the Middle East was not receiving income for their work. It is known that they left their homeland for the sake of receiving income to improve their future. However, half of the migrant workers (59%) replied they were not receiving full income for their toils in such overloaded work, and they were also working in

TABLE 2 | Challenges faced by female return migrants during emigration to the Middle East.

Challenges faced during emigration (Multiple responses are possible)	No. of respondents	Percentage
Physical abuse	74	21.5%
Rape and sexual abuse	58	16.9%
Robbery and extortion	226	65.7%
Lack of accommodation/shelter	212	61.6%
Suffer in prison	160	46.5%

TABLE 3 | Challenges faced by female return migrants while working in the Middle East.

Challenges faced during working in the Middle East (Multiple responses are possible)	No. of respondents	Percentage
Physical beating	70	20.3%
Sexual harassment	86	25%
Verbal abuse	204	59.3%
Restricted mobility and communication	232	67.4%
No day off at work	292	84.9%
Not receiving income for work	174	50.6%

debt bondage. Sexual harassment and physical beating were also reported by 25 and 20.3 % of respondents. As discussed above, respondents still replied that their friends were victims of sexual harassment to hide themselves. This indicates that their friends

TABLE 4 | Challenges facing female return migrants in post returning to Ethiopia.

Challenges after coming to Ethiopia (Multiple responses are possible)	No. of respondents	Percentage
Mentally ill and psychologically disordered	168	48.8%
Symptoms of alienation	100	29.1%
Lack of happiness	232	67.4%
Lack of employment	306	89.0%
The feeling of inferiority and low self-esteem	180	52.3%

said their friends are victimized. From this, it can be concluded that more respondents were victims of sexual harassment.

More than this, the returnee migrants reported different problems they encountered while working in the Middle East, such as food being withheld or being given leftovers, language and health problems (vulnerability to disease/illness), alienation, poor working conditions, instability due to informal employment, no social security protection and access to legal and health service, discrimination and vulnerability to social crisis/mistreatment, xenophobia and social exclusion, cultural shocks and suffering identity conflict, and being unable to adapt to the weather conditions in the destination.

Challenges of Returnee Female Migrants Post Returnees to Home Country, Ethiopia

Returnee female migrants have not escaped their troubles despite their arrival back to their home country, and they are living with their families. They have experienced common economic problems and unusual psychosocial problems.

Returnee female migrants were also asked what challenges they were affected by post returning to Ethiopia. As shown in **Table 4**, lack of employment was reported by 89% of respondents. Most of them stay for about 2 years or more without any kind of employment that provides an income, and they are still dependent on their families and relatives. Post returning to Ethiopia, female returnees also reported some psychological problems. Returnees have a symptom of lack of happiness which was reported by 67.4% of respondents. Nearly half of the respondents reported feelings of inferiority and low self-esteem, along with mental illness and being psychologically disordered. Such a problem was replied by 52.3 and 48.8% of respondents, respectively. Symptoms of alienation from families and relatives was also another psychological problem that was reported by 29.9% of respondents.

Support of Government and NGOs for Returnee Females Migrants From the Middle East

After the crackdown of the Saudi Arabian government on illegal migrant workers, Ethiopian migrants were a heated issue. Much of the international media have recorded the issues, and the Ethiopian government brought its citizens back to Ethiopia by adjusting air transportation services. Then our issue as researchers is how much the concerned body of the government, as well as NGOs, follows up with those returnee migrants in

TABLE 5 | Contribution by the government and NGOs.

Contributes given to return migrants (Multiple responses are possible)	No. of respondents	Percentage
Financial contribution	0.00	0.00%
Skill training	80	23.3%
Social counseling	56	16.3%
Organizing in micro and small enterprise	14	4.1%

providing care support for them to be stable and not to intended to re-migrate illegally.

As shown in **Table 5**, returnee migrants replied to the question of how much assistance they get from the public as well as private organizations. None of the returnees gain any financial contribution either from the government or non-governmental organizations except for the birrs they received upon arrival at Bole international airport. Only those respondents, 23.3, 16.3, and 4.1%, be given skill training, social counseling, and organizing in micro and small enterprises, respectively. Other reported problems were repeated headaches, emotional stress, loss of relationship with relatives and families, feeling estranged upon return, and bureaucracy related to work even though some of them have tried to participate in work.

Regarding whether the respondents are happy with the support they received from the government or non-governmental organizations, only 4.1%—who might be those engaged in micro and small enterprises—replied that they were happy. The other 95.9% of respondents are not happy for one or more reasons. Regarding medical treatment, provision of working place, support in cash, expectation of a place for housework, provision of money in the form of loans, suitable place for work and market linkage, jobs, expecting more care from the government, and what they replied was that what the government promised before we returned was not implemented, i.e., what was said is that the government prepared working place with available credit funds.

Besides, key informant interview responses from the concerned organizations indicate the problem that migrants experienced was obvious, and organizations were trying to eliminate illegal brokers to reduce the problem even though they do not use legal brokers also participate in illegal activities. The key interviewees said that they have been working to help the returnees, including adjusting continuous social counseling training, skill training, and entrepreneurship training. They replied that the trainees or returnees are not interested in participating in such kinds of training and they only ask how much money they would receive.

The key informants replied that their organizations, through the cooperation of NGOs, even gave financial support up to 8,000 Ethiopian Birr to those who were supposed to be the greatest victims and organized them into micro-enterprises, giving working places including containers even though it contradicted the response of returnees and at the same time the interviewee said the rules and regulations of the government to organize the small and micro-enterprise are not easy as expected.

The key informants added that actually, they did not consider the support sufficient because it would be considered adequate when the returnees become independent of them and start helping their families.

Information About the Middle East and Their Expectation Before Their Emigration

The majority of respondents (76.2%) replied that they migrated to the Middle East without having full information. Those who did not have information about it replied that they were simply thinking of the money they get from work, i.e., a higher salary from their work, but they did not know how much it would actually be. Most of them said that they dropped out of school and expected better life; they simply thought that they were a relief from their current and immediate problems, they did not expect any discrimination, they did not know they were living in a closed campus, and houses with restriction of mobility and communication, and they did not know they would be overloaded with work, labor exploitation, and torment. In general, they are primarily interested in migrating to the Middle East simply by facial observation of previous migrants, including their luxurious clothing, which migrants do not expect in their life without considering close communication with those previous migrants and mostly depending on the information given by brokers, which further magnifies these aspects. In addition, they expected they could collect more money within a short period.

The Overall Emigration Process of Migrants to the Middle East

Most of the returnee migrants were considering migration to Saudi Arabia and Dubai, and started from the local agents or brokers. They were contacted by brokers through their relatives as well as *via* the direction of earlier migrants. Having contacted the brokers, the following began: Passports were processed, with girls as young as 15 being considered, but having their age falsified to 18, which was easily done because of the lack of birth registration in Ethiopia. During this process, Christians would change their names on documentation to Muslim ones, e.g., Alemitu to Fatuma, to be eligible for entry to Saudi Arabia. Most of the migrants began from local areas through the Afar region in the direction of a mile to Djibouti by cars and containers with the help of illegal brokers, and they were migrated illegally through the roads of Djibouti to Yemen by small boats and then Saudi Arabia. During this time, they experienced extreme suffering, and terrible, appalling, and tiresome travel. Because of such situations and lack of food and water, the returnees replied that some of their friends died on the journey. Others acquired entry visas during the seasons of the Muslim Haj and Omra and were illegally employed in Saudi Arabia. Some others were directly transported to Saudi Arabia through Bole International airport, which seems to be legal travel. Still, their visa was a fraud by their brokers in the form of tourist or business visas which expired within a short time, as the migrants could not understand the visa situation. So it can be understood that the migration situation is illegal in general. Illegal brokers deliberately recruit those young girls with low educational levels and where they can

easily convince them by magnifying the positive information and receiving their income through the exploitation of their labor well as their physical bodies. The key informants from social and labor affairs offices responded that they even knew how illegal brokers recruit young girls the age of 14 or 15 in low-income families by forming networks with the local people by providing false information.

Challenges During Forced Return to Ethiopia, Overall Current Situation and Future Prospects of Returnees

Returnees replied to the open question of what challenges or problems did they encounter during their forced return to Ethiopia. The major problems they reported are that they lost their property through force, including cash. Some of them suffered in prison from a congested environment, lack of food and water, physical beating, and inhumane treatment. Despite the migrants arriving in their home country, some other returnee migrants also reported they forcefully lost their property at Bole international airport. More than half (55.2%) of the returnees were not happy with the forced return to their home country, Ethiopia. This is because they did not attain their objective. Their main goal was to work for 4 or 5 years and above and on returning invest in a certain business in Ethiopia. But this was not succeeded by the majority of respondents, and they came back empty-handed. Those who were happy about the forced return explain that they were fearful of their life at that time, so being returned safely with their health to their family was welcome; they were longing for their family at that time.

Regarding the current overall conditions, 79.7% of returnees reported they were not happy. Because they are still unemployed, they did not attain what they wanted, experienced no positive life changes, lost a lot of properties during deportation, and did not receive any support from the government or NGOs. Promises made to them were not implemented, they are living in poverty, being dependent on their families, suffering from different psychological problems, loss of previous work and unemployment, and in general, having low self-esteem from being failed migrants. They added that even though there are several challenges in the Middle East, there is a possibility of good prospects and economic change.

Since large scale return of migrants at the end of 2013 and the beginning of the 2014 Ethiopian Calendar, to reduce out-migration to the Middle East, the interviewed government officials from the offices of labor and social affairs, micro and small enterprises, and mayors, responded that the government is offering skills development training courses, the returnees were organized into micro and small enterprises, consecutive social counseling was given, and primarily regional bureaus of the Ministry of Labor and Social Affairs are responsible for finding jobs in cooperation with a variety of organizations and businesses. At the federal level, there are various programs to assist returned migrants with their social, economic, and cultural reintegration through the cooperation of ILO and IOM. But, the response of the officials was contradicted by that of returnee migrants.

According to the officials yet, despite these programs and their motivation to help, and regardless of their negative experiences

in Saudi Arabia, many returnees do not see a good future in Ethiopia and mostly intend to migrate again. Such response is also consistent with the response of returnees themselves. Most of them replied that their expectation from the government as well as NGOs was high. Suppose such things do not succeed or are not fulfilled. In that case, they are ready to re-migrate in the immediate future (illegally or legally) despite their response how the working condition is terrible and unpleasant in Saudi Arabia. Those returnees replied that they did not consider training for social counseling as well as skill training and support; rather, they expected much more direct financial support from the government to construct houses, directly start businesses of their own, and likely be stable in their locality. What they replied was that mostly they were attending skill training and social counseling training in expecting a huge amount of money support unless it is valueless to them, and they did not give credit for any training. Besides, rural resident returnees were not joining their family still, and they lived in nearby towns.

Ideas to Stop Girls' Emigration to the Middle East?

Concerning the question "is it good to stop girls' emigration to the Middle East?" more than 95 percent (95.5) of the respondents responded it is good to stop girls' emigration to the Middle East. Those respondents reason out a lot of problems like women being easily vulnerable to crises and unable to cope with some of the situations, risks of sexual harassment, physical beating including loss of body parts or life, work overload, restriction of movement such as being locked in a house and isolation, too great a temperature, social and psychological problems, food and salary withholding, insults and many more problems aforementioned in this study. Yet, despite the mentioned problems, they still recommended that those girls who are subjected because of unemployment and discomfort in life in their home country, it is better to migrate and work there such a pain could be for a few years and a better future would be perhaps possible through working abroad, i.e., most of them put the probability that whether better life would come or they could suffer by several challenges.

Basic Issues to Be Done to Curv Emigration of Women to the Middle East

Lots of ideas were mentioned by returnee migrants to stop Migration to the Middle East. There must be goals set, and committed work in any of the following activities to be effective. These activities included: arresting illegal brokers for legal actions, helping would-be migrants to become entrepreneurs, work through cooperation, having endurance for goal achievement, the government arranging jobs for those who are moving as migrants, the government should provide continuous training related to business as well as social wellbeing; the government should provide a working place, containers, and money for different businesses; the poor and disadvantaged should be able to expect positive life changes to come through working in our country, and creating good governance with little bureaucracy. From this, it is understood that most of the responses are outward-looking to the government. The key informants' interview response indicates that there are several

TABLE 6 | Item sufficiency and sampling adequacy analysis.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy. (KMO)	0.843
Bartlett's Test of Sphericity Approx. Chi-Square	1.946E3
Df	231
Sig. (p-value)	0.000

strategies to protect against illegal emigration to the Middle East. Different organizational committees are assigned in the form of a task force with the chairperson of mayors. Such organizational committees include religious leaders, police, administration, and security officers in each kebele. The role of such committees creating awareness for the whole local people to report if there are newcomers from rural into the town, including housemaids, construction workers, waitresses, and follow whether they are contacted by someone else considered to be illegal brokers and they have a checklist for conducting activities. Such committee members are also considered focal persons in different social problems. As to the responses of key informants, the nominating committees were not working well to combat the problem, and still, there are illegal migrants.

Results of Data Reduction With Principal Component Factor Analysis

Before running multivariate methods of factor analysis, it is important first to test the reliability of the instrument items used. The overall reliability was computed to be Cronbach's alpha = 0.792 indicating that the questionnaire items were consistent.

As shown in **Table 6**, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy statistic values tests if sufficient items (by partial correlation among variables) are available for the factor component in the factor analysis. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy statistic for the principal component analysis is 0.843. This was > 0.5 , indicating that the sampling was adequate for factor analysis. There were significant relationships among the perceived indicator items as drivers of emigration to the Middle East. The data were also checked for Bartlett's test of Sphericity to see that the original variables were sufficiently (bivariate) correlated, and this met the criteria as significant.

Bartlett's Test of Sphericity Approximated Chi-square result indicated that the original observed variables were sufficiently correlated (the variables were not completely uncorrelated), and factor analysis was possibly appropriate. Thus, the higher loadings were acceptable and easy to interpret. Moreover, from the factor analysis, all 22 observed variables (items) can be expressed (composed into) by six extracted component factors.

These six-component factors cover a total of 84.67% of the total variation explained in the data from the original observed 22 variables. The original observed variables (items) have Likert scales starting from 1 = strongly disagree to 5 = strongly agree. The extracted component factors are shown in **Table 7** and can be named as *socio-cultural and demographic factors*: which contains eight observed items; *economic factor*: which contains five observed items; *external influence factor*: which contains

TABLE 7 | Extracted component factors with rotated component matrix ^a.

Observed variables (Items)	Component factors					
	1	2	3	4	5	6
F1. Unequal status with men/male dominated relationship in the family forced me to emigrate	0.743		0.320			
F1. Conflict and disagreement with family derived me to emigrate	0.715					
F1. Pressure of relatives in Arab nations attracted me to emigrate	0.671					
F1. Large family size in a house caused my Migration	0.642					
F1. The expansion of the sex industry was caused by my emigration	0.637					
F1. Fleeing from domestic violence and desiring equal opportunity was derived me to emigrate	0.625			0.434		
F1. Discrimination against some groups of women (single mothers, unmarried women, widowed, or divorced) derived me to move	0.593			0.366		
F1. Desperateness in education force me to emigrate	0.425	0.330			0.424	
F2. Wishing a higher standard of living was caused by Migration		0.713				
F2. Low income of the family or poor economic conditions forced		0.707				
F2. A family emergency forced me to emigrate	0.341	0.549				
F2. The existence of labor demand in the middle east on the service sector market (domestic work and they are giving) was caused by my emigration		0.418			-0.355	
F2. Low wages in local employment were a great cause		0.318				
F3. Peer pressure is the basic reason for my emigration	0.355		0.700			
F3. Family pressure or obligation force me to emigrate	0.448		0.697			
F3. Remittance pressure (the previous migrants build houses for themselves and their families) cause me to emigrate		0.368	0.397	-0.392		-0.311
F4. Getting out of abusive marriage was my basic reason to emigrate				0.714		
F4. To increase assertiveness, autonomy, freedom, power, self-esteem that comes with employment was caused me to emigrate		0.498		0.509		
F5. Lack of Individual freedom and dependence derived me to emigrate					0.737	
F5. False promises of brokers and the proliferation of illegal agents, money lenders, and private agencies cause my emigration					0.521	0.361
F6. Limited job opportunities in localities forced me to emigrate						0.638
F6. Unemployment						0.620

Extraction Method: PCA. Rotation Method: Varimax with Kaiser Normalization.

^aRotation converged in 20 iterations.

Bold values show the highest loading value for a specific item.

three observed items; **gender violence factor**: which contains two observed items, **miscellaneous factor**: that contains two observed items and employment-related factor: which contains two observed items, respectively.

Results of Logistic Regression Analysis

Out of 346 respondents, about 344 were involved in this data survey. This is 99.4% of the targeted sample size which is satisfactory for logistics regression analysis. Variables selection

for different models was made by running Univariate binary logistic regression and correlation analysis.

Table 8, Univariate analysis, **the variables not in the Equation** table, shows that three of the nine variables (Deprived economic factor, external influence, and miscellaneous factor) are, individually, significant predictors of whether a returnee migrant would intend to live in their home country or not.

From **Table 9**, nine variables have been added to the model. By adding these variables, -2 log likelihood (deviance) has been reduced by 28.405 on nine degrees of freedom which implies that

TABLE 8 | Variables not in the equation (univariate analysis): null model.

			Score	df	Sig.
Step 0	Variables/ factors/	Current age (Cage)	0.379	1	0.538
		Current Marital Status (CMaritalStatus)	3.773	1	0.052
		Birth Place	2.162	1	0.141
		Socio-cultural and demographic (SCD) [F1]	0.372	1	0.542
		Deprived Economic factor [F2]	8.957	1	0.003
		External influence (extinfu) [F3]	6.611	1	0.010
		Gender violence (gendvio) [F4]	0.000	1	0.989
		Miscellaneous factor [F5]	3.965	1	0.046
		Joblessness related factor [F6]	3.752	1	0.053
Overall statistics			26.992	9	0.001

TABLE 9 | Omnibus tests of model coefficients.

		Chi-square	Df	Sig.
Step 1	Step	28.405	9	0.001
	Block	28.405	9	0.001
	Model	28.405	9	0.001

TABLE 10 | Model summary.

Step	-2 Log likelihood	Cox and Snell R Square	Nagelkerke R Square
1	445.499 ^a	0.6901	0.763

^aEstimation terminated at iteration number four because parameter estimates changed by < 0.001.

there are not many variations of the returnees' future intention. Looking at the *p-value* of step, block, and model, it can be seen that these items are significant (< 0.05). This indicates that the addition of the independent variables to the model is statistically significant or that the overall model is significant when all nine independent variables are entered. This shows that the independent variables explain variations in returnee migrants' plans.

From **Table 10**, Cox and Snell R Square and Nagelkerke R Square indicate that the model includes nine variables, of which the three independent variables explain between 69 and 76.3% of the variation in returnee migrants' plan. That means the Model Summary table includes two different ways of estimating *R*² (percent of variance accounted for). These "pseudo" *R*² estimates (0.6901 and 0.763) indicate that ~69 or 76% of the variance in whether or not a returnee migrant plans to live in their home country or not can be predicted from the linear combination of the nine independent variables/factors.

The Hosmer-Lemeshow goodness of fit statistic (shown in **Table 11**) measures the correspondence between the actual and predicted values of the dependent variable. It is also commonly used to assess the goodness of fit of a model to the data and allows for any number of explanatory variables, which may

TABLE 11 | Hosmer and Lemeshow test.

Step	Chi-square	df	Sig.
1	12.171	8	0.144

be continuous or categorical. Since, *p-value(significance)* = 0.144 > α = 0.05, the null hypothesis is not rejected. Thus, the model is fitted well.

From **Table 12**, it can be seen that four independent variables (current marital status, deprived economic factors, miscellaneous factor, and Joblessness related factor) are statistically significant (sig. <0.05). **Exp** (β) gives the odds ratio for each variable. The odds ratio and confidence interval for current marital status was 1.43 (95% CI = 1.05–1.95), for deprived economic factor was 0.68(CI = 0.53–0.87), for miscellaneous factor was 0.80(CI = 0.64–1.00) and for joblessness related factor was 0.73 (CI = 0.68–0.99). These indicate that the odds of estimating correctly who plans to live in the home country improve by 43% (1.43–1) if one gets married after returning. A Wald statistic and its associated *P-value* (which are part of the logistic regression output) are used to determine whether each independent variable is significantly associated with the dependent. From the 95% confidence intervals, there is a positive association between current marital status and the probability of a female returnee migrant intention to live in their homeland. On the other hand, the odds and probability of a female returnee migrant's intention to live in their homeland decreases as deprived economic, miscellaneous, and joblessness-related factors increase in the community. This implies that the chance and the expected probability of returnee migrants' intention to live in the homeland are somewhat lower as the deprived economic, miscellaneous, and joblessness-related factors are larger.

From the regression coefficients (B), the probability/the predicted value of the migrants' intention to live in the homeland increase by 0.36 as the current marital status level of returnee migrants increases from single to married, assuming all other factors are constant. On the other hand, the probability/the predicted value of the return migrants' intention to live in

TABLE 12 | Variables in the equation (multivariate binary logistic regression).

	Predictors	B	SE.	Wald	df	Sig.	Exp(B)	95.0% CI for EXP(B)	
								Lower	Upper
Step 1 ^a	Current Marital Status	0.360	0.157	5.231	1	0.022	1.433	1.053	1.950
	Deprived Economic factor	-0.394	0.127	9.539	1	0.002	0.675	0.525	0.866
	Miscellaneous factor	-0.219	0.113	3.749	1	0.053	0.803	0.643	1.003
	Joblessness related factor	-0.271	0.121	4.995	1	0.025	0.729	0.682	0.986
	Constant	-0.455	0.304	2.237	1	0.135	0.634		

^aVariable(s) entered in step 1: Current Marital Status, Economic factor, miscellaneous factor, and joblessness related factor.

TABLE 13 | Classification table for predication.

	Observed	Predicted			
		Plan to re-migrate	Intended to live here	Percentage correct	
					Plan to emigrate to the Middle East
Step 1 ^a	Plan to emigrate to the Middle East	Plan to re-migrate	72	84	46.2
		Intended to live here	52	136	72.3
	Overall PERCENTAGE			60.5	

^aThe cut value is 0.500.

their homeland decreases by 0.39 as economic deprivation factors increase, keeping other factors fixed; the probability/the predicted value/ of the migrants' intention to live in homeland decreases by 0.22 as miscellaneous factors increases, keeping other factors fixed, and the probability/the predicted value of the migrants' intention to live in homeland decreases by 0.27 as joblessness related factors increases, keeping other factors fixed. In **Table 12**, the Miscellaneous factor, which encompasses lack of individual freedom, the false promises of brokers, and proliferation of illegal agents, money lenders, and private agencies, is not statistically significant under this criterion since its p -value = 0.053 greater than the adopted 5% significance level. However, the closeness of the p -value to the significance level showed that the Miscellaneous factor would be an essential factor affecting migrants' intention to live in the homeland.

The above **Table 13**, of logistic regression model evaluation, shows us the cutoff (intended to live here = 1) or plan to re-migrate = 0) correctly classify 136/188 = 72.3% of the returnee migrants where the predicted incident (deciding/intended to live here in home country) was observed. Thus, as the sensitivity of prediction, the probability (correct given that event did occur), that is, the percentage of occurrences correctly predicted. Overall our predictions were correct 208 out of 344 times, for an overall success rate of 61%. Recall that it was only 69% for the model with intercept and coefficients.

Moreover, from **Figure 4**, the plot of the graph shows the frequency of categorizations for different predicted probabilities and whether they were 'H' or 'P' categorizations. This provides a useful visual guide to how accurate our model is by displaying

how many times the model would predict an 'H' outcome based on the calculated predicted likelihood when in fact, the outcome for the participant was 'P.'

The goodness of the model at predicting the outcome for individual cases is the bunching of the observations toward the left and right ends of the graph. Scatter plots show that where the incident did occur (intended to live homeland, as indicated by an 'H' in the graph), the predicted probability was also high and that where the incidence did not occur (not intended to live homeland (plan to remigration, indicated by a 'P' in the graph) the predicted probability was also low. The above graph shows that quite many cases are actually in the right middle area of the plot, i.e., the model predicts a probability of around 0.6 (or a 40:60 chance) that returnee migrants planned to live in the homeland will be achieved.

Discussion

This study assessed the drivers of migration to the Middle East, challenges in different situations, and future perspectives of female Ethiopian forced returnee migrants in the 2013 Ethiopian Calendar.

Female returnees have mentioned various reasons or drivers from the Middle East as causes for their migration. Among these, the major ones are; poverty, lack of education, and influence and pressure from friends and families, illustrated by a slight change in the quality of life of neighbors or friends whose relatives are living abroad. Such reasons have also been mentioned and discussed by numerous previous related studies in detail. Among the factors that drive returnee migrants to migrate previously and

significant positive chance of returnees intended to live in the homeland. At the same time, other extracted explanatory variables such as deprived economic factor (composed of wishing for higher standards of living, low income/poor economic condition of the family, family emergency, existence of labor demand in the Middle East, and low wages in local employment), the miscellaneous factor (composed of lack of individual freedom/dependence and false promises of brokers and proliferation of illegal agents, money lenders, and private agencies) and joblessness related factor (constituted of limited job opportunities in localities and unemployment) have a significant negative chance of returnees intended to live in the homeland. It is estimated that migration flows from Ethiopia will continue to increase due to limited employment opportunities, poverty, overpopulation, food scarcity, and unfair and unjust leadership. Migration is a livelihood strategy for many people within Ethiopia, and international migration is a desirable option for both skilled and unskilled individuals in search of better opportunities. It appears that until large-scale development and change occur in Ethiopia, international Migration will be the desired possibility for many Ethiopians. However, there is more likelihood to live homeland even with challenges for government forced returnee female migrants in the 2013/2014 Ethiopian Calendar.

Recommendations

The study recommends that close cooperation between all parties, i.e., officials of labor and social affairs of Amhara regional state, zonal and Woreda levels, micro and small-enterprise officers and other governmental institutions, UN organizations like IOM, ILO, and NGOs are needed for the better reintegration and living of these forced returnees.

The Kingdom of Saudi Arabia (KSA) recently ordered thousands of Ethiopian citizens without legal living and work permits to leave and return home. These people lived in the Kingdom of Saudi Arabia as domestic workers due to a lack of

job opportunities at home. Some have become undocumented as they ran away from abuses by their employers. Thus, the Ethiopian government should intervene to support and establish an organization working to help and find jobs upon their return, the most vulnerable victims of migrant returnees. A comprehensive migration policy should be developed, and actors should participate and respond promptly to curb the similar future crisis.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Debre Tabor University, Debre Tabor, Ethiopia. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

EE has developed the methodology and modeling, data screening, and analyses with interpretations. BB has developed literature reviews, objectives, and wrote up the discussions parallel to the results of the study. Both authors contributed to the article and approved the submitted version.

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fams.2022.870111/full#supplementary-material>

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