

## Chapter 5

# A Knowledge–Based Recommender Framework to Recommend Destination Country for Human Migrants (KBRF): The Case of Ethiopia in Africa

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### ABSTRACT

*Human migration is a challenging process in Ethiopia, where special illegal human migrants cross different border countries without any basic information or knowledge. Due to this, there is the difficulty of getting a vast amount of information to know the destination countries. They go without any information, which also wastes more time, cost, violates their human rights, and endangers their lives. This study used a KBRF to assess the user input and compare them with the stored cases. For this, 75,920 cases were collected from MoLSA and central statistical agencies with and attributes selected for the query of users as well as for their solution. The best solutions are displayed for a user after the similarity calculation of the query and the stored cases. Then the users can decide on which similar cases satisfy their needs. KBRF has an average performance, recall, and precision score of 92% (4.60), 0.91 (91%), and 0.63 (63%), respectively, from domain experts and system performance.*

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## INTRODUCTION

According to UN Migration Agency (IOM), “no commonly conventional definition for migration exists”. In reality, there are a lot of definitions of human migration, and it defines differently. It can be defined as “a process of moving, either across different border countries, or within a state; it is a peoples movement, nearby any kind of movement of peoples, whatever its length, composition, and causes; it includes migration of refugees, displaced persons, uprooted people, and economic migrants” (Fiorini, A., 2016). On the other hand, Encyclopedia Britannica defines the term ‘migration’ as being “a permanent change of residence by an individual or group; it excludes such movements as migrant labor, travel, and tourism, all of which are transitory in nature”. Finally, defines migration as being a long-term movement of an individual people or group of peoples outside their place of migrant’s source. In general, these processes are it may be illegal or legal.

“Since the dawn of human progress, more than 70,000 years ago, humans have migrated across different border countries to search for food, shelter, safety, and hospitable climate”. The movement is continuing in the beginning of the 21<sup>st</sup> century (Hristoski, I., & Sotiroski, K., 2012), but new reasons for human migration are arising too, such as job-related movement (Boubakri, H., 2013). Due to the great technological advances in electronic communications and transportation, the scale of modern human migration is even bigger and more dynamic than ever before. It is a global problem of huge strength, involving people from various countries, of different ages, gender, and race, belonging to various nationalities and religions, and having various social, economic and political background problems (Yemisrach, F., 2015).

As stated in (Yemisrach, F., 2015) illegal migration front multiple challenges or problems to countries of source, bridge, and destination, as well as to migrants themselves. Migrants in the illegal situation are particularly open to bias, exploitation, and violence. Such migrants are also in danger of being exploited by crime organizations involved in human trafficking and migrant smuggling crimes that constitute a serious violation of the human rights of its sufferers.

Basic Information about unrecorded migrants in the illegal situation is often difficult to put a figure on. Estimates vary greatly from one source to another. As described in IOM, “has approximate that 10–15% of the world’s 214 million international migrants in 2010 were unrecorded and also the UNDP has estimated that around one-third of all migration flows in developing countries were unrecorded” and also both the UNDP and the OECD include unrecorded migrants in their estimation of the migrant database, but the accurate amount of migrants in the illegal situation are unknown.

According to the central statically agency and MoLSA office, from 2000-2014 years, there are around 84, 000 and 459, 810 young people in Ethiopia living outside their place of birth, in different regions by legally system was recorded about 459, 810 respectively. The main origins of Ethiopian migrants are from the populated regions, such as Amhara, Oromiya, SNNPR, Addis Ababa, Gambela, Dire Dawa, Harari, Tigray, Somali, and Beshangul Gumuz region. These areas are also the same that belong to the poorest regions in Ethiopia, with low per capita incomes. Central statically agency and MoLSA Office clearly defines the number of migrants in each year in different regions as shown, in Table 1 and 2.

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