

# **The Dynamics of Migration in Sub Saharan Africa: An Empirical Study to Find the Interlinkages of Migration with Remittances and Urbanization.**

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## **Background**

Africa is known for its long history of migration within and beyond the vast continent (Shimeles, 2010). Historical, economic, ethnic, and political links have fostered and reinforced intra-regional, inter-regional and international migration in Africa (Adepoju, 2000). There is mounting evidence from recent studies suggesting that migrants, particularly from Africa are a reservoir of great potential that can be harnessed and unleashed to transform the development prospect of many countries and assist in the fight against poverty, hunger diseases and human suffering (Ratha et al., 2008)

According to official statistics, about 30 million Africans have migrated internationally (including within Africa). This figure includes both voluntary migrants and international refugees—almost certainly underestimates the size and importance of migration from and particularly within Africa.

About two-thirds of migrants from Sub-Saharan Africa, particularly poorer migrants, go to other countries in the region; the bulk of migrants remain within their sub regions. In West Africa, for example, more than 70 percent of intra-African emigration was within the sub region. In contrast, more than 90 percent of migrants from North Africa travel to countries outside the region. Migrants from middle-income countries disproportionately migrate to destinations outside Africa, whereas emigrants originating from poorer countries generally go to neighboring countries (Ratha, 2011).

Countries within Africa are the main destinations for Sub-Saharan African migrants. For other African migrants (including those from North Africa), destination countries outside Africa are equally important. According to the Migration and Remittances Factbook 2011, African diasporas living in Africa accounted for over 14 million people, or nearly half of all African diasporas. For example, large numbers of immigrants from Burundi and the Democratic Republic of Congo continue moving to Tanzania; Somalis are still living in Kenya; and many migrants from Lesotho, Mozambique, and Zimbabwe are living in South Africa.

Traditional migration configurations in West Africa have changed in recent years. For example, Côte d'Ivoire and Nigeria were traditionally key destinations. But the disruption in Côte d'Ivoire and the economic crisis in Nigeria have diminished the number of immigrants into these countries, although these countries still have large stocks of immigrants. Ghana has been one of the major host countries in the subregion. Senegal has been both a receiving and sending country (ECA 2006). Kenya continues to be the main destination in East Africa, although about 84 percent of Burundian emigrants are in Tanzania and 79 percent of Rwandan emigrants are in Uganda. South Africa is also a major pole of attraction not only for African immigrants in

southern Africa but for immigrants from other parts of Africa (for example, the Democratic Republic of Congo and Somalia), and for immigrants from China, India, and European countries. South Africa is also a sending country; Germany, the Netherlands, the United Kingdom, and the United States are important destinations for South Africans.

## **Objective**

This study attempts to understand the recent patterns and trends of migration, remittances and urbanization in Sub-Saharan Africa. It further tries to investigate their interlinkages in the context of sub Saharan Africa.

## **Data and Methods**

Data has been taken from World Development Indicators. Simple descriptive analysis has been done to check the patterns and trends of migration, in flows of remittances and percentage of urbanization. Spearman's rank correlation method has been applied to check the correlation between migration and other two. To further investigate the relationship empirically a regression analysis has been employed. A simple path analysis is also done to check the causal paths. The linear regression equations are-

- i.  $\text{Ln}(\text{IR}) = \text{Const.} + \text{Ln}(\text{OMig.})$
- ii.  $\text{Ln}(\text{OMig.}) = \text{Const.} + \text{Ln}(\text{IR})$
- iii.  $\text{Ln}(\text{PU}) = \text{Const.} + \text{Ln}(\text{OMig.})$
- iv.  $\text{Ln}(\text{OMig.}) = \text{Const.} + \text{Ln}(\text{PU})$
- v.  $\text{Ln}(\text{GDP}) = \text{Const.} + \text{Ln}(\text{OMig.})$

Here IR means inflow of remittances, OMig means out migration, PU means percent of urban population and GDP is gross domestic product.

In this analysis the problem of endogeneity and spatial interaction effects are not considered.

## **Results**

The recent data from World Development Indicators gives the recent pattern of migration among the countries of Sub Saharan Africa. According to the data Angola faced out migration constantly during the period of 196 to 1975, in the next ten years it faced in migration. But in the next twenty years it faced out migration as well as in migration alternately and then after it is facing in migration continuously. Burundi is the country which faced a constant out migration from 1960 to 2000 and a significant number of populations are migrating from this country. Countries like Burkina Faso, Cameroon, Guinea- Bissau, Lesotho, Madagascar, Mali, Mauritius and Niger are showing constantly an out migration over the period of 1960 to 2014 among the other countries of Sub Saharan Africa. Predominantly out migration is a general phenomenon

over the countries of Sub Saharan Africa whereas Cote d'Ivoire and Gabon are exception to this. These two countries faced in migration predominantly during the period of 1960 to 2014.

The data from World Development Indicators also gives us the opportunity to study the remittance inflows in the different countries of Sub Saharan Africa starting from 1970 to 2014 on yearly basis. There are countries like Somalia and South Sudan for which the data is not available at the same time there are countries like Mauritius, Namibia, Zambia etc. for which the remittance data is not available throughout the total duration. For every country of Sub Saharan Africa a total of the remittances inflow have been computed throughout the whole period of 2000-2014 based upon which we can say that Nigeria is the country which received the maximum remittances during this period. Nigeria received a total of 197,139 million (US\$) during this whole period. South Africa ranks fourth in this series. Inflow of remittances during the period is very low in the countries of Congo, Rep, Sao Tome and Principe, Gabon and in Eritrea. But there are countries like Central African Republic, Chad, Mauritania, Somalia, South Sudan and Zimbabwe have not received any remittances during this period. Among the countries of Sub Saharan Africa there are 18 countries which have received on an average 100 US\$ million and more every year starting from the year 2000. Nigeria is the only country to receive a total of 13, 143 US\$ million remittances every year on an average.

WDI data is also giving the percentage of urbanization for the countries of Sub Saharan Africa. Chad and Comoros are the two countries where the percentages of urbanization remained fixed during the period of 2000 to 2014. During this period every country of SSA faced an increase in the urbanization but Swaziland and Zimbabwe and Mauritius are the three countries where percent of urban population decreased. If we look at the 2014 data then we can see that the rate of increase in the percentage of urban population is highest in Rwanda and it is almost 87 percent. There are three countries namely Zimbabwe, Swaziland and Mauritius where the change in the percent of urban population is negative. The 2014 data shows that the percentage of urban population is highest in Gabon which is almost 87 percent and including Gabon there are twelve countries in SSA where this percentage is almost fifty percent and the countries are Guinea-Bissau, Liberia, Ghana, Cote d'Ivoire, Cameroon, Botswana, Gambia, The, Mauritania, South Africa, Sao Tome and Principe and Cabo Verde.

If we consider the duration of 2000 to 2014 then South Africa is the country having its GDP the highest than the other countries of Sub Saharan Africa whereas Nigeria, Angola ranks the second and third respectively in this context.

Application of Rank correlation to the data sets of migration and remittances, migration and urbanization gives the association when the net migration is restricted to the countries of SSA only. After analyzing the net migration data for the mid-year duration of 2010-14 and 2014 remittances inflows a negative association has been found. This means if we are considering the countries of SSA and its net migration then there is hardly any relationship with the inflows of remittances to the respective countries. At the same time an association has been checked taking the same set of net migration data and the recent pattern of (2014 data) urbanization data. Spearman's rank correlation for this data set has been found positive. This suggests that the way the recent pattern of migration is going it is supposed the percent of urban population will increase in the countries of SSA.

An exploratory data analysis has been done to explore the relationship between the variables under study. To perform the simple linear regression a logarithmic transformation had been done for all the variables. And in this case the out migration has been considered.

From the simple linear regression analysis the following has been found which is presented in a tabular form below.

<b>Table 1: Results from regression analysis</b>	
Models	Value of the coefficient
Model- i	Beta= -0.143
Model- ii	Beta= -0.037
Model- iii	Beta= -0.105
Model- iv	Beta= -0.941
Model- v	Beta= -0.750

Simple linear regression analysis suggests that people are out migrating from the countries to earn and send remittances to their home country. It is also found that out migration and urbanization are negatively associated.

## **Discussion**

This paper tries to understand the recent patterns and trends of migration, remittances and urbanization in the countries of Sub Saharan Africa. Sub Saharan Africa had been a major source of providing labour force to the developed nations. There are lots of factors which lead those people to migrate to the other nations. A lot of researchers gave many insights to the determining factors for this type of migration from the countries of Sub Saharan Africa. It is evident from the data that there is a predominance of out migration from these countries of SSA though there are some countries which are facing only in migration for a long time. Some researchers are suggesting that due to migration for a long time Africa is facing the problem of 'Brain-Drain' and will face the problem in future also. Sub Saharan Africa receives a lot of remittances and it has contributed to the country's GDP directly. Africa is growing and there are chances to improve and grow more at the same time remittances may create a good opportunity in this direction. Lots of researches had already been done to explore the diaspora remittances in flow and development. The countries of Sub Saharan Africa are also showing an increasing pattern in urbanization. This indicates that within the countries of Sub Saharan Africa people are concentrating in the urban part which will create the labour force strengthening the overall income and thus an improved GDP for the countries.

**Table 2: Net migration in the countries of Sub Saharan Africa, WDI- 1960- 2014**

Country Name	Net Migration										
	1962	1967	1972	1977	1982	1987	1992	1997	2002	2007	2012
Angola	-135000	-201155	-88455	13955	234149	-150232	142763	-126311	172194	82005	65543
Burundi	-84989	-57900	-260594	-150288	-86002	-44320	-250000	-404999	112532	163733	-20001
Benin	-24295	-23742	-24845	-19393	-10848	-8723	105000	-29287	98831	50000	-10000
Burkina Faso	-144723	-144723	-170263	-217400	-217400	-183699	-150001	-137499	-125000	-125000	-125000
Botswana	-15000	-6020	2326	14845	601	5803	17864	24546	21278	18730	20000
Central African Republic	11930	13145	-20075	-1000	40165	-40982	37392	11293	-45000	5000	10000
Cote d'Ivoire	200000	300000	400000	420000	430000	325000	375000	180000	-420000	-290000	50000
Cameroon	0	-1000	-2500	-8000	-55000	-65000	-80000	-80000	-80000	-70000	-50000
Congo, Rep.	0	500	6945	-7408	2097	1145	15531	35300	-13257	49872	-45363
Comoros	-8491	-5500	-5500	10000	-4500	-4500	-3000	-6000	-10000	-10000	-10000
Cabo Verde	-267	1865	-3551	-57090	-20313	-34010	-6376	-9437	-10925	-31280	-17215
Eritrea	6356	2910	7773	53231	49202	-3799	-358660	-8887	229378	55001	55001
Ethiopia	-19999	-42182	-59597	-2E+06	250001	780074	1295280	-305577	-83182	-50132	-60001
Gabon	9410	16188	2999	4999	4999	4999	4999	9566	9566	9566	5000
Ghana	0	-361999	-164002	-563999	206001	-30003	-16285	-112636	165518	189259	-100000
Guinea	-13857	-18000	-275000	-353000	-38000	162450	800000	-246148	-368004	-55577	-10000
Gambia, The	-3232	118	9392	-3380	19475	48392	-14801	-26418	-13742	-13742	-13476
Guinea-Bissau	-40000	-27230	-25000	-60000	-30000	-25000	-30000	-30000	-30000	-30000	-10000
Kenya	-20000	-19535	-17915	-2930	3805	5023	221569	-21386	25144	-189330	-50000
Liberia	7996	11013	10996	11949	0	-400000	-300000	450000	-50000	175585	-20000
Lesotho	-25000	-22400	-24048	-6538	-25760	-62682	-46345	-74427	-34493	-24418	-19998
Madagascar	0	-8000	-19000	-30000	-8000	-8000	-7000	-6000	-5000	-5000	-5000
Mali	-70243	-98235	-95585	-174998	-218064	-480652	-173489	-141950	-67110	-100823	-302449
Mozambique	-23500	-23500	-23500	87373	-373366	-1300000	650000	75000	-20000	-20000	-25004
Mauritania	-1820	-2760	-5950	-9700	-16100	-30300	-14700	9900	30000	9900	-20000
Mauritius	-30869	-29156	-20463	-20617	-21632	-35977	-5611	-8858	-28626	-14328	0
Malawi	-6874	-9696	29207	54	-83786	784999	-932889	-179091	-22289	110888	0
Namibia	0	-870	-2825	-44585	-29139	74791	23492	35497	-50000	-50000	-3336
Niger	-11545	-11545	-13763	-18138	-92946	-91917	-2679	24056	-28497	-28497	-28497
Nigeria	1021	-43347	-38526	854649	-671640	-91407	-95769	-95027	-170000	-300000	-300000
Rwanda	-140001	20000	-20000	-20000	-50002	29999	-1533124	1791149	-63536	-63536	-44999

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Country Name	1962	1967	1972	1977	1982	1987	1992	1997	2002	2007	2012
Sudan	0	0	20000	180000	220000	150000	1200000	-640000	-430000	-500000	-800000
Senegal	50002	86522	65586	-134783	-85108	-60291	-70008	-209864	-151131	-166051	-99996
Sierra Leone	0	0	0	0	0	62745	-450000	-150000	500000	60000	-21000
Somalia	-1046	1489	-6	1587565	-832045	-632286	-893365	-100004	-200000	-300000	-150000
South Sudan	0	0	25000	60000	150000	-405000	-1095000	400000	432000	785000	865000
Sao Tome and Principe	-9152	-744	-2509	-1221	-5273	-2548	-3732	-9107	-5998	-1498	-1500
Slovenia	-15206	-20295	15108	29487	78426	30143	-16487	1375	16824	44720	22000
Swaziland	-9908	-9472	-7872	-9472	-14496	17149	-38243	-12000	-46077	-6000	-6000
Chad	-5000	-40950	-49050	-175500	-131245	1418	-10374	69444	218966	-50000	-120000
Togo	-77885	138923	-49999	-100000	50001	-20000	-95003	-30000	-9994	-9994	-9994
Tanzania	27000	36025	118990	-22250	37180	68208	591288	-205875	-345000	-300000	-150000
Uganda	125200	53330	-240530	-166660	-115340	233366	119995	-45737	-5000	-135000	-150000
South Africa	115210	200939	231569	73316	175112	-133363	804595	158912	1072072	1402643	-100000
Zambia	2500	-4180	27122	3583	48103	28583	-11201	83483	-81713	-85000	-40000
Zimbabwe	-10000	-28000	-30360	-101515	141520	120505	-191804	-200000	-700000	-800000	400000

<b>Table 3: Total remittances received during 2000-2014 in the countries of SSA, WDI</b>	
Contries	Total Remittances during 2000-2014 (US\$ million)
Angola	101
Benin	2225
Botswana	731
Burkina Faso	1281
Burundi	258
Cabo Verde	2027
Central African Republic	0
Chad	0
Comoros	934
Congo, Rep.	90
Cote d'Ivoire	3557
Eritrea	3
Ethiopia	4390
Gabon	38
Gambia, The	1175
Ghana	1503
Guinea	742
Guinea-Bissau	501
Kenya	9141
Lesotho	8161
Liberia	2133
Madagascar	3584
Malawi	260
Mali	6129
Mauritania	0
Mauritius	3348
Mozambique	1674
Namibia	197
Niger	1320
Nigeria	197139
Rwanda	1173
Sao Tome and Principe	89
Senegal	15722
Sierra Leone	541
Somalia	0
South Africa	10952
South Sudan	0
Sudan	13274
Swaziland	956
Tanzania	519
Togo	3603
Uganda	8751
Zambia	639
Zimbabwe	0

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Angola	32	33	34	35	35	36	37	38	39	39	40	41	42	42	43
Benin	38	39	39	39	40	40	40	41	41	41	42	42	43	43	44
Botswana	53	54	54	55	55	55	55	56	56	56	56	56	57	57	57
Burkina Faso	18	19	19	20	21	22	22	23	24	25	26	27	27	28	29
Burundi	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12
Cameroon	46	46	47	47	48	49	49	50	50	51	52	52	53	53	54
Cabo Verde	53	54	55	56	57	58	59	59	60	61	62	63	63	64	65
Central African Republic	38	38	38	38	38	38	38	38	38	39	39	39	39	40	40
Chad	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
Comoros	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
Congo, Dem. Rep.	35	36	36	37	37	37	38	38	39	39	40	40	41	41	42
Cote d'Ivoire	44	44	45	46	46	47	48	48	49	50	51	51	52	53	53
Eritrea	18	18	18	18	19	19	19	20	20	20	21	21	21	22	22
Ethiopia	15	15	15	15	16	16	16	16	17	17	17	18	18	19	19
Gabon	80	81	82	82	83	83	84	84	85	85	86	86	86	87	87
Gambia, The	48	49	50	51	51	52	53	54	55	56	56	57	58	58	59
Ghana	44	45	45	46	47	47	48	49	49	50	51	51	52	53	53
Guinea	31	31	32	32	32	33	33	34	34	34	35	35	36	36	37
Guinea-Bissau	37	37	38	39	40	41	42	43	43	44	45	46	47	48	49
Kenya	20	20	21	21	21	22	22	22	23	23	24	24	24	25	25
Lesotho	20	20	21	21	22	22	23	23	24	24	25	25	26	26	27
Liberia	44	45	45	45	46	46	46	47	47	47	48	48	49	49	49
Madagascar	27	27	28	28	28	29	29	30	31	31	32	33	33	34	34
Malawi	15	15	15	15	15	15	15	15	15	15	16	16	16	16	16
Mali	28	29	30	31	31	32	33	34	34	35	36	37	38	38	39
Mauritania	49	50	51	52	52	53	54	55	55	56	57	57	58	59	59
Mauritius	43	42	42	42	42	42	41	41	41	41	41	40	40	40	40
Mozambique	29	29	29	30	30	30	30	30	31	31	31	31	31	32	32
Namibia	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Niger	16	16	16	16	17	17	17	17	17	17	18	18	18	18	18
Nigeria	35	36	37	37	38	39	40	41	42	43	43	44	45	46	47
Rwanda	15	16	17	18	18	19	20	21	22	23	24	25	26	27	28

*Continued...*

Country Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Sao Tome and Principe	53	54	55	56	57	58	59	60	60	61	62	63	63	64	65
Senegal	40	40	41	41	41	41	41	42	42	42	42	42	43	43	43
Sierra Leone	36	36	36	36	37	37	37	37	38	38	38	39	39	39	40
Somalia	33	34	34	34	35	35	36	36	36	37	37	38	38	39	39
South Africa	57	57	58	58	59	60	60	61	61	62	62	63	63	64	64
South Sudan	17	17	17	17	17	17	17	17	18	18	18	18	18	18	19
Sudan	32	33	33	33	33	33	33	33	33	33	33	33	33	33	34
Swaziland	23	23	22	22	22	22	22	22	22	22	21	21	21	21	21
Tanzania	22	23	23	24	24	25	25	26	27	27	28	29	29	30	31
Togo	33	33	34	34	35	35	36	36	37	37	38	38	38	39	39
Uganda	12	12	12	12	13	13	13	14	14	14	14	15	15	15	16
Zambia	35	35	35	36	36	37	37	37	38	38	39	39	40	40	40
Zimbabwe	34	34	35	34	34	34	34	34	34	33	33	33	33	33	33

**Table 5: Rate of change in urbanization in the countries of SSA during the period of 2000-2014, WDI**

Country Name	2000	2014	Change of urbanization in percentage
Angola	32	43	33.5
Benin	38	44	13.5
Botswana	53	57	7.5
Burkina Faso	18	29	62.7
Burundi	8	12	42.6
Cameroon	46	54	18.2
Cabo Verde	53	65	21.3
Central African Republic	38	40	5.6
Chad	22	22	3.3
Comoros	28	28	0.4
Congo, Dem. Rep.	35	42	19.5
Cote d'Ivoire	44	53	22.8
Eritrea	18	22	26.4
Ethiopia	15	19	29.1
Gabon	80	87	8.5
Gambia, The	48	59	23.3
Ghana	44	53	21.5
Guinea	31	37	18.3
Guinea-Bissau	37	49	32.5
Kenya	20	25	26.7
Lesotho	20	27	37.0
Liberia	44	49	11.2
Madagascar	27	34	27.1
Malawi	15	16	10.2
Mali	28	39	38.0
Mauritania	49	59	20.3
Mauritius	43	40	-6.7
Mozambique	29	32	9.7
Namibia	32	46	41.1
Niger	16	18	14.1
Nigeria	35	47	34.7
Rwanda	15	28	86.5
Sao Tome and Principe	53	65	20.8
Senegal	40	43	7.6
Sierra Leone	36	40	11.1
Somalia	33	39	17.5
South Africa	57	64	13.0
South Sudan	17	19	12.6
Sudan	32	34	3.5
Swaziland	23	21	-6.0
Tanzania	22	31	38.5
Togo	33	39	19.9
Uganda	12	16	30.5
Zambia	35	40	16.3
Zimbabwe	34	33	-3.7

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