Examination of Factors Predicting the Likelihood of Irregular Cross-border Migration Decision: Evidence from Ethiopia, Addis Ababa

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Abstract. In Ethiopia, most studies that were conducted so far on irregular cross-border migration are often tended to omit examining the relative weights of crucial factors associated with origin and destination countries, and personal attributes of the migrants that made evidence remained inconclusive for decision making. The study explored the major driving pull-push factors predicting irregular cross-border migration decision among 402 international returnees randomly drawn from Addis Ababa based on a cross-sectional survey to provide scientific evidence on the issue. Descriptive statistics and multiple regression models were used to analyze the data. Majority of the returnees (90%) concurred that economic factors took the most leading share in compelling the respondents to migrate in irregular manner. Socio-cultural and socio-political factors at abroad and homeland made the first and the second greatest contributions on irregular migration decision with the values of (β = .403; and β = .381) respectively at ($p = 0.000<0.001$). Meanwhile, nevertheless, the decision to migrate was influenced by situations in both the destination and the origin areas, the findings of the present study illuminated that the decision to migrate is robustly more predicted by conditions in the former areas than conditions in the latter ones.

Keywords: *cross-border; irregular migration; migration decision; pull-push factors*

1. Introduction

In today's interconnected world, migration is found to be at the cutting-age of international discussions on social and economic development as a whole (FAO 2017; UNDESA 2013; Echeverría 2020). More fundamentally, irregular cross-border migration has become a subject of heated debates among a variety of actors. It is utmost priority policy challenge and remains a demanding political agenda (IOM 2019; Harpviken 2018); and it frequently makes headlines, and policy makers are under a rise of public and political pressures to address the issue of migrants in irregular situations (Morehouse and Blomfield 2011; IOM 2005). Currently, irregular

migration is truly a global structural phenomenon (Cvajner and Sciortino 2010a; Düvell 2006; IOM, UNFPA, and UNDESA 2013).

Latest evidences invariably indicate that migration in general and cross border migration in particular is inevitable in our modern epoch. It has become inescapable and almost touches every corner of the globe due to globalization (Messay and Teferi 2017; IOM 2017). In this respect, the Horn of Africa has unique migration challenges as every month thousands of irregular migrants attempt to cross-border to escape conflict, drought and economic challenges (Schroder 2015; Fransen and Kuschminder 2009). Human movement in the region is mostly irregular as the result of limited options for regular movements and also reactive to political and environmental factors (Siegel et al. 2016); and in the Horn of Africa, irregular migrants cross borders by violating conditions for entering another country without having proper authority (Jordan and Düvell 2002). By the same token, Ethiopia is not an exception to the situation as it has become an important origin, transit and destination for irregular migration flows in the Horn of Africa (Shishay, Wendu, and Kinfe 2019; ILO 2016; Assefa, Seid, and Tadele 2017); in Ethiopia documented and undocumented labour migration to different areas of the globe has remarkably increased (Girmachew 2017); and Ethiopia is a hub for outward migration (Siegel et al. 2016).

On the one hand, the experience of migration is characterized by the following evils: both sexes are increasingly exposed to exploitation and abuse, losing their lives; others trapped behind walls of discrimination, xenophobia and racism as the result of rising cultural and religious tensions in some societies (UNODC 2010). Migrants generally tend to be less food secured than non-migrants, discrimination and xenophobia play an important part, and migration exposes migrants to less healthy food choices (Chikanda and Crush 2018). In Ethiopia, despite efforts being made by the Ethiopian government and other core actors to reverse irregular cross-border migration, an overwhelming number of Ethiopians are currently moving to abroad irregularly. Through 2008 to 2013, about 460,000 Ethiopians migrated irregularly to different parts of the world (Rohwerder and Carter 2016); and between 2012 and 2016 around 317,136 Ethiopian migrants arrived Yemen in less than 5 years via Yemen to Saud Arabia and other Middle-East countries (RMMS 2016) on the other hand.

Accordingly, attempts were made to review some empirical studies that have been undertaken in Ethiopia on the issue under way. Ethiopia is one of the

largest origins (both transit and destination) of trafficked persons from Africa; and the most common drivers of migration in Ethiopia are found to be an amalgam of socio-economic, political and environmental factors (Messay and Teferi 2017; Shishay, ,Wendu, and Kinfe 2019; Fransen and Kuschminder 2009; Siegel et al. 2016); and irregular migration can be ended up with severe mental health problems that may ultimately impose negative impacts on the life of the migrants in the future (Mesfin and Emirie 2018; Muna and Atinkut 2018; Anbesse et al. 2009).

Moreover, a survey conducted on the links between migration and sustainable livelihoods on three countries (Ethiopia, Mali and Bangladesh) uncovered that international migration is seen as just one of the livelihood strategies open to households and a desirable option for both skilled and unskilled individuals in Ethiopia (Fransen and Kuschminder 2009). A study looked at female migration and reintegration in Ethiopia, found that unless returnees' establish a sense of belongingness in the country of return, then they will most likely re-migrate (Kuschminder 2013); and a case study conducted on Ethiopian returnee migrants expounded that they were swamped by hopelessness and painful experiences as the result of physical abuses, restrictive mobility, and a variety of harassment by respective employers (Shishay, Wendu, and Kinfe 2019).

However, none of the aforementioned studies dealt with exploring the relative weights and influences of factors associated with origin and destination countries, and personal attributes of migrants to migrate irregularly. The present issue under consideration has become blurred and has hardly been explored so far in Ethiopia. As the result decision makers and other core actors have been fallen out of a full understanding of the dynamics of the issue. Hence, here is a clear need for targeted evidences for scientific investigation to start filling the gap.

Accordingly, the main intent of the study is to examine factors predicting irregular cross-border migration decision in Ethiopia, Addis Ababa. The study could contribute for further understandings of irregular cross-border migration, with the aim of providing insights for policy-makers and development actors to develop pragmatic strategies and ultimately to mitigate irregular fluxes.

2. Material and Methods

Description of the Study area

The study was conducted in Addis Ababa, Ethiopia (see Fig.1), which is

located on a well-watered plateau surrounded by hills and mountains, in the geographic centre of Ethiopia (Addis Ababa Plan and Development Commission/AAPDC 2020; Addis Ababa City Administration 2015). It is located at geographical coordinates: between 8055' and 9005' North Latitude and between 38040' and 38050' East Longitude. Its average elevation is 2,500 meters above sea level, and hence has a fairly favorable climate and moderate weather conditions. It is the capital, the largest city, the educational and administrative center of the country (UN-HABITAT 2008; AADPC 2020).

Moreover, it is the seat of the African Union and the United Nations Economic Commissions for Africa as well as various other continental and international organizations. It is often referred to as "the political capital of Africa" for its historical, diplomatic and political significance for the continent (UN-HABITAT 2008). The total land area of Addis Ababa is about 527 km² or 54, 000 hectors; and the city has a complex mix of high climate zones, with temperature differences of up to 10°C, depending on elevation and prevailing wind patterns (World Meteorological Organization 2019). It is a chartered city having three layers of government: City government at the top, 10 sub-city administrations in the middle (of course, Lemi Kura, the 11th sub-city isn't considered in the study as it is the newly emerging sub-city that isn't well established), and 121 woreda administrations at the bottom (AAPDC 2020).

Research Design and Approach

In this study, mixed methods research design was employed based on two underlying assumptions: studying migration as a whole and irregular migration in particular is a complex and multifaceted process that involves data from a variety of sources, and the perspectives of different actors; and employing a single approach to study the phenomenon may limit the comprehensiveness of the data and accuracy of the findings.

Mixing both qualitative and quantitative data in a single study provides a better understanding of research problems than either approach alone (Creswell 2009; Creswell and Clark 2007; Johnson and Onwuegbuzie 2004; Creswell and Clark 2010; Bryman 2006; Tashakkori and Creswell 2007). Amongst the mixed methods designs, "*Concurrent Embedded Design Approach*" was used as the primary design. Both qualitative and quantitative data were collected concurrently, though the weight between the two may vary depending on the nature of the research

questions to be considered and the secondary method is embedded within the predominant method (Johnson, Onwuegbuzie, and Turner 2007; Teddlie and Tashakkori 2009; Creswell and Clark 2010; Johnson and Onwuegbuzie 2004).

Accordingly, the quantitative data were given more weight and the qualitative data were embedded within the former one to substantiate the numerical data obtained via survey questionnaires. For the purpose at hand, the sub-cities of Addis Ababa were grouped into two clusters: Lideta, Arada, Kirkos, Addis Ketema, Gulele; and Nifas Silk, Yeka, Kolfe Keraniyo, Bole, and Akaki Kality were clustered as inner-urban and peri-urban areas respectively. The clustering is based on the livelihood strategies and activities available for the urban poor, wherein the inner-urban centers the dwellers more likely tend to be engaged in non-agricultural activities, while in peri-urban areas the communities are being progressively absorbed into the urban fabric and are dependent both on agricultural and non-agricultural activities. Accordingly, out of ten sub-cities clustered into inner-urban and peri-urban areas two sub-cities from each cluster having a large number of returnees were selected, namely; Addis Ketema and Kirkos; and Akaki Kality and Kolfe Keraniyo from the former and latter areas respectively via purposive sampling technique.

The study employed a simplified formula provided by Yamane (2001) to determine the sample size at the 95% confidence level and 5% degree of variability (Israel 2002).

$$n = \frac{N}{1+N\,(e)^2}$$

Where: n = sample size; N = population size; and e = level of precision.

Based on the above formula, a representative sample size of 416 was drawn randomly from a target population of 5,228 officially registered international returnees found in Addis Ababa (Bureau of Labour and Social Affairs/BOLSA 2021). Out of four hundred sixteen survey questionnaires administered, a total of four hundred two were completed and returned, constituting 96.6% response rate. Survey questionnaires, key informant interviews (KIIs), semi-structured interviews (SSIs), and focus group discussions (FGDs) were used as tools of data gathering. Using both types of data enable the researcher to expand an understanding from one method to another, to converge or confirm findings from different data sources

(Greene, Benjamin, and Goodyear 2001; Creswell 2009; Bryman 2006; Tashakkori and Creswell 2007). The survey questionnaire was pre-tested to check for its internal consistency, and a Cronbach's alpha (α) of 0.892 was obtained as a whole.

The survey questionnaire was translated into the local Amharic language and tested for face validity. A principal component analysis (PCA) was also carried-out to reduce the factors into a smaller set of components and to summarize data so that relationships and patterns can be easily interpreted and understood (O'Rourke and Hatcher 2013; Abdi and Williams 2010; Everitt 2004; Field 2009; Gray 2017). Kaiser-Meyer-Olkin (KMO) and Bartlett's test were undertaken to check the sample adequacy and the suitability of data for factor analysis respectively on both pull and push factors separately. The KMO measures of sampling adequacy were calculated above the commonly recommended values in both cases (Field 2009; Hair et al. 2010), and Bartlett's tests of sphericity were significant and considered adequate for performing a factor analysis (Tabachnick and Fidell 2013; Pallant 2010; Hair et al. 2010; Tabachnick and Fidell 2007) (see Table 5 and Table 6).

Descriptive statistics and multiple regression analysis were employed to analyze the quantitative data. The qualitative data were also transcribed, coded and interpreted thematically to supplement the numerical data secured through survey questionnaires. Furthermore, the authors were committed to meet the ethical standards set forth by the APA from inception to completion of the study to protect the subject's identity.

3. Results and Discussions

Descriptive Analysis

Demographic profile of the respondents

Table 1 indicates that the number of female returnees assumes higher figure than their male counter parts with percentage of 83.8%. This may indicate that majority of the migratory or returnee group is female-dominated in Ethiopian context. Thus, unlike the foregoing finding, the previous studies conducted by (Songsore 2003; Elbadawy 2010) found that males were more likely to migrate abroad compared to females that seems contradict with the above one. With regard to marital status, relatively as a whole the share of unmarried respondents outweighs the share of the rest respondents found in other marital status and account for 51.2%; and the married ones held the second position with percentage of 35.1%.

As evident from the results of analysis, as a whole, about 47% of the returnees were only attending secondary school education. This could limit returnees' access to information and technology to respond to knowledge-based vibrant economy of the modern era. The highest level of education attained by the Ghanaian returnees was senior secondary school education, with majority of them completing junior high school (Kodom and Dako-Gyeke 2017). The percentages of returnees who had first Degree and Master's Degree were found to be only about 3.5% and 0.2% respectively. This may show that most returnees are deprived of getting further education, which may in turn have a powerful negative impact in the world of work to make a living. Moreover, the percentages of sampled returnees from inner-urban and peri-urban areas were found to be 33.3% and 66.7% respectively which in turn portrays that a vast majority of the returnees were from peri-urban areas. As evident from the results of analysis, as a whole, about 47% of the returnees were only attending secondary school education.

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Economic characteristics of the respondents

Figure 2 presents about the economic characteristics of the respondents at abroad and homeland. Accordingly, the results of the analysis highlighted that the overall mean income of the respondents at abroad and homeland was found to be about 6233.46 ETB and 1038.06 ETB respectively, that is, an indication of the overall mean income of the study population at abroad is about six times the average income at homeland that may imply households having significant number found in

the study area had poor purchasing power so as to acquire enough and nutritious food and did not have access to sufficient food to meet their dietary energy requirements.

The medians monthly income of the study population at abroad and homeland were found be about 6,000 ETB and 800 ETB respectively. Furthermore, as can be noted from the given data, while the mean income of the respondents at abroad was about 6147.69 ETB and 6250.00 ETB for male and female respondents respectively, and on average the homeland income on monthly basis of the male respondents (1938.46 ETB) and female respondents (864.39 ETB). Table 2 illustrates that domestic work is the most predominant occupation category in which returnees were being engaged in their respective destinations. Numerically speaking, 76.4% of the respondents were engaged in domestic work when they were at abroad.

Moreover, as it is observed from the given data, company employment as an occupation was the most suffered occupation and the percentage of migrants who were working as employee at abroad was below 1.0% which directly related with their education levels in the study area as a whole.

Determinants of irregular cross-border migration decision

As shown in Table 3, the study returnees reported that: the presence of job opportunity in more affluent society (mean = 4.24, standard deviation (SD) = 0.909), better income and prospects for wealth creation and building assets (mean = 4.17, SD = 0.980), pressures of individuals who returned back from migration (mean = 3.33, SD = 1.562), lure words and pressures of brokers (mean = 3.22, SD = 1.603), and presence of sustainable food security at abroad (mean = 3.00, SD = 1.396) were attached the greatest values above mean score and found as the most five important motivating factors that exert a powerful influence on Ethiopian emigrants to migrate irregularly to abroad.

On the contrary, in the view of returnee respondents among the pull factors indicated (Table 3) rated below the mean score as follows: family reunification at abroad, independence and freedom available at abroad, strong social cohesion found at abroad, and pursuit of better and special education at abroad with mean value and standard deviation 2.24 and 1.205, 2.27 and 1.167, 2.31 and 1.231, and 2.48 and 1.252 in ascending order respectively as the four least motivating factor

that influences Ethiopian emigrants to plan to move away in irregular situations.

However, as a whole all variables associated with pull factors were rated above the mean sore on a five-point Likert Scale(overall average = 2.99, SD = 1.26), which in turn may imply that all the pull factors had substantially contributed to irregular cross-border migration in Ethiopia.

Furthermore, qualitative data were collected via Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), and Semi-Structured Interviews (SSIs). Returnees, key officials, core actors, and experts were asked about their views concerning the factors that were accounted and attracted the Ethiopians to migrate irregularly to abroad. The results are presented hereunder. The factors motivating Ethiopians to move away are tremendous in number and the cumulative effect of both socio-cultural and economic factors. Some may migrate to build assets in affluent nations and others may migrate to join their respective family found at abroad.

In connection with this, one of the key informants confirmed that:

> …Well, I think Ethiopians move to different parts of the world in the hope of improving their own and their respective family life. The main reason for choosing irregular migration is that potential migrants think the cost of irregular migration will be lower than the regular one. However, the consequences are not incalculable. They are likely to become entangled with the number of difficulties upon their arrival: ill-treated in inhumane manner, at risk of deportation and suffer its consequences, persecution and discrimination just to mention a few. The decision to migrate irregularly in Ethiopia mostly to earn better money to improve their living standard to some extent as there is differential of wages between origin and affluent nations (the latter is better than the former in wages). Of course, some others may migrate due to non-economic factors, but they are very few in number (1 July, 2021).

During the FGDs, participants rightly expressed the situations as follows:

> …in our country including Addis Ababa, pull factors for irregular cross-border migration may vary in degree and in kind. Some individuals may be attracted solely by lucrative job conditions prevail in the destination regions, others may migrate to get in touch with their family members living abroad, and few others may have their own hidden agenda including conducive political factors at abroad to exercise democracy whereby the origin is featured by less political autonomy. In Ethiopia, whatever factors driving international migration particularly the irregular ones, the potential migrants are not from the well-to-do families rather they are from the poor family. In this respect, the poor are governed by the principle “do or die”. Generally speaking, because of the aforementioned reasons and others the pull factors for irregular migration can be viewed as an amalgam of both social, economic, political conditions in Ethiopia including Addis Ababa, though the

> economic conditions outweighs by far the other pull factors as the poor are governed by the aforementioned principle to escape from poverty (2 July 2021 and 7 July 2021).

This implies that the result obtained from qualitative summary of the respondents' perception on the pull factors accounted for emigrants to migrate irregularly also strengthen data obtained from quantitative analysis. That is, participants of FGDs disclosed that the prevailing economic conditions in the destination areas are the predominant pull factors amongst others, which in turn substantiate data obtained from quantitative analysis. Furthermore, participants of SSI shared the same ideas and reported the following:

> ….the prime propelling forces of irregular cross-border migration are various and often differ from one person to another. It is a complex phenomenon that is often driven by social, economic, cultural and other factors. There are, however, many factors that tend to be common to such migration as a whole. Some of the common factors are associated with destination area conditions that induce people to migrate in search of better conditions: better jobs and wages, better access to labor market, political stability, and the like. This is without underestimating the common conditions like absence job opportunities, unemployment and the like that motivate Ethiopians to move away from their native land. In addition, success stories could be considered as pull factor for those who keep on hearing and looking to the success of those who have already migrated (August 5, 2021 and August 15, 2021).

Generally speaking, the results obtained from qualitative data also strengthen data obtained from quantitative analysis. As seen in Table 4, the overall average of the respondents' responses for the factors that drifted them to migrate irregularly were (overall average = 3.46, and SD = 1.22), which may reflect that majority of the respondents rated the items between the ranges of high and very high. That is, the mean score is above an average on five-point Likert scale. In the views of the returnees the three most dominant component factors which drive them out of their origin country were found to be: lack of employment opportunity, low wages and other associated payments, and the prevalence of food insecurity with the mean values of 4.27, 4.24, and 3.98 in descending order respectively (Table 4). This implies that the aforementioned push factors were rated above the mean scale and majority of the responses for the items were falling between high and very high. A final observation from Table 4 is that the respondents of the study clearly held more intense attitudes to the conditions that repelled them to leave their origin country to move abroad in irregular manner and rated all the associated variables above an average on five-point Likert scale.

Moreover, FGDs were also held with a team constitutes returnees and various core actors about push factors forcing Ethiopians to migrate in irregular manner. Accordingly, they forwarded their ideas as follows:

> ---To tell you the truth, in Ethiopia, there were and/are repelling factors that affect individuals to migration irregularly being exposed to an immense hardship on their way to arrive the destination and even after arrival. Though, to mention all push factors is difficult, in Ethiopia, as a result of low job opportunities or poor living conditions, migration is often seen as a form of household income diversification. The prevalence of poverty in general and urban poverty in particular is another bottleneck in our country for such kind of migration. In addition, disagreement between family members, very low income of family, and quest for a better future to improve their living conditions are also some major push factors. The other is the growing of unemployment rate resulted in unable to be absorbed into labor market/ world of work (2 August, 2021 and 7 August, 2021).

As majority of the participants reported, Ethiopian emigrants left their country and migrated to abroad due to: the prevalence of unemployment, urban poverty, and poor living conditions in the origin country amongst others, which in turn may indicate that the poor economic conditions in the origin country had sound effect in drifting Ethiopians to migrate irregularly to find work and to improve their economic situations and their family. Similarly, Düvell (2011) noted that the key pushing forces of the supply of illegal migration are poverty, limited opportunities at homeland, lack of education, economic imbalances, unstable social and political conditions, and war amongst others. This indicates that the factors highlighted by the participants of the study are in harmony and congruent with the finding of the aforementioned author.

As depicted in Figure 3, majority of the returnee respondents concurred that above all economic factors took the most leading share in compelling the returnees to migrate irregularly with the percentage 90%, while social factors held the second position with the percentage of 3.7%. Moreover, the summary of responses obtained from qualitative data via (KIIs, FGDs, and SSIs) is harmonized with the above findings and majority of the participants shared the above ideas and reported that many Ethiopians do have a plan to make migration a career due to low job opportunities and poor living conditions in Ethiopia including Addis Ababa to scale-up their means of generating incomes and ultimately to improve their life and their respective family found at origin country. They also highlighted that dissatisfaction with the current living conditions is crucially one of the most important variables that make migration a solution to avert the situation.

Predictive Analysis

Principal Component Analysis on Pull-Push Factors

Before plunging into conducting factor analysis, the sample adequacy was tested by employing Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test to check the suitability of data for structure detection and factor analysis (see Table 5). Measuring Sampling Adequacy (MSA) is at the center of scientific investigation as insufficient inter-correlations among variables can lead to unusable exploratory factor analysis (EFA) results (Chan and Idris 2017; Hair et al. 2010); and it is good practice to obtain the MSA to assess sampling adequacy prior to performing an EFA (Pallant 2007; Tabachnick and Fidell 2007; Pallant 2010).

Following MSA, factor analysis was undertaken to identify sets of variables that are tapping the underlying phenomenon as it examines the patterns of correlations among a set of variables. As evident from Table 5, the Kaiser-Meyer-Olkin (KMO) measure verified the goodness-of-fit of the variables for the factor analysis with a KMO equal to 0.798, which is rated as 'meritorious' as the minimum acceptable value for KMO is 0.60 (Field 2009; Hair et al. 2010). Bartlett's test of sphericity (Chi-square = 2300.921, df = 55, p= 0.000) indicated that relations between variables were sufficiently large for PCA as significance level for Bartlett's test below 0.05 suggest that there is substantial correlation in the data (Hair et al. 2010; Pallant 2007; Tabachnick and Fidell 2007).

Three distinct factors were yielded and extracted which explained about the total percentage variance extracted (96%) on the pull factors accounted for and attracted the returnees to migrate irregularly to abroad. The first factor (factor 1) that constitutes six variables is related to an emigrant's personal characteristics and behavior, and may also have positive contribution to migrate irregularly. Hence, it is labelled as socio-cultural factors. The second factor (factor 2) deals with the presence of job opportunity in more affluent society, and better income and prospects for wealth creation may seem to directly relate to an individual emigrant resource endowments and asset accumulation, therefore, referred to as economic factors. The third factor (factor 3) may seem to indicate the overall human motivators of irregular migration, thus, denominated as human pressures.

A final observation is about the variable with the strongest association to the underlying latent variable. Accordingly, the result of factor analysis portrays that the first factor (socio-cultural factors) as a whole explains most of the variance in pull factors of Ethiopian emigrants (83%), which had by far the highest percentage

variance extracted than the rest three resulting factors. Furthermore, all factors are positively contributing and lure the emigrants to the destination areas in irregular manner in Ethiopian contexts.

Table 6 reveals the results of the KMO and Bartlett's tests on push factors. Accordingly, the Kaiser-Meyer-Olkin (KMO) measure demonstrated the goodness-of-fit of the variables for the factor analysis with a KMO equal to 0.821, which is rated as 'meritorious' as the minimum acceptable value for KMO is 0.60 (Field , 2009; Hair et al. 2010). Bartlett's test of sphericity (Chi-square = 1572.33, df = 45, p = 0.000) indicated the inter-correlations among variables were generally considered adequate for performing a factor analysis as the significance level for Bartlett's test below 0.05 suggest that there is substantial correlation in the data (Hair et al. 2010; Pallant 2007; Tabachnick and Fidell 2007; Pallant 2010).

As vividly indicated in Table 6, two distinct factors were extracted which explained about the total percentage variance extracted (97%) on the push factors that compelled the returnees to migrate irregularly to abroad. The first factor (factor 1) that comprises five variables that seem to signify the combination or interaction of social and political conditions that were pervasive in a country, therefore, labeled as socio-political factors at homeland with the total percentage variance extracted (82%). The second factor (factor 2) that constitutes four variables in one or another, they seem to be associated with the economic activities and systems of a country, hence, named as economic factors at homeland.

Moreover, the result of factor analysis clearly indicates that the first factor (socio-political factors at homeland) explains most of the total percentage variance extracted on push factors (82%) and outweighs their counter resulting factors. Finally, to identify one or more key-factors that explain why the study population decided to migrate irregularly, a multiple linear regression analysis was performed with the extracted scores of (pull-push factors). The result of the multiple linear regression analysis for each extracted factor is presented. The next section presents the results of analysis about the relationship between explanatory variables and the outcome.

As revealed in Table 7, irregular cross-border migration decision is significantly affected positively with all five extracted factors included in regression analysis at 0.1% and 5% probability levels ($p = 0.000<0.001$ and 0.05). In other words, all five extracted factors (three from pull factors: socio-cultural factors, economic factors, human pressures, and two from push factors: socio-political factors at

homeland and economic factors at homeland) had a significant positive impacts on irregular cross-border migration decision. Moreover, results show that amongst the three key explanatory variables extracted from pull factors the effect of socio-cultural factors at destination areas had the strongest effect in making decision to emigrate with an unstandardized coefficient of (5.926), followed by economic factors at destination areas with an unstandardized coefficient of (2.723), whereas among the two key explanatory variables extracted from push factors socio-political factors at homeland had a strong compelling effect and followed by economic factors at homeland with unstandardized coefficients of (5.011 and 4.555) respectively.

Furthermore, the results of analysis uncovered the relative importance of the factors for migration decision. Accordingly, based on the results of beta values, amongst pull factors, socio-cultural factors at abroad (Beta = .403) are the most important factors motivating irregular cross-border migration decision followed by socio-political factors at homeland (Beta = .382) and economic factors at homeland (Beta = .224) (Table 7). The above results in turn may imply that, nevertheless the decision to migrate can rely on different parameters and taken within a broader political, economic, social and environmental context, influenced by situations in both the country of origin and the country of destination, in this study the above findings concurred that the decision to migrate is relatively more influenced by conditions in the destination areas than conditions in the origin country.

On examining the contributions of made by the independent variables in the model, it was found that socio-cultural factors at abroad made the greatest contribution with the values of (β = .403, p = 0.000<0.001); which is followed by socio-political factors and economic factors at homeland with the values of (β = .381, p =.000<0.001; and β = .224, p =.000<0.001) respectively. In the above model, the coefficients of determination (R square/adjusted R square R2 = 0.964) predicts that 96.4% irregular cross-border migration decision was explained by the aforementioned five key extracted variables; and only 3.6% decision is due to factors that are not taken into account in the analysis.

As self-evident from Table 7, the results are best shown by the following regression equation:

Y=.906+5.926X1+2.723X2+2.077X3+5.011X4+4.555 X5.

Where: Y = Irregular cross-border migration decision

X1 = Socio-cultural factors at abroad

X2 = Economic factors at abroad

X3 = Human factors or pressures

X4 = Socio-political factors at homeland

X5 = Economic factors at homeland.

The other most interesting findings were the relative strength of the composite pull-push variables. Thus, conclusion would be drawn that both pull and push factors had statistically significant positive impacts on irregular cross-border migration decision in Ethiopian context at large and Addis Ababa in particular.

4. Conclusions

The study aimed to eloquently shed light on the relative weights of the major pull-push factors in predicting irregular cross-border migration decision in Ethiopia, Addis Ababa. The study was built on the discourse of *"pull-push model"* of migration as the main framework to get the general picture of the phenomenon. All relevant assumptions of the multilinear regression analysis were examined to perform the predictive analysis. Accordingly, the standard model's degree of predicting the dependent model was found to be R = .982, while the model's degree of explaining the variance in the dependent variable was R^2 = .964, which indicates that the model predicts the dependent variable very well.

The results of multivariate regression analysis have demonstrated that both the conditions in the origin country as well as in the destination areas jointly had sound positive impact for Ethiopians to make decision to emigrate in irregular manner. In a nutshell, conclusions drawn from the present study is two-fold: irregular cross-border migration decision is found to be increasingly a matter of decision making encompassing a set of intertwined propelling forces found in the origin and destination areas, above all the prevailing economic conditions in the destination areas are the most predominant pull factors amongst others; and the overall results of the study were not amplifying and quantifying a single existing theory of migration instead an amalgam of a number of theories of migration as a whole.

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Appendices

Appendix 1. List of Figures

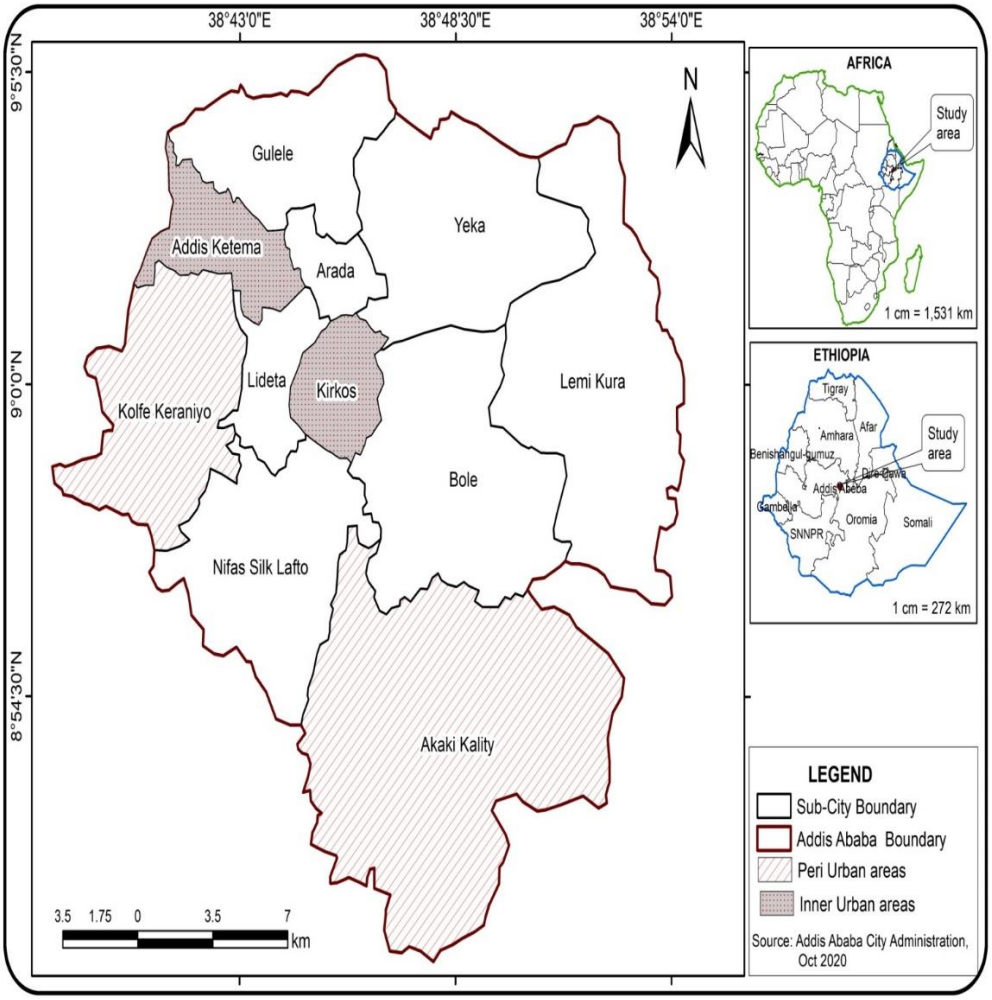

Fig. 1: Location of the Study area, Addis Ababa

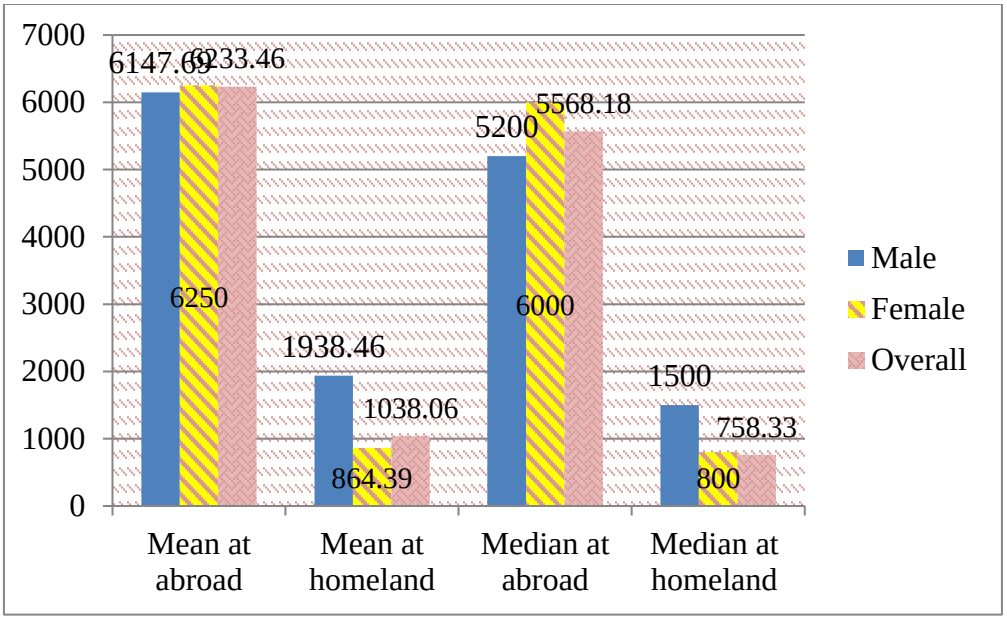

Fig. 2: Income at abroad and homeland in Ethiopian Birr (ETB)

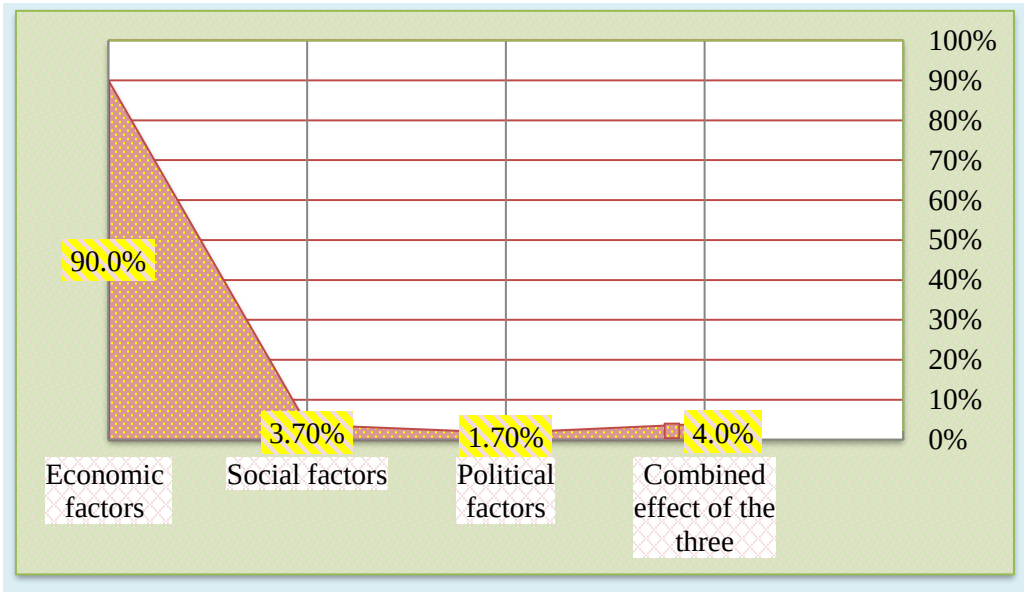

Fig. 3: Summary of responses on most underlying pushing factors

Appendix 2: List of tables

Table 1: Descriptive statistics on demographic profile of the respondents (N = 402)

No	Characteristics	N	%
1	Gender		
	Male	65	16.2
	Female	337	83.8
2	Marital status		
	Married		35.1
	Unmarried		51.2
	Divorced		11.2
	Widower/Widow		2.5
3	Educational level		
	First Degree	15	3.7
	Diploma	31	7.7
	Certificate	21	5.2
	Secondary School Education	189	47.0
	Primary School Education	146	36.3
4	Category of residence area		
	Inner-urban area	134	33.3
	Peri-urban area	268	67.7

Source: Authors tabulation based on survey data (2021)

Table 2: Occupation of the respondents at abroad

S.No	Major categorized occupations	Responses	
		N	%
1	All-round Worker	8	2
2	Cleaner	19	4.7
3	Daily laborer	21	5.2
4	Employee/Company Worker	4	1.0
5	Domestic Worker	307	76.4
6	Driver	11	2.7
7	Garage Worker	2	0.5
8	Guard	11	2.7
9	No job	4	1.0
10	Shepherd	6	1.5
11	Petty Trader/Trader	8	2.0
12	Private Work (House rent, etc.)	-	-
13	Student	-	-
14	Broker	-	-
15	Tailor	-	-
Total		402	100.00%

Source: Authors tabulation based on field survey data (2021)

Table 3: Descriptive Statistics on pull factors

S.No	Pull factors	Mean	Standard Deviation
1	Family reunification at abroad	2.24	1.205
2	Independence and freedom available at abroad	2.31	1.231
3	Strong social cohesion found at abroad	2.27	1.167
4	Presence of sustainable food security at abroad	3.00	1.396
5	Presence of job opportunity in more affluent society	4.24	.909
6	Better income and prospects for wealth creation/building assets	4.17	.980
7	Pursuit of better and special education at abroad	2.48	1.252
8	Accessibility to urban services (including health care, transport, etc.)	2.66	1.321
9	Pressures of individuals who returned back from migration	3.33	1.562
10	Lure words and pressures of brokers	3.22	1.603
	Overall average	2.99	1.26

Table 4: Descriptive Statistics on push factors

S.No	Push factors	Mean	Standard Deviation
1	A restriction in human freedom and a violation of human rights	2.87	1.407
2	Intense political instability and conflict	2.81	1.438
3	Family dysfunctions and breakage	2.71	1.372
4	Absence of adequate urban services and infrastructures	3.20	1.381
5	Peer pressures	3.09	1.497
6	Lack of employment opportunity	4.27	.835
7	Low wages and other associated payments	4.24	.838
8	The growing of urban poverty	3.96	1.099
9	The prevalence of food insecurity	3.98	1.083
	Overall average	3.46	1.22

Source: Own construction based on field survey data (2021)

Table 5: Rotated component matrix on pull factors

S.No	Pull factors	Components		
		Factor 1: Socio-cultural factors	Factor 2: Economic factors	Factor 3: Human pressures
1	Family reunification at abroad	.715		
2	Independence and freedom available at abroad	.901		
3	Strong social cohesion found at abroad	.868		
4	Presence of sustainable food security at abroad	.589		
5	Pursuit of better and special education at abroad	.731		
6	Accessibility to urban services (including health care, transport, etc.)	.788		
7	Presence of job opportunity in more affluent society		.835	
8	Better income and prospects for wealth creation/building assets		.865	
9	Pressures of individuals who returned back from migration			.884
10	Lure words and pressures of brokers			.895
Total variance extracted (%)		82.585	10.275	3.423
$\chi 2$ (55) = 2300.921, p = 0.000; KMO = .798				

Only variables with factor loadings of more than 0.50 and eigenvalues greater than one were retained; KMO = Kaiser-Meyer-Olkin measure of sampling adequacy.

Table 6: Rotated component matrix on push factors

S.No	Push factors		Component	
			Factor 1: Socio-political factors at homeland	Factor 2: Economic factors at homeland
1	A restriction in human freedom and a violation of human rights		.874	
2	Intense political instability and conflict		.819	.
3	Family dysfunctions and breakage		.797	
4	Absence of adequate urban services and infrastructures		.792	
5	Peer pressures		.773	

6	Lack of employment opportunity			.808
7	Low wages and other associated payments			.757
8	The growing of urban poverty			.687
9	The prevalence of food insecurity			.663
Total variance extracted (%)			81.693	15.769
	$\chi 2$ (45) = 1572.33, *p = 0.000*; KMO = .821			

Only variables with factor loadings of more than 0.50 and eigenvalues greater than one were retained; KMO = Kaiser-Meyer-Olkin measure of sampling adequacy.

Table 7: Multiple linear regression predicting the likelihood of irregular cross-border migration decision

No	Constant and key extracted factors	Unstandardized coefficients		Standardized coefficients			Model summary		
							R	Adjusted R square	S. E of the Estimate
		β	Std.Error	Beta	t	p-value	.982[a]	.964	2.823
1	Constant	.906	.959		.944	.346			
2	**Pull factors**								
2.1	Socio-cultural factors	5.926	.189	.403	31.354	.000***			
2.2	Economic factors	2.723	.153	.181	17.782	.000***			
2.3	Human pressures	2.077	.134	.210	15.501	.000***			
3	**Push factors**								
3.1	Socio-political factors at homeland	5.011	.199	.382	25.156	.000***			
3.2	**Economic factors at homeland**	**4.555**	**.204**	**.224**	**22.315**	**.000*** **			

*** P-value significant both at 0.001 and 0.05; only variables with factor loadings of more than 0.50 and eigenvalues greater than one were retained