Spatial patterns, trends and flow of Internal Migration Intensity in African Continent (1990-2014)

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Abstract

The flow of African continent Migration are obtained from last two decades is estimated 13.9 million to 15.4 million. The general determined of global pattern in which a set of push factors remarkably a deteriorating economy, political instability, droughts, and inner conflict land acquisition wars are largely liable for the exit of people from the origin countries and emigrants are attractive towards pulling intensity neighbouring countries (Premi, 1985). We assessed Burkina Faso, Mali, Niger, Mozambique, and Somalia countries were hosted by huge emigration. All the equatorial belts of African countries are facing communal and ethnic war. However, continent consantly placed in the form of clash, civil war (Côte d'Ivoire, Liberia, Sierra Leone), internal armed conflict (Democratic Republic of Congo, South Sudan), or political dispute (Mozambique and Zimbabwe). Natural disasters persist; the drought in the western Africa has dislodged huge numbers of immigrates nearer countries namely Ethiopia and South Africa.

Keywords: Immigration, Emigration, Displacement, Structured Matrix, Remittances, DMEI

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Introduction:

Migration and movement of human population have always been an integral element in the history of mankind. The flows of population movement from one place to another deserve a special mention because many socio-economic and demographic conditions of a place of origin and place of a destination depend upon the nature of flow of population. Generally the flow of migration depends largely on the differential level of economic development of different regions. Many hypotheses have been put forward to relate the movement of population from one area to another area with the economic development of the society and distance. In his hypothesis, Lee (1966) clearly has shown that the efficiency of migration stream varies with the economic conditions, being high in the prosperous time and low in the times of depression. Mobility transition also supports this relationship that in different economic development levels in the society migration changes accordingly (Zelinsky's, 1970). Clark (1966) also concluded that population mobility has increased with technical and economic progress. It has been observed that the industrialization and economic development attract large scale movements of people from countryside to town and from towns to city or from one country to another (Bouge, 1961). Raventein's papers published in 1885 and 1889, entitled "The Laws of Migration" stated that the volume of migration decrease with increasing distance. Zipf (1941) in his "Inverse Distance Law" also expressed the same view that the volume of migration tends to vary inversely with the distance. On the contrary, Stouffer's "Model of intervening opportunities" denies that there is any relationship between population mobility and distance. Immigration and Emigration scenario of the African Continent has amplified in volume, purposes intricacy and demographic consequence over the past two decades. Since 1990,

international migratory flows have become growing tremendously, and many countries care now simultaneously countries of origin, destination, and transit. In 2013, the number of international migrants worldwide reached 232 million, up from 154 million in 1990 (UN migration Stock Report, 2008). Although this represents an increase of 78 million people, the share of international migrants in the world population increased only slightly, from 2.9 percent in 1990 to 3.2 percent in 2013. Trends of Internal migration has been increased from 1990-2013 is respectively 13.9 million to 15.4 million (UN Migration Stock, 2013) in African continents is 15.2 Net international migration (the number of immigrants minus emigrants) has become a primary source of population growth in the more developed regions. Geographic mobility, or migration, has always been an integral part of the social transformer of the world (Bilger and Kraler 2005). It ensures that the mobility of labour and its associated human capital between regions and occupations. The flow of contemporary temporal migration relates both to the distance traversed and the duration of residence at the destination of neighbouring countries and maximum are seasonal migration, short-term migration for a period of two to five years, and long-term or permanent migrations (Byerlee 1979). Keeping in view all this, in this present study an attempt has been made to show the flow of immigrants and emigrants within African continent over the last three decades. In this study an attempt has been also made to capture the flow of remittances in all African countries of the light of world migration stock and remittances, World Bank data(1990-2014).

Objective

The broad objectives of this paper are to study the spatial trends, pattern, cause and consequence of internal migration flow and in the African Continent.

Database and Methodology:

The present study is based entirely on the secondary sources of data. The main secondary source of data is the Migration and Remittances. Data is taken from Trends in International Migration stock: Migrants by destination and origin (1990-2013) by United Nation Population Division and

Refugees, asylum-seekers, internally displaced persons (IDPs), returnees (refugees and IDPs), stateless persons, and others of concern to UNHCR by origin, end-2014. 2013. Concerned about the methodology part to adopt various types of migration rate, Crude Net Immigration and Emigration, Rank Correlation and Correlation effect among Migration and Refugee. Estimation of the total migrant population in countries was calculated through structure matrix (Fig 1).

Inter-Country immigrants and emigrants: person with last residence outside the country of enumeration.

Methodology:

The whole analysis of the study is carried out using simple statistical techniques like rates, ratios and percentage. Net Migration Rate is also calculated with the help following formula.

A. Structure Diagonal Matrix:

The computation of volume of each migration stream namely rural to rural, rural to urban, urban to urban and urban to urban has been done. The nature and volume of each stream totally depends upon distance migration. Estimation of migrant population in each country is calculated through the structure diagonal matrix (Fig 1). After that percent of each stream of migration is calculated out of the total migrant population of each country of Africa (Paul, 2015).

Structure of Diagonal Matrix
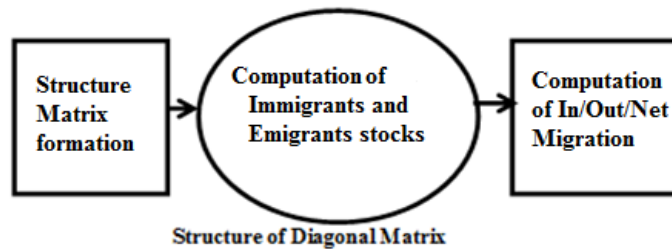
	A_i	B_i	C_i	Z_j
A_i	$A_i A_i$	$A_i B_i$	$A_i C_i$	$A_i Z_j$
B_i	$B_i A_i$	$B_i B_i$	$B_i C_i$	$B_i Z_j$
C_i	$C_i A_i$	$C_i B_i$	$C_i C_i$	$C_i Z_j$
Z_j	$Z_j A_i$	$Z_j B_i$	$Z_j C_i$	$Z_j Z_j$

Fig 1 Formation of the Matrix

B. Rank Method:

$$r_{rank} = 1 - \frac{6 \Sigma d^2}{n(n^2 - 1)}$$

C. Migration Rate:

The rate of distance migration is calculated to study the spatial pattern of migration. The rate of inter-district and inter-state migration is calculated. Using the given formula-

$$\text{a. } \mathbf{NIMR} = \frac{IM_i}{P_i} * k$$

where,

NIMR   =   Net In-migration Rate
$IM_i =$ no. of in-migrants area i
P_i =   total midyear population of area i
k =   per thousand population

$$\text{b. } \mathbf{NOMR} = \frac{OM_i}{P_i} * k$$

where,

NOMR   =   Net Out-migration Rate
OM_i =   no. of out-migrants area i
P_i =   total midyear population of area i
k =   per thousand population

$$\text{c. } \mathbf{CNMR = NIMR - NOMR}$$
$$\mathbf{CNMR = [\{(IM_i/P_i)*k - \{(OM_i/P_i)*k\}]}$$

where,

CNMR   =   Crude Net Migration Rate

Other symbols are already aforementioned.

D. Degree of Migration Effectiveness Index (DMEI)

The Degree of Migration Effectiveness Index (DMEI), which measures the degree of (a) symmetry or (dis) equilibrium in the network of interregional or inter district migration flows, and hence the complete efficiency of migration as a mechanism for population redistribution. The DMEI can assume values between 0 and 100, high values indicating that migration is an efficient mechanism of population redistribution, generating a large net effect for the given volume of movement, while low values denote that inter-zonal flows are more closely balanced, leading to comparatively little redistribution (Bell et al:2002).

$$\mathbf{DMER_i = (D_i - O_i) / (D_i + O_i) * k}$$

Where,

DMER$_i$ =   Degree of Migration Effectiveness Rate for area i
$D_i =$ in-migrant population of area i
O_i =   out-migrants population of area i

$$\mathbf{IR_i = [(D_i - O_i / 2) / \{0.25 * (P_i + P_{i+1})\}]}$$

where,

IR$_i$ =   Index of Redistribution of area i
P$_i$ =   population at time i
P$_{i+1}$ =   population at time $_{i+1}$

E.
$$P_t = P_0 e^{r*t}$$

$$r = \frac{1}{t} ln(\frac{P_t}{P_0})$$

where,

r   =   Exponential Growth Rate of Population
P$_t$ =   population at time t
P$_0$ =   population at time 0

Result and Discussion:

The matrix shows that the overall immigrants and emigrants and remittances scenario in the African Continent. The African migration pattern is different from other continents like; Asia, Europe, and America. Other continents are, generally emigrated for the purpose of development, in terms of a better standard of living, quality education and economic growth. But, migration in the countries of African continents is forced or involuntary in nature. Ethnic conflict, civil war, political turmoil, food insecurity and unemployment are the major reasons behind the mass migration in most of the countries of Africa. History said that largest and the variety of the ethnic community is obtained in Africa.

Approximately, 60 percent African countries are located on the degree of Equatorial belt (from 0^0- 15^0Latitudes) characterized by rainforest along the coast and desert in the interior. Sub-Saharan Africa countries are also a region characterized by forced migrants. It has the world's highest concentration of internally displaced immigrants (IDIs) and hosts approximately 26 percent of the world's refugee population (UNHCR, 2014). Interesting finding is that both sending and receiving countries, it means, they are affected by internal ethnic conflict, lack of resources, civil war, food insecurity, etc.. We also find states that are both, or that are transit countries. Cote D Ivoire, Ethiopia, South Africa, Sudan is amongst the top twenty immigrants as well refugee receiving

countries in worldwide. Equatorial belts countries likes Mali, Niger, Nigeria, Burkina Faso, South Sudan, Chad and few South-Eastern countries Cameroon, Sudan and Kenya are amongst the countries in African continents that hosted the maximum amount of new refugees and IDIs in 2013. Voyage and expulsion, particularly as a consequence of inside communal armed conflicts, influence the development, stability and security of maximum countries (Except South Africa, North region countries). It has great challenges for an implement to well and long-term stable policy at all stages. According to Zourkaleini (2005), flows between Burkina Faso and Cote d'Ivoire continued to receiving emigrants from Burkina during 1990-2013. Cote d'Ivoire was the country of destination for 90 percent of its emigrants or Refugees. A similar situation was observed the large chunk of emigrated found neighbouring countries like; Senegal to Ghana, Mali to Niger. Movement of emigration from Mozambique increased during the period of armed conflict towards 1972. More than 1,8 million emigrants towards neibouring countries, namely Zimbabwe, Swaziland, Malawi, Tanzania, Zambia and South Africa and in between observed six to seven million were displaced internally due to natural hazards such as drought .The least developed region, namely Western equation (Burkina Faso, Mali, Tongo) and middle-eastern countries (Ethiopia, Uganda, Mozambique, and Somalia) are large numbers of immigrants to neighbouring countries like; South Africa, Cote D' Ivoire, Sudan and Nigeria.

According to the Table 1 & 2 depict that the rank of Net immigrant receiving courtiers. It's clear that Net immigrants' effect shows that, per thousand population in their country. It does not Means, $Rank_1$ countries are much better than $Rank_2$ or $Rank_3$. The maximum Volume of immigrants receiving countries is Cote D Ivoire, Sudan, Ethiopia and South Africa. According to the map, trends of migration flows from equatorial countries likes; Burkina Faso, Mali, and Eastern countries are Ethiopia, Mozambique from 1990-2013. In 2013, 2.1 million tribal Africans were residing in neighboring countries of within continent; most of the immigrants were displaced or refugees from their origin places.

Concentration of net immigration much higher in Djibouti over the last two decades, because of, urban migration due to drought in neighbouring countries. Similarly, it seems to be found positive country likes; South Africa, Gabon. But, another major finding is that Mozambique, Somalia, Burkina Faso, Western Africa, South Sudan are less urbanized due stagnant of overall growth (Food, political, education, communication, etc.

The trends and pattern of remittances flow in African continent is very up and down, as because of internal arms, conflict inside the groups. There have large chunk of people migrating toward neighbouring countries due to political problems. They are do not migrating for education or better living purposes to another countries only for shelter and foods. Within the continent percentage share of inflow of remittances is very low. Those who are immigrants to different continents they are sending their remittances at native place. However, overall share of percentage of remittances more than 40th countries (58th countries) are economically poor pathetic situation (Table3).

Conclusion

These study appraisal issues engross flow of international migration within African continent and policy execution for a better understanding and organization of internal Intensity immigration and emigration in African continent. In conclusion, the pathetic scenario of pattern and trends of African countries internal migrations and remittances flow over last two decades. However, these movements have resurfaced in a different pattern, in the form of refugees and asylums. After maximum independent nations are faced with war (Côte d'Ivoire, Liberia, Sierra Leone), internal conflict (the Democratic Republic of Congo, Sudan), political dispute (Zimbabwe). Natural disasters persist; the drought in the western Africa. Index of redistribution (IR) and degree of migration effectiveness index (DMEI) shows the higher values of the index in South Africa, Côte d'Ivoire, Sudan and Ethiopia which are efficient for making population redistribution through

migration intensity. Comprehensive primary data, structure, in-depth behaviour and characteristics of immigrants or emigrants or refugees in all ground level to the detailed investigation are required.

References

Ackah, C. and D. Medvedev. (2010). 'Internal Migration in Ghana: Determinants and welfare impacts'. Paper presented at the PEGNet Conference 2010: Policies to Foster and Sustain Equitable Development in Times of Crisis Development Bank of Southern Africa, Midrand South Africa, 2-3 September 2010.

Bell et al. (2002). The wax and wane of migration patterns in the US in the 1980s: a Demographic effectiveness field perspective, *Environment and Planning A* 26: 1545-61.

Bilger, Veronika, and Albert Kraler. (2005). "African Migration. Historical Perspectives and Contemporary Dynamics." *Vienna Journal of African Studies* No 8/2005.

Byerlee Derek. 1(972). "Research on Migration in Africa: Past, Present, and Future." Rural Employment Paper 2, Department of Agricultural Economics, Michigan State University,

Byerlee Derek, Carl K. Eicher, Carl Liedholm, S. Duncan, and C. Spencer. (1977). "Rural Employment in Tropical Africa: Summary of Findings." Working Paper 20, Michigan State University.DFID. 2004a. Migration in Eastern Africa.'' Development Research Center on Migration, Globalization, and Poverty, Sussex, UK.

Chakravarty, B. (1997). "The Census and the NSS Data on Internal Migration", in Ashish Bose, Davendra B. Gupta, and Gaurisankar Raychaudhuri (eds.), Population Statistics in India. New Delhi: Vikas Publishing House Pvt. Ltd.

United Nations. (2008). *World Economic and Social Survey 2008: International Migration.* Department of Economic and Social Affairs. New York.

Paul,K. and KC. Das. (2015): "Provincial and Flow of Migration Streaming in West Bengal, 2001: IJCR; Vol.7, Issues, 07, pp.18794-18801.

Zachariah K. C., Julien Condé, and N. K. Nair. (1980). "Demographic Aspects of Migration in Western Africa, Volume 1 and Volume 2." Staff Paper, World Bank, Washington, DC.

Lozano-Gracia, N. et al. (2009) 'The Journey to Safety: Conflict-Driven Migration Flows in Colombia', International Regional Science Review, 33/2: 157–80.

Chun, Y. and Griffith, D. (2011) 'Modeling Network Autocorrelation in Space–Time Migration Flow Data: An Eigenvector Spatial Filtering Approach', Annals of the Association of American Geographers (February 2012), 37–41.

Cohen, J. E. et al. (2008) 'International Migration Beyond Gravity: A Statistical Model for Use in Population Projections', Proceedings of the National Academy of Sciences, 105/40: 15269–74.

Gonzá´lez, M. C., Hidalgo, C. A. and Baraba´si, A.-L. (2008) 'Understanding Individual Human Mobility Patterns', Nature, 453/7196: 779–82.

Greenwood, M. J. and Hunt, G. L. (2003) 'The Early History of Migration Research', International Regional Science Review, 26/1: 3–37.

Lucas, R. E. B. (2006) 'Migration and Economic Development in Africa: A Review of Evidence', Journal of African Economies, 15 (Supplement 2), 337–95.

Bouge, D.J. (1961), "International Migration" in Phillip M. Hausen and Otis Dudley Duncan(Eds.). The Study of Population, New Delhi: Asia Publishing House, pp-486.

Clark,J.I.(1966), "Population Geography". Pergamon Press London, pp. 123.

Clark, G. and Wolcott, S. (2002), "One Polity, Many Countries: Economic Growth in India, 1873–2000", Working Paper, University of California-Davis.

Greenwood, M.J.(1971), "A Regression Analysis of Migration to Urban areas of a Less Developed Country : A case Study Of India", *Journal of Regional Science,* Vol. 11, No. 8.

Ravenstein, E.W. (1889), "The laws of Migration", *Journal of the Statistical Society of London*, Vol.-52, No.-2, pp. 288.

Stouffer, S. (1940), "Intervening Opportunities; A theory relating to mobility and distance", *American Sociological Review*, 5, pp. 298-305.

Zelinsky, W. (1971), "The Hypothesis of the Mobility Transition" *Geographic Review*, 61(2), pp. 219-49.

Zipf, G.K. (1946) "The P1P2/D Hypothesis: On the intercity movement of persons", *American Sociological Review*, II (DEC, 1946), pp. 677-86.

Stark, O. and Bloom, D. (1985) 'The New Economics of Labor Migration', The American Economic Review, 75/2: 173–8.

Table: Effect of Net Migration and their changes of Top 20 African Countries by Rank method,1990-2013

Sl.No.	African Countries	1990 Net Immigration Effect / per '000 pop #	African Countries	2000 Net Immigration Effect/ per '000 pop #	African Countries	2013 Net Immigration Effect/ per '000 pop #
1	Djibouti(R_{01})	200.35	Djibouti(R_{01})	92.15	Mayotte(R_{01})	258.95
2	Gabon(R_{02})	120.24	Côte d'Ivoire(R_{02})	56.52	Gabon(R_{02})	161.63
3	Côte d'Ivoire(R_{03})	117.75	Gabon(R_{03})	51.96	Djibouti(R_{03})	119.53
4	Malawi(R_{04})	108.03	Malawi(R_{04})	44.05	Gambia(R_{04})	79.22
5	Mayotte(R_{05})	100.73	Gambia(R_{05})	40.55	Congo(R_{05})	73.55
6	Gambia(R_{06})	96.36	Mayotte(R_{06})	36.68	Côte d'Ivoire(R_{06})	66.46
7	Sudan(R_{07})	45.42	Sudan(R_{07})	19.92	Réunion(R_{07})	37.44
8	Sierra Leone(R_{08})	40.85	Sierra Leone(R_{08})	18.97	South Africa(R_{08})	31.08
9	Zimbabwe(R_{09})	34.34	Zimbabwe(R_{09})	16.96	Libya(R_{09})	22.89
10	Congo(R_{10})	29.34	South Africa(R_{10})	15.25	Botswana(R_{10})	22.30
11	South Africa(R_{11})	24.28	Congo(R_{11})	11.00	Kenya(R_{11})	18.55
12	Zambia(R_{12})	22.83	Zambia(R_{12})	10.13	Chad(R_{12})	8.79
13	Uganda(R_{13})	20.34	Uganda(R_{13})	8.93	Rwanda(R_{13})	8.66
14	United Rep. of Tanzania(R_{14})	17.88	Libya(R_{14})	7.00	Seychelles(R_{14})	8.65
15	Libya(R_{15})	12.84	United Rep. of Tanzania(R_{15})	6.82	Ethiopia(R_{15})	6.08
16	Cameroon(R_{16})	10.72	Cameroon(R_{16})	4.64	Guinea(R_{16})	4.49
17	Democratic Rep. of Congo(R_{17})	10.09	Réunion(R_{17})	4.37	Algeria(R_{17})	4.16
18	Réunion(R_{18})	9.09	Democratic Rep. of Congo(R_{18})	3.37	Cameroon(R_{18})	3.30
19	Central African Rep. (R_{19})	7.55	Central African Rep. (R_{19})	3.33	Nigeria(R_{19})	3.26
20	Algeria(R_{20})	5.46	Algeria(R_{20})	2.54	United Rep. Tanzania(R_{20})	2.89

 # Net Migration Effect of Immigrants & Emigrants from Origin & Destination among Country Population R_n Rank of the Country in Africa
Structure Matrix Formation all African Countries
Data Sources: UN Migrants Stock: Migrants by Destination & origin 1990, 2000 and 2013

Table 2 Effect of Net Migration and their changes of Bottom 20 African Countries Rank from 1990-2013

| Sl.No.	African Countries	1990 Net Immigration Effect/ per '000 pop #	African Countries	2000 Net Immigration Migration Effect/ per '000 pop #	African Countries	2013 Net Immigration Effect/ per '000 pop #
1	Western Sahara(R_{58})	-748.71	Western Sahara (R_{58})	-310.74	Western Sahara (R_{58})	-262.32
2	Mozambique(R_{57})	-156.87	Lesotho(R_{57})	-59.59	Lesotho(R_{57})	-169.86
3	Liberia(R_{56})	-133.53	Mozambique(R_{56})	-58.67	Somalia(R_{56})	-132.85
4	Lesotho(R_{55})	-115.20	South Sudan(R_{55})	-48.96	Equatorial Guinea(R_{55})	-132.63
5	South Sudan(R_{54})	-109.73	Liberia(R_{54})	-43.59	Comoros(R_{54})	-83.19
6	Equatorial Guinea(R_{53})	-76.92	Burkina Faso(R_{53})	-34.47	Swaziland(R_{53})	-68.61
7	Burkina Faso(R_{52})	-73.64	Rwanda(R_{52})	-32.32	Sao Tome & Principe(R_{52})	-59.66
8	Rwanda(R_{51})	-68.42	Equatorial Guinea(R_{51})	-31.10	Burkina Faso(R_{51})	-54.21
9	Angola(R_{50})	-60.84	Mali(R_{50})	-24.61	Namibia(R_{50})	-44.49
10	Mali(R_{49})	-56.85	Angola(R_{49})	-23.55	Togo(R_{49})	-41.09
11	Chad(R_{48})	-45.50	Chad(R_{48})	-17.89	Mali(R_{48})	-35.99
12	Somalia(R_{47})	-41.46	Eritrea(R_{47})	-16.96	Sierra Leone(R_{47})	-28.94
13	Eritrea(R_{46})	-39.73	Benin(R_{46})	-15.83	Benin(R_{46})	-26.21
14	Benin(R_{45})	-38.45	Somalia(R_{45})	-15.06	Eritrea(R_{45})	-23.95
15	Guinea-Bissau(R_{44})	-28.48	Namibia(R_{44})	-13.13	Mozambique(R_{44})	-23.13
16	Sao Tome & Principe(R_{43})	-26.59	Comoros($R4_3$)	-11.27	Cape Verde(R_{43})	-20.49
17	Togo(R_{42})	-21.01	Guinea-Bissau(R_{42})	-11.23	Guinea-Bissau(R_{42})	-19.39
18	Mauritania(R_{41})	-19.88	Botswana(R_{41})	-10.61	Zimbabwe(R_{41})	-11.60
19	Comoros(R_{40})	-19.04	Guinea(R_{40})	-9.38	Mauritius(R_{40})	-10.87
20	Guinea(R_{39})	-14.95	Sao Tome & Principe(R_{39})	-8.95	Angola(R_{39})	-10.47

 # Net Migration Effect of Immigrants & Emigrants from Origin & Destination among Country Population R_n Rank of the Country in Africa Structure Matrix Formation all African Countries
Data Sources: UN Migrants Stock: Migrants by Destination & origin 1990, 2000 and 2013

Table3: Inflow of Remittances in African Continents, in Millions (1990-2014)

African Countries	1990 Inflow (Int+Ext)	1990 Inflow within A. Continent	2000 Inflow (Int+Ext)	2000 Inflow within A. Continent	2010 Inflow (Int+Ext)	2010 Inflow within A. Continent	2011 Inflow (Int+Ext)	2011 Inflow within A. Continent	2012 Inflow (Int+Ext)	2012 Inflow within A. Continent	2013 Inflow (Int+Ext)	2013 Inflow within A. Continent	2014 Inflow (Int+Ext)	2014 Inflow within A. Continent
Algeria	352	36	790	39	2044	44	1942	27	1942	26	2000	45	2020	45
Angola	0	0	0	0	18	0	0	0	0	0	0	0	0	0
Benin	101	48	87	47	139	162	172	144	208	140	208	184	217	192
Botswana	86	11	26	13	22	14	20	48	18	42	36	33	48	45
Burkina Faso	140	93	67	102	120	73	120	91	120	107	120	116	121	117
Burundi	0	0	0	0	34	35	45	30	46	27	49	39	51	41
Cameroon	23	11	30	12	115	14	219	35	210	33	244	17	251	18
Cape Verde	59	57	87	63	131	69	177	32	178	33	176	76	188	78
C.African.Rep.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chad	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Comoros	10	16	0	17	87	19	108	0	110	0	116	22	121	22
Congo,Dem Rep.	0	12	1	14	16	9	115	0	12	0	33	18	35	20
Congo, Rep.	0	0	10	0	0	0	0	0	0	0	0	0	0	0
Côte d'Ivoire	44	21	119	53	373	275	373	252	373	219	373	286	378	290
Djibouti	0	10	12	11	33	12	32	6	33	6	36	13	36	13
Egypt, Arab Rep.	4280	171	2850	189	12453	208	14324	1521	19236	2180	17833	277	19612	305
Equat. Guinea	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eritrea	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Ethiopia	5	38	53	42	345	46	513	82	624	84	624	51	646	53
Gabon	0	0	6	0	0	0	0	0	0	0	0	0	0	0
Gambia	0	15	0	17	116	19	108	14	141	13	181	22	191	23
Ghana	6	0	32	12	136	35	152	46	138	46	119	41	126	43
Guinea	0	0	1	0	46	52	65	49	66	47	93	54	95	56
Guinea-Bissau	1	1	0	0	46	15	52	14	46	13	46	16	47	16
Kenya	8	1	0	0	686	154	934	131	1214	172	1338	209	1481	232
Lesotho	428	391	478	432	610	477	649	581	554	539	462	459	456	453
Liberia	0	49	0	54	31	13	360	131	516	137	383	156	528	216
Libya	0	0	9	0	0	0	0	0	0	0	0	0	0	0
Madagascar	8	2	11	3	547	18	398	0	397	0	427	18	432	18
Malawi	0	16	1	0	22	20	25	10	28	9	28	23	30	24
Mali	107	58	73	39	473	212	784	311	827	291	895	706	923	729
Mauritania	14	0	0	0	0	0	0	0	0	0	0	0	0	0
Mauritius	0	11	177	12	226	13	249	2	249	2	249	16	267	17
Mayotte		0		0		0		0		0		0		NA
Morocco	2010	29	2160	32	6423	36	7256	22	6508	21	6882	37	6962	38
Mozambique	70	140	37	155	139	111	157	111	220	70	217	173	218	173
Namibia	13	2	9	1	15	11	15	8	13	8	11	11	11	11
Niger	14	6	14	6	134	124	166	79	152	95	152	136	157	140
Nigeria	10	2	1390	219	19818	6418	20619	4870	20633	4860	20890	6447	20921	6457
Rwanda	3	99	7	1	106	121	174	62	182	95	170	142	179	149
S.T Principe	0	7	0	0	6	9	7	0	6	2	27	11	29	12
Senegal	142	41	233	54	1478	490	1614	539	1614	495	1614	518	1644	527
Seychelles	8	1	3	1	17	1	25	2	18	2	13	2	15	2
Sierra Leone	0	9	7	1	44	10	59	28	61	29	68	38	104	59
Somalia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
South Africa	135	69	344	77	1070	85	1158	286	1085	262	971	104	1039	111
South Sudan	0	0	0	0	0	0	0	0	0	NA	0	NA	0	0
Sudan	62	79	641	88	1100	97	442	309	401	250	424	102	432	104
Swaziland	113	24	57	26	55	29	38	48	31	41	30	29	30	29
Tanzania	0	16	8	1	55	20	78	34	67	34	59	25	64	27
Togo	27	198	34	218	337	241	337	193	337	184	337	256	343	261
Tunisia	551	16	796	18	2063	20	2004	238	2266	261	2291	20	2314	20
Uganda	0	298	238	329	771	363	816	563	910	580	932	441	994	470
Zambia	0	22	0	0	44	27	46	19	73	18	54	34	58	37
Zimbabwe	1	0	0	0	0	0	0	0	0	0	0	0	0	0

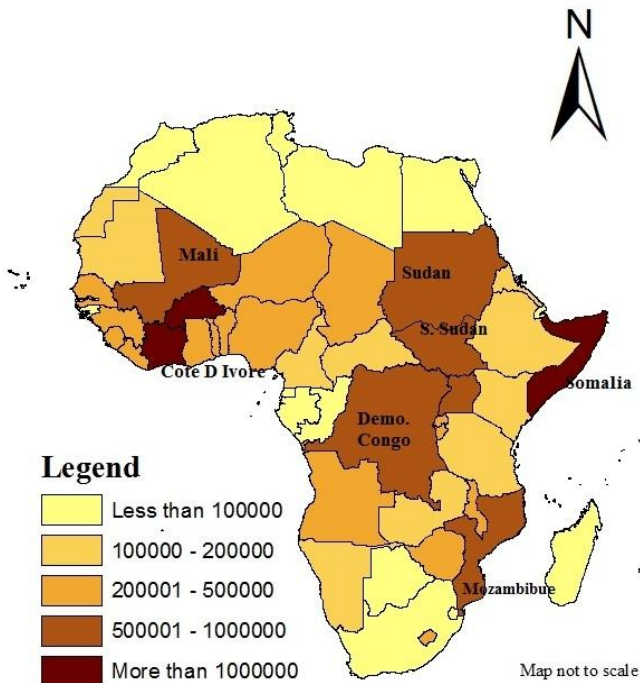| Total	8832	2127	10905	2398	52544	10219	56952	10966	61867	11472	61210	11424	63815	11694

Emigration Senario of African Continent (1990)
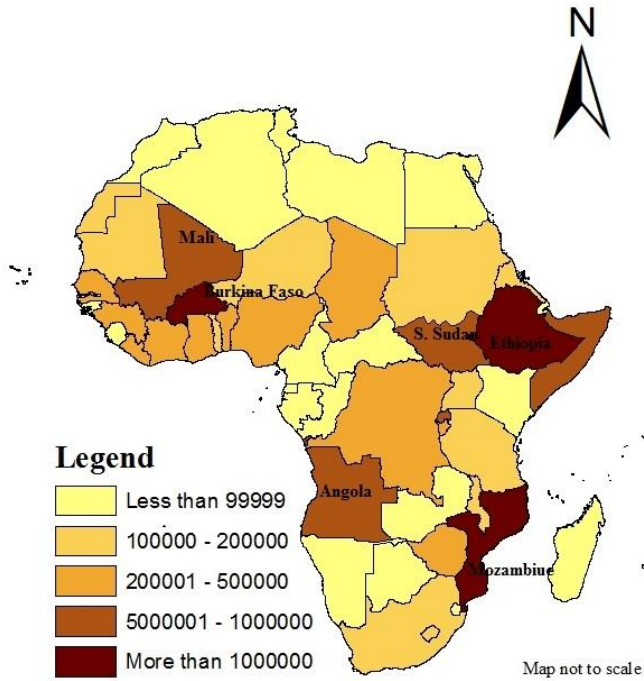
Emigration Senario of African Continent (2000)
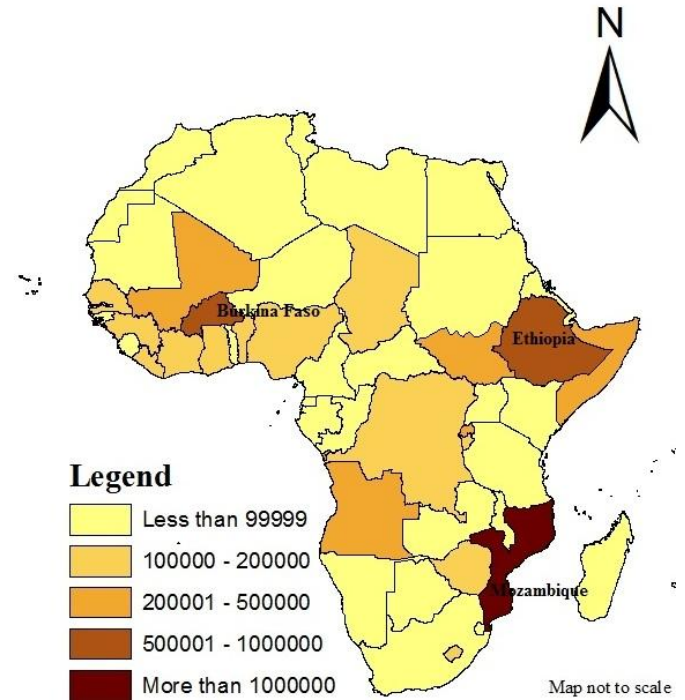
Emigration Senario of African Continent (2013)

Immigration Scenario of African Continent