The relationship between Rural-TO-Urban Migration and its relationship to the quality of health services – education ,and transportation (A local case study of Umm Bedda – Khartoum State: 1995 – 2022AD)

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Abstract:

The paper dealt with relationship between rural-urban migration and health services – education – transportation, where it was found that most of the migrations in Sudan are from the countryside to the cities, specifically to the capital, Khartoum, in search of a better life. This increased its population density and consequently pressure on public (health services, education, and transportation) in Umm Bedda locality, Khartoum state. Importance of this study lies in the importance of studying migration. The study aimed to identify the demographic characteristics of the migrants, and to examine the relationship between rural-urban migration and public (health services – education – transportation) in the locality. The study was based on hypothesis states that There is relationship between Rural-urban migration and increases pressure on use of public "health services, education, and transportation" in Umm Bedda locality. Most of the data collected by questionnaire; In addition to that obtained from the secondary data includes references, pdf files, and website. The study used the analytical method. The study reached a set of results the most important of which are there is relationship between Rural-urban migration and increases pressure on public (health services – education – transportation) in the locality. The study came out with a number of recommendations, the most important of which are, construction and imple-

menting of public projects (hospitals, health centers, schools, and transportation) in the locality to meet the needs of the existing population, reducing the increase in migration from rural to urban by developing strategies and implementing projects of (hospitals, health centers, schools, and transportation) in rural areas.

Key Words: Migration, Rural, Urban, Health, Education, Transportation.

العلاقة بين الهجرة من الريف إلى الحضر وعلاقتها بجودة الخدمات الصحية والتعليم والنقل

(دراسة حالة محلية أم بدة – ولاية الخرطوم 1995 - 2022م)

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مستخلص:

تناولت هذه الورقة العلاقة بين الهجرة من الريف إلى الحضر والخدمات الصحية – التعليم – المواصلات, حيث نجد أن معظم الهجرات في السودان تكون من الريف إلى المدن وتحديداً إلى العاصمة الخرطوم, بحثاً عن حياة أفضل. وادى ذلك الى زيادة الكثافة السكانية وبالتالي الضغط على الخدمات العامة (الخدمات الصحية – التعليم – المواصلات) في محلية امبدة, ولاية الخرطوم. تكمن اهمية هذه الدراسة في اهمية دراسة الهجرة وندرة البيانات عنها. وتهدف الدراسة الى تحديد الخصائص الديموغرافية للمهاجرين, ودراسة العلاقة بين الهجرة من الريف الى الحضر والخدمات العامة (الخدمات الصحية – التعليم – المواصلات) في المحلية. وتستند الدراسة على فرضية تنص على وجود علاقة بين الهجرة من الريف الى الحضر وزيادة الضغط على استخدام الخدمات العامة (الخدمات الصحية – التعليم – المواصلات) في محلية امبدة. معظم البيانات تم جمعها عن طريق الاستبيان بالاضافة الى تلك التي تم الحصول عليها من البيانات الثانوية ونشمل المراجع, ملفات pdf والمواقع الالكترونية. استخدمت الدراسة المنهج التحليلي, وتوصلت الدراسة الى مجموعة من النتائج اهمها وجود علاقة بين الهجرة من الريف الى الحضر والخدمات العامة (الخدمات الصحية – التعليم – المواصلات) في المحلية. وخرجت الدراسة بعدد من التوصيات أهمها بناء وتنفيذ المشاريع العامة (المستشفيات– المراكز الصحية – المدارس – المواصلات) في محلية امبدة لتلبية احتياجات السكان الموجودين, والحد من زيادة الهجرة من الريف إلى الحضر من خلال وضع الاستراتيجيات وتنفيذ مشاريع (المستشفيات– المراكز الصحية – المدارس – المواصلات) في المناطق الريفية.

كلمات مفتاحية: الهجرة، الريف، الحضر، الخدمات الصحية, التعليم, المواصلات.

Preface

Migration is one of the three components of population dynamics; beside it has its own effects especially in urban areas. Migration can be a major component of population change at every

administrative level; it may affect age specific, gender and socio-economic conditions. Migration is a selective process; it is the movement of people from one place to another with intentions of settling, permanently or temporarily at a new location (geographic region). The movement often occurs over long distances and from one country to another, but internal migration (within a single country) is the dominant from of human migration globally. (https://en.m.wikipedia.com/ (Accessed: 15/6/2022).

Internal migration in Sudan is most often related to forced displacement and internal displacement. Among the factors driving this process are the civil war, economic reasons and environmental degradation, and the widespread hunger and malnutrition (https://migrants-.refugees.va//country-profile/sudan (Accessed: 15/6/2022).

People migrate to Khartoum state for searching better living conditions, better socio-economic development. They are affected by pull factors that attract people to urban areas and push factors that drive people away from the country side. People are attracted to an urban lifestyle and the "bright lights" of city life (https://www.open.edu./openlearncreate (Accessed: 15/6/2022).

Umm Bedda locality is one of the most densely populated localities, making it the top of the list of localities in Khartoum state, this high density population increases pressure on health services – education – transportation. This study examines the relationship between rural-urban migration and use of public (health services – education – transportation) in Umm Bedda locality – al Amir unite – Alharah Aloula. There are few researches about this area; so this research helps the competent authorities.

The research problem

Umm Bedda locality is one of the most densely populated localities, making it the top of the list of localities in Khartoum state. Many people prefer to move from rural to Khartoum state

where best facilities are available. This results in increasing pressure on public "heath services, education, and transportation". To solve this problem the following question, need to be answered:
How does the migration of people from the rural areas increasing pressure on public "health services – education – transportation" in Umm Bedda locality?

The importance of study

- The importance of studying migration and the scarcity of data on it.
- This study will contribute to the growing literature on the relationship between rural to urban migration and public "health services – education – transportation", and to understand why people move and settle in this area. In addition, this study sheds light on Umm Bedda locality.

The objectives of study

To identify the demographic characteristics of the migrants, and to examines the relationship between rural-urban migration and public "health services – education – transportation" in Umm Bedda locality.

The hypothesis of study

There is relationship between Rural-urban migration and increases pressure on use of public (health services, education, and transportation) in Umm Bedda locality.

The Chi-square test of independence is used to determine if there is a significant relationship between variables (respondent's classification – use of health services – enrollment of students in education – use of transportation).

The methodology of study

This study used analytical approach. Both primary and secondary data used. And to determine sample size, using "Cochran equation".

Sample size criteria

For populations that are large, Cochran (1963:75) developed the equation (1) to yield a representative sample for proportions:

Which is valid where n0 is the sample size, Z^2 is the abscissa of the normal curve that cuts off an area α at the tails (1 – α equals the desired confidence level, e.g., 95%), e is the desired level of precision, p is the estimated proportion of an attribute that is present in the population, and q is 1-p. The value for Z is found in statistical tables which contain the area under the normal curve.

Assume there is a large population but that we do not know the variability in the proportion that will adopt the practice; therefore, assume p=.5 (maximum variability). Furthermore, suppose we desire a 95% confidence level and ±5% precision. The resulting sample size is demonstrated in equation (2).

Used simple random sampling by which selected (385) persons from Umm Bedda locality – Al Amir Unite – Alharah Aloula. The primary data collected through a questionnaire; include demographic questions, migration questions, use of (health services, education, and transportation) questions. For analysis used (SPSS) Statistical Package for Social sciences.

In addition to secondary data that obtained from the secondary data includes references, pdf files, and website.

Theoretical Framework

Push and Pull Factors

Migration is broadly understood as a permanent or semi-permanent change of residence. In other words, migration may be defined as a form of relocation diffusion (the spread of people, ideas, innovations, behaviours, from one place to another), involving permanent moves to new locations. The reasons that people migrate are determined by push and pull factors, which are forces that either induce people to move to a new location, or oblige them to leave old residences. These could be economic, political, cultural, and environmental.

Push factors are conditions that can force people to leave their homes and are related to the country from which a person migrates. Push factors include non-availability of enough livelihood opportunities, poverty, rapid population growth that surpasses available resources ,"Primitive" or "poor" living conditions, desertification, famines/droughts, fear of political persecution, poor healthcare, loss of wealth, and natural disasters.

Pull factors are exactly the opposite of push factors—they attract people to a certain location. Typical examples of pull factors of a place are more job opportunities and better living conditions; easy availability of land for settling and agriculture, political and/or religious freedom, superior education and welfare systems, better transportation and communication facilities, better healthcare system and stress-free environment attractive, and security (https://www.epgp.inflibnet.ac.in/ Accessed: 15/7/2022).

Health services – education – and transportation

Rural areas often suffer from limited educational and healthcare infrastructure. As a result, young individuals and families may migrate to urban areas in search of quality education and better healthcare facilities for themselves and their children.

As rural migrants flock to urban centers, cities often experience population surges that lead to overcrowding. This puts immense strain on existing infrastructure (https://www.iips.com.pk/ Accessed: 15/7/2022) where these population increased lead to increased pressure on health services, education, and transportation.

Lee's theory of migration

Everett Spurgeon Lee, Professor of sociology at the University of Georgia is known for his pioneering theory of migration, which is known as the push and pull theory (https://www.epgp.inflibnet.ac.in/ Accessed: 15/7/2022).

Lee developed a "general schema into which a variety of

spatial movements can be placed" (Lee, 1966): He divided the forces exerting an influence on migrant perceptions into "push" and "pull" factors. The former are "negative" factors tending to force migrants to leave origin areas, while the latter are "positive" factors attracting migrants to destination areas in the expectations of improving their lot. Lee hypothesized that factors associated with origin area conditions would be more important than those associated with destination areas. These factors associated with the area of origin and of destination are governed by personal factors "which affect individual thresholds and facilitate or retard migration" (Lee, 1966, p. 51). Lee's approach is reflected in a broad range of studies, particularly sociological studies dealing with migrant selectivity. It is actually not a theory but a conceptual framework for classifying factors in migration decisions (Bilsborrow, R., Oberai, A and Standing. G. 1984, P 15).

Lee, E. in his a theory of migration divides the factors that determine the decision to migrate and the process of migration into four categories:

Factors associated with the area of origin:

There are many factors which motivate people to leave their place of origin to outside area. They are push factors.

Factors associated with the area of destination:

There are very attractive forces at the area of destination to which the proportion of "selectivity" migrants is high. According to lee, such forces are found in metropolitan areas of a country. Pull factors are present in such areas.

Intervening obstacles:

There are intervening obstacles like distance and transportation which increase migrant selectivity of the area of destination. These obstacles have been lessened in modern times with technological advances. Lee also refers to cost of movement, ethnic barriers and personal factors as intervening obstacles.

Personal factors:

Lastly, it is the personal factors on which the decision to migrate from the place of origin to the place of destination depends. In fact, it is an individual's perception of the 'pull and push factors' which influence actual migration. He categorizes these forces into "pluses" and "minuses" respectively. In other words, pluses are pull factors and minuses are push factors. In between them are "zero" which balance the competing forces.

These are explained in Figure 1, where the first circle represents the area of origin and the second circle the area of destination. The sign pluses represent the forces that attract people to place (pull factors) and that of minuses represents the force that push people from the area. Zeros represent the indifference of the people towards migration. In between these forces are the intervening obstacles.

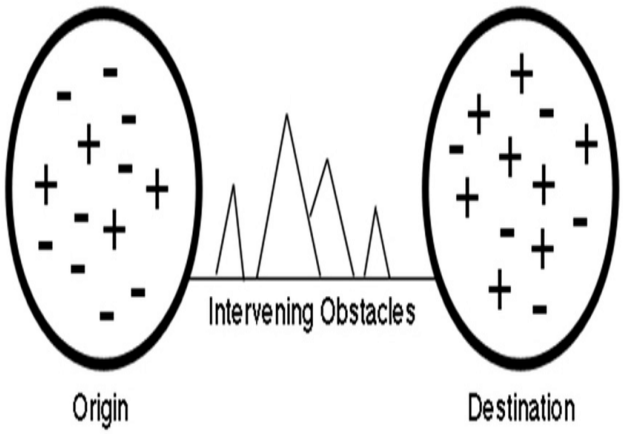

Figure 1: Lee's push and pull theory

Source: https://www.researchgate.net/ Accessed: 10/7/2022

According to Lee, it is the personal factors such as age, sex, race and education which along with the pull-push factors and intervening obstacles that determine migration. Further, there are sequential migrants such as children and wives of migrants who

have little role in the decision to migrate (https://www.sociology-discussion.com/ (Accessed: 10/7/2022).

Demographic data analysis

The data analysis below including: gender, age, and educational level of the migrants, marital status, and occupation.

Gender of migrants

Table 1: Gender

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	149	58.2	58.2	58.2
	Female	107	41.8	41.8	100.0
	Total	256	100.0	100.0	

Source: author through SPSS for windows.

As shown in Table 1, most of the migrants (58.2%) were male and (41.8%) were female. This finding indicates that men are more likely than women to migrate.

Age of migrants

Table 2: Age

Age		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-24	35	13.7	13.7	13.7
	25-29	41	16.0	16.0	29.7
	30-34	51	19.9	19.9	49.6
	35-39	40	15.6	15.6	65.2
	40-44	34	13.3	13.3	78.5
	45-49	20	7.8	7.8	86.3
	50-54	17	6.6	6.6	93.0
	55-59	13	5.1	5.1	98.0
	60+	5	2.0	2.0	100.0
	Total	256	100.0	100.0	

Source: author through SPSS for windows.

As shown in Table 2, the age of the migrants is divided into (9) age groups; most of the migrants were within age groups (20-24) – (35-39), this indicates that young people are more likely to migrate and migration decreases with age.

Educational level of migrants

Table 3: Educational level

	Educational level	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Illiterate	25	9.8	9.8	9.8
	Khalwa	36	14.1	14.1	23.8
	Basic	70	27.3	27.3	51.2
	Secondary	82	32.0	32.0	83.2
	University	30	11.7	11.7	94.9
	Postgraduate	13	5.1	5.1	100.0
	Total	256	100.0	100.0	

Source: author through SPSS for windows

As shown in Table 3, most of the migrants have Secondary education, where the propensity to migrate increases with education.

Marital status of migrants

Table 4: Marital status

	Marital status	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	89	34.8	34.8	34.8
	Married	151	59.0	59.0	93.8
	Divorced	12	4.7	4.7	98.4
	Widowed	4	1.6	1.6	100.0
	Total	256	100.0	100.0	

Source: author through SPSS for windows.

As shown in Table 4, most of the migrants (59.0%) were married.

Type of occupation of migrants

Table 5: Type of occupation

	Type of occupation	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employee	31	12.1	12.1	12.1
	Trader	77	30.1	30.1	42.2
	Worker	128	50.0	50.0	92.2
	Unemployed	20	7.8	7.8	100.0
	Total	256	100.0	100.0	

Source: author through SPSS for windows.

As shown in Table 5, (50.0%) of the migrants were workers, and (92.2) have an occupation, while 7.8% were unemployed, this indicates to women's participation with men in work.

The relationships between rural-urban migration and use of public (health services, education, and transportation) in Umm Bedda locality

Crosstabulation below used to shows the relationship between two categorical variables by recording the frequency of observations "counts and percentages of observations". While Chi square test used to test if a significant relationship between variables at 0.05 significant level.

Hypotheses: The null hypothesis and alternative hypothesis of the Chi-square test of independence:

: There is no statistically significant relationship.

: There is statistically significant relationship.

Use of health services

Table 6: Respondents classification and Use of health services

Respondents classification * Use

		Use of health services					
			Public (hospital and health centers)	Organiza-tion-private health center	Private hospital	Herbal medicine	Total
		Count	60	26	34	9	129
	Residents	% within Use of health services	29.7%	%27.4	68.0%	%23.7	33.5%
Respondents classification		Count	142	69	16	29	256
	Migrants	% within Use of health services	70.3%	%72.6	%32.0	%76.3	66.5%
Total		Count	202	95	50	38	385
	% within Use of health services	%100.0	%100.0	95	%100.0	100.0%	

Source: author through SPSS for windows.

As shown in the finding of crosstabulation Table, (70.3%) of the migrants receiving health services in public "hospital and centers", compared with (29.7%) of the residents receiving health services in public "hospital and centers".

Table 7: Chi-square tests

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.265[a]	3	.000
Likelihood Ratio	29.472	3	.000
Linear-by-Linear Association	3.510	1	.061
N of Valid Cases	385		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12.73.

Chi Square statistic, 31.265

"P. value = 0.000, less than 0.05", the null hypothesis is rejected.

As shown in the finding of crosstabulation in Table 6 and Chi square test in Table 7, There is a statistically significant relationship between Rural-urban migration and the use of public health services in Umm Bedda locality.

Enrollment of students in education

Table 8: Respondents classification and enrollment of students in education

Source: author through SPSS for windows.

As shown in the finding of crosstabulation in Table 8, 74.0% of the migrants said that their sons enrollment in public schools in the locality, compared with (26.0%) of the residents said that their sons enrollment in public schools in the locality.

Table 9: Chi-square tests

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.045a	3	.000
Likelihood Ratio	20.060	3	.000
Linear-by-Linear Association	1.124	1	.289
N of Valid Cases	385		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.70.

Chi Square statistic, 21.045

"P. value = 0.000, less than 0.05", the null hypothesis is rejected.

As shown in the finding of crosstabulation in Table 8 and Chi square test in Table 9, there is a statistically significant relationship between Rural-urban migration and enrollment of students in public education in Ummbeda locality.

Use of transportation

Table 10: Respondents classification and use of transportation

Public transportation Own car			Use of transportation					Total
			Walking	Rickshaws	Cart			
Respondents classification	Resi-dents	Count	42	15	36	32	4	129
		% within Use of trans-porta-tion	31.8%	34.1%	31.0%	55.2%	11.4%	33.5%
	Mi-grants	Count	90	29	80	26	31	256
% within Use of transportation 68.2%				65.9%	69.0%	44.8%	88.6%	66.5%
Total		Count	132	44	116	58	35	385
		% within Use of trans-porta-tion	100.0%	100.0%	100.0%	100.0%	100.0%	

Source: author through SPSS for windows.

As shown in the finding of crosstabulation in Table 10, most of the migrants (68.2%) use public transportation, compared with (31.8%) of the residents use public transportation.

Table 11: Chi-square tests

Chi-Square Tests	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.371a	4	.000
Likelihood Ratio	21.086	4	.000
Linear-by-Linear Association	.011	1	.916
N of Valid Cases	385		

a. 0 cells (.0%) have expected count less than 5. The mini-mum expected count is 11.73.

Chi Square statistic, 20.371

"P. value = 0.000, less than 0.05", the null hypothesis is rejected.

As shown in the finding of crosstabulation in Table 10 and Chi square test in Table 11:
– There is statistically significant relationship between Rural-urban migration and use of public transportation in Umm Bedda locality.

The results

The study reached the following:

Most of the migrants are male; this finding indicates that men are more likely than women to migrate. And most of the migrants were within age groups (20-24) – (35-39), this indicates that young people are more likely to migrate and migration decreases with age. Most of the migrants have secondary education, where the propensity to migrate increases with education. And most of the migrants were married, and (50.0%) of the migrants were workers.

And there is a relationship between Rural-urban migration and increases pressure on use of public (health services, Enrollment in education, and use of transportation) in Umm Bedda locality.

Conclusions and recommendations

In conclusions, the study recommended the following:

1. Construction and implementing of public projects (hospitals, health centers, schools, and transportation) in the locality to meet the needs of the existing population.
2. Reducing the increase in migration from rural to urban by developing strategies and implementing projects of (hospitals, health centers, schools, and transportation) in rural areas.

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