Reverse migration under the devolved governance system in Kenya: Subsequent implications for income and occupation

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Abstract

Reverse migration is on a steady increase under the devolved system of governance in Kenya. The situation could be attributed to an array of triggers such as; the ongoing rural development programmes, backdrop of non-availability of livelihood and job opportunities in the city. Upon return to the rural areas, it could be perceived that the returnees encounter some socio-economic shocks, which tend to impact their income and career. To ascertain the impact, we use a binomial probit model to estimate the probability of income and occupational change. We postulate that harsh encounters in the city inspire those with savings, newly acquired entrepreneurial acumen, and land to migrate out of the city and exploit rural job opportunities. Study participants were people that had moved from Nairobi to their rural counties. Using snowball sample selection, we obtained 49 adult participants mean age = 41years, SD = 15.95, female 48%, employed 68%, married 59%, and 29% educated up to university Results found that significance for career and income changes varies across participants socio-economics status or demographics. For instance, those aged 35–59 years (r^2 = 0.399, ME = 0.421); land size greater than 2.5 acres (r^2 = 0.507, ME = 0.473) and postgraduate degree (r^2 = 0.513, ME = 0.591) had significant income increment. For 60 + years (r^2=-0.369, ME=-0.312), primary-leavers (r^2=-0.459, ME=-0.226) had significant decrease in income upon return. Conversely, females (r^2 = 0.326, ME = 0.348), and migrants aged 60 + years (r^2 = R^2 = 0.797, ME = 0.651) were more prone to career change; all at .01 significance level. Attributes such as marital status, age 25-34yrs, secondary or college-level education are weak income or career change determinants. We conclude that rural land size, more than 2.5acres was a significant incentive for reverse migration, since the likelihood of shifting to agriculture and establishing a robust livelihood source and income after assigning other dummy variables, and setting the baseline at two years was evident across groups.

1. Introduction

The migration of people from rural areas into Nairobi city is a common phenomenon. It is easy to find youngsters as old as 18 moving to the cities upon finishing high school. Most of the youths are inspired by better-paying jobs and living standards in those areas. However, the desire to stay in the city depends on their long-term encounters immediately after moving into the cities. Youngsters whose income improves significantly are likely to lead better lives, hence are willing to wait for more extended periods. That said, youths whose salaries are significantly low cannot afford necessities such as decent housing and healthy food. Such individuals have a lower incentive to stay in the city due to their inability to sustain city life and live their dreams. It is imperative for some of the urban migrants to return to the rural or less urbanised areas with a lower cost of living to take on agriculture and other rural economic activities. Studies such as [1, 2] claim that industrialists prefer setting up their firms in highly populated areas to benefit from a ready market for their products and low distribution costs. As industries grow, so does the swarming of people into those areas.. Conversely, rural-urban migration can start with establishing industries in certain areas and result in rural-urban migration as people flock to those areas to look for jobs [3, 4]. Then again, regardless of what comes first, the population growth in industrialised areas encourages investment in services such as schools and hospitals. The government and private businesspeople view such ventures as necessities and economic opportunities, respectively.

The rural-urban influx of low-income population is responsible for an upsurge in informal settlement in Nairobi city. Slums in Kenya, such as Korogocho, Kibra, Mukuru Kwa Njenga, and Mathare, have sprawled within the city. Scholars such as [5, 6] have argued that those who opt to live in such setups compromise their housing way to sustain the costly city life. The informal settlements have their challenges, including the government's inability to supply basics such as water and amenities, especially critical infrastructure [7]. Since the houses are constructed using inferior and highly inflammable materials, the slum residents often suffer from catastrophes such as disease and inferno outbreaks, which destroy property and even claim lives [7]. Poorly-developed road network hinders the city authorities' from countering such disasters, leading to enormous losses during disasters. While staying in the city appears more meaningful to some urban dwellers, some rural-urban migrants, regardless of economic status, decide to return to the rural or less urbanised areas to enjoy a lower cost of living or take on the available economic activities. In this study, there is a detailed look into the reasons for reverse migration, particularly from Nairobi city to rural or less urbanised places, emphasizing the backdrop of opportunities or expectations across various demographic profiles. The research hypotheses that the city's harsh encounters inspire those with savings, newly acquired entrepreneurial acumen, and skills to migrate out of the city and exploit rural economic opportunities. It also postulates that some people go to rural areas to enjoy lower living costs and engage in their most preferred careers.

1.2. Problem Statement

Migration from rural areas is viewed as an opportunity to eradicate poverty among the rural poor. Typically, most rural economies in Kenya tend to be dominated by agriculture, but most people perceive it as a less-lucrative job. People opt to move to towns with expectations of better-paying jobs and improved lifestyle [10, 12]. However, while in urban areas, people encounter new challenges such as the high cost of living, overcrowding, joblessness, and health issues, which might be unbearable [9]. Kenyans, especially the poor rural youngsters, are aware of the challenges, but their migration persists. Some prolong their stay in these urban centres despite their challenges, while those who are less resilient opt to return home (reverse migration). The migration is also possible for those who do not encounter city challenges but find meaning in staying in rural areas rather than urban ones. As stated earlier, in Kenya, the urban people's decisions to return to the rural areas are shaped by encounters and subsequent city life perceptions. The factors that inspire people to migrate to cities and back home are known. However, little or no empirical study reveals what inspires people to go back to the rural areas under the devolved policy and how the decision-making varies across demographic profiles in the Kenyan setup. To explore this, the present study employs empirical methods to investigate urban-rural migration incentives using income and occupational changes as impetus. The study objectives are twofold: 1) to estimate the probability of income and career change upon return to the rural areas; 2) to establish critical determinants of income and career change upon migration to the rural area. The study is limited on key factors after the implementation of the devolution policy in Kenya [11].

1.3. The Devolution Policy of Kenya

Kenya's devolved governance system under the County government Act of 2012 was formulated to even out the processes of social and economic development and provide proximate, easily-accessible public services in the country [11, 30]. As a result, a steady, significant number of Kenyans, including those having good life standards, moved out of cities' rural areas to take up the opportunities. In 2012, a harmonisation of human resource policies improved workers' welfare such as terms of employment and salaries, regardless of residence, thereby making the rural stay more advantageous to city life among civil service employees. The influence of the devolved system of government towards urban-rural migration is critical. After its implementation, the ex-urban migration has risen from 15 percent to 31 per cent by 2019. Also, there is a triple digit projection that by 2035, urbanites reallocating to their rural places could surge up to 50 percent [20, 21].

1.4. Theoretical Perspective of labour Migration

Poverty and search for better opportunities inspire either rural-urban migration or reverse migration. Lewis in his dual-sector theory claims that the capitalist manufacturing sector is defined by higher wage rates, better marginal productivity, and a demand for more labour force as compared to the rural opportunities that have labour-intensive production processes and low wage rates[15]. In Kenya such a notion can be perceived that people move from rural to urban areas to search for job opportunities and better living standards. Though, the correlation between urbanisation and poverty in developing countries is indistinct. Study by Cali and Menon on the effects of urbanisation established positive externalities, especially poverty reduction at the peripheries of India's rapidly growing districts [12]. Other studies revealed that rural-urban migration is primarily economic and has varying impacts on developing regions [13, 14]. For the countryside, rural-urban migration makes food production lucrative as food demand escalates in the urban areas. The farmers living adjacent to urban areas benefit most because of a ready market for their commodities. The positive spill-over effect signifies increases in employment and productivity of the rural setups associated with the labour influx of people in cities. That said, rapid urbanisation depletes the agricultural land that is used for crop growing and animal rearing. Also, food commodity prices rise with time, leading to reduced access to healthy food among the less wealthy populations. On the positive side, infrastructural facilities such as transport, health facilities, and education are more developed in cities than in rural areas because establishing them tends to be more economical.

The implication of urban-rural migration in terms of income and career changes vary. From theoretical observations of the neoclassical and Lewis subsistence agricultural sector theories, there is convincing evidence that the returned migrants who decide to change career and venture in rural agricultural opportunities can be exposed to wage reduction and abundance of labour given the low productivity and labour-intensive production process [15, 16, 17]. However, the opportunity could still serve a significant employment opportunity for the returnees if the supply of labour gets exhausted then triggers a drop in wage rate, which pushes more labour into agriculture. Contrary to Lewis and the neoclassical doctrines, and the thoughts developed by the concept of Marxist theory, urban-rural migration functions in a selective manner [18] Casual and the middle workers can be driven out of urban areas only for them to create new economic development activities in the rural areas that are not only limited to agribusiness, but also entrepreneurship, and public work sectors. This resonates with a study, which found that increased urban-

rural migration was associated with economic growth in many rural areas in the U.S. in and early 1990s, contrary to historical flows [19]. Enhanced transportation systems, telecommunication technologies, and incentives of rural amenities have drawn urbanites to rural areas. Some of the returnees are well situated psychologically to make informed migration decisions. Also, incentivised with the ongoing rural socio-economic advancements spearheaded by the devolved system of governance in Kenya.

2. Methods

2.1. Study Design and Sample

Data for this study were obtained in October 2019 by administering a survey and questionnaire. The recruited respondents were sent an electronic link via the Open-Data Kit (ODK). A section of respondents with information technology difficulties were interviewed via phone-call conversation; all after securing an informed consent. To eliminate sample bias, the study adopted a twofold eligibility criteria; 1) individuals that had migrated to rural counties except Nairobi, Kisumu, and Mombasa, with a baseline of two years after migration; 2) Any person aged between 25-70 years. To obtain an appropriate sample, a systematic sample selection approach was used. First to ensure easy sample selection, sample frames were reduced from 44 to 6 rural counties using a purposive sampling procedure. The selected 6 counties recorded the uppermost intraregional migration flow, with an estimated 199547 returned migrants to these counties [29]. Thereafter, a sample size of n=49 was determined using Fisher formula [22]. Also, owing to the heterogeneity of the target population a design effect of 2.23 was used as illustrated below:

$$n = Z^2 pqD/d^2$$

Where:

n = the desired sample size;

Z = the standard normal deviation, (1.95) which corresponds to the 95% confidence interval

P = the proportion of the target population estimated to have a particular characteristic (p=estimated, 0.12 was used);

$Q = 1 - P = 0.5$; D = the design effect, usually 2.23

d = the degree of accuracy, which is 0.05;

The formula determined the sample of n=49, which was later stratified into six counties namely; Kilifi, Uasin Gishu, Murang'a, Nyamira, and Siaya each drawing 8 participants to the study. Whereas in Bungoma County 9 participants were recruited. Afterwards, a snowball sampling technique was used to recruit new study participants that returned migrants until the required threshold was achieved [23]. The Online survey and questionnaire captured respondent's socio-economic and demographic attributes, income estimates, career as well, before and after they migrated.

2.2. Empirical Analysis

The study estimated the probability of change in income and career when individuals return to rural areas of Kenya. Socioeconomic and demographic attributes of urban-migrants are used to establish which one of them are significant determinants of income and career change upon return. Owing to the dichotomous aspect of the migrants, a quantitative response economic model is appropriate. The model correlates the probability of the situation to several independent variables. Further, the model is essential to establish migrants' attributes that influence their decision to move from urban to rural areas. To obtain a comprehensive assessment for the decision to migrate to rural Kenya and its impact on income (yes or no) as well as change in career (yes or no), a probit model was applied. To establish associations between nominal explanatory variables, Chi-square measure of association was used.

Probit regression model was applied to estimate the probability of career change on the binary dependent variables. The model basically estimates the cumulative normal probability of the observations with the binary outcome variable (Y_i) [24]. The statistical significance of each socioeconomic and demographic independent variables estimates reveals the extent of influence the probability of income and occupational change. The model assumed income change to be *1* and no change in income to be *0*. Conversely, change in career as *1* and no change in career as *0*. The probability P_i of change in career and income or not can be expressed as in the formula below, where represents the cumulative distribution of a standard normal random variable [24, 25].

$$P_i = prob \ [Y_i = 1 \mid X] = \int_{\infty}^{\dot{x}_i \beta} (2\pi)^{-1/2} \ exp \left(\frac{t^2}{2}\right) dt$$

$$= \Phi \left(x_i \beta\right)$$

That said, Φ denotes a random residual with a normal distribution. Consequently, the real individual resolves to change career after moving to the rural area as well as having a change in income (Y_i) is such that the vector X_i comprises population attributes. Hence the marginal effect related to a continuous predictor variable such as age, gender, land size, education, as well as marital status on the probability P(Y_i) = 1 | X), donating the outcome variable constant, can be achieved as follows [24, 25].

$$\frac{\partial P(y_i = 1|x_i)}{\partial x_i} = \frac{\partial E(y_i|x_i)}{\partial x_i} = \varphi(x_i \beta)\beta$$

Where Φ donates the probability density function of a standard normal variable. Notably, the marginal effect on dummy variables was estimated exceptionally from continuous ones. The discrete change in the predicted probabilities encompasses a substitute to the marginal effect when examining the impact of a dummy variable [24, 25], as expressed below:

$$\Delta = \Phi \left(x\beta, d = 1\right) - \Phi \left(x, \beta \ d = 0\right)$$

The estimated coefficients and marginal effects show the way the outcome variables such as family size, family income, and land size owned in rural areas, marital status, age, gender, and education influence the probability of magnitude of change in career and income. For instance, if employment status (dummy variable) changes from zero to one when returning to the rural area, the probability of change in income increases. STATA13 was used to calculate the marginal effects for each explanatory variable for the observation before and after migration while keeping the dependent variable constant at their average values. Excel 2013 and SPSS20 were helpful for descriptive statistics.

Studies such as [25, 26, 27, 28] found statistical significant results for gender, age, marital status, education level, family size, and the relationship to household head as well as employment status as explanatory variables to estimate their marginal effect on outcome variables using probit model. Further, using the Binomial probit model, the study assumes that these migrant's socioeconomic and demographic attributes could trigger a statistically significant result. Table 3-1 presents descriptives for the variables.

3. Results

3.1. Descriptive results

Table 3.1 shows the summary statistics for population, household attributes, and occupational profile based on migration status.

Table 3.1 – Descriptive Statistics for Socio-economic and Demographic attributes

	%/Average		SD
	Male	Female	
Individual Attribute			
Gender	52%	36.4%	NS
Married	58%	48%	NS
Education level		59%	
Primary	93%	90%	***
Secondary	69%	65%	NS
College	51%	43%	***
University	44%	36%	NS
Household Relationship			
Household head	60%	43%	NS
Spouse	11%	69%	NS
Child	70%	76%	NS
Job Status (Before Migration)			
Employed	71%	59%	NS
Unemployed	20%	29%	NS
Occupational Choices			
Self-employment	38%	67%	***
Farmstead labour	13%	51%	***
Education/research	71%	49%	NS
Manufacturing	67%	43%	NS
Civil Service	54%	36%	NS
Cottage Industry	47%	33%	NS
Sample size (n=49)	*25*	*24*	

On average, male 71% and female 59% confirmed that they had jobs before reverse migration. Unemployment rate for male was at 20% while females were at 29%. More females than males were working in the cottage industry, personal businesses (entrepreneurship) and farms after migration. By contrast, the males surpassed the females in industries such as civil service, education and research as well as manufacturing as presented in Table 3-1.

Table 3-2: Respondents Household and Income

	Mean value	Min	Max	SD
Household attributes				
Age	42.2	25	68	15.95
Family size	3.00	1.00	7.00	2.051
male dependants	3.00	1.00	5.00	1.269
female dependants	2.00	1.00	4.00	0.991
the aged members (70+ years)	1.00	1.00	2.00	0.471
Land per individual in rural area (Acre)	0.99	0.25	5.00	***
Family income				
Monthly Income before migration	37,400	15,500	50,600	18972.62
Monthly income after Migration	39,750	17,100	53,100	21391.51
Sample size	49	49		

On average, the respondent's household size was 3 with 5 maximum members. 59% of families had between one and two elderly people aged 70 years and above. The average size of land owned was 0.99acres. Before migration, the average family income ranged between 17100 and 3 100. After migration, the average income of the respondents ranged between 15500 and 50600. Intraregional migration rate in Kenya for the year 2012, Nyamira recorded the highest rates of immigration while Kisumu and Nyandarua had the lowest. More females than males migrated into these two counties. In Murang'a, there migration rates of males and females was almost similar. The counties that had more males than females migrating were Uasin Gishu, Nakuru and Narok [29].

The percentage of those involved in the agricultural sector increased from 5% to 19%.In education and research, the percentage dropped from 20% to 15%. The number of those in the civil service rose from 19% to 36% and represents the highest change. The percentage of people working in the cottage industry reduced from 20% to about 6%. The largest decline was experienced in the manufacturing sector. Those in the sector fell from 30% to about 3%. That said, the number of those working as small business owners rise from 15% to 30%. The average incomes for those working in the agricultural sector rose from Ksh 39,000 to Ksh 49,000. Contrariwise, the employees working in the educational sector experienced a growth of income from Ksh39000 to Ksh40000. For those working in the civil service, the incomes rose from slightly lower to slightly higher than 50,000. The incomes for those working in the cottage industry increased from 19000 to 20000. The workers in the manufacturing sector experienced a growth in the incomes from 40000 to 50000. A similar income growth rate was experienced among those that were self-employed. In table 3.2, gains and losses of labor across sectors are demonstrated.

3.2 Empirical Results

3.2.1 Key determinants for Income and Occupational Change

The study tested the association between return migrants' demographic and socioeconomic characteristics and income change as presented in table 3-3 cross-tabulation.

Table 3-3: Demographic Socio-economic attributes and Income change

Attribute	Group	Mean monthly Income(Ksh)		Difference	Gamma	Phi (Φ)
		Before return	After return			
Gender	Male	37469	45174	7705	.148	.766
	Female	39900	44280	4380		
Age	25-34 Years	30475	40080	9605	.307	3.563
	35-44 Years	45600	57000	11400**		
	45-59 years	63000	69000	6000		
	60 and Above	54600	37600	-17000**		
Education	Postgraduate	70000	98000	28000**	-.074	1.919
	primary	56000	44000	-12000**		
	undergraduate	29083	35667	6584		
	Some College	39364	45364	6000		
	secondary	39000	44118	5118		
Relationship	Relative	33571	39700	6129	-.109	1.436
	Spouse	43088	48800	5712		
	Family head	29667	39000	9333		
	Son/daughter	38875	43154	4279		
Land size	> 2.5acres	55000	74000	19000**	0.4785	1.518
	0.5acre	38500	43000	4500		
	0.25acre	67000	60000	-7000		

Note: The asterisk indicates a statistically significant change at the p<.01 level

Migrants with more 2.5 acres of land (mean= Ksh19, 000, Gamma=.4785, Φ=1.518). Migrants between 34-44years (mean=Ksh11400, Gamma=.307, Φ=3.563) have significant income raise as .01 significance level. Though, returnees who were 60+ years, less than 0.25acres of land, and primary leavers had a significant income reduction (Mean Ksh -17,00, -12,000 & -7,000) respectively. Possible loss of source of income in the city either retirement or layoff could have forced them to relocate to rural areas. Land is the most essential

means of production. As such, it largely determined income change as observed from the results. The association and difference among groups were significant at chi-square p<.01 level. Table 3-4 cross-tabulation presents career change based on multiple socio-economic attributes.

Table 3-4: Demographic Socio-economic attributes and career change

Characteristic	Group	Change in career (%)		Phi	Cramer's V
		No	Yes	(Φ)	
Gender	female	29	71**	1.016	.718
	male	67	33		
Age	25-34 Years	71	50.	1.324	.765
	35-44 Years	0.0	14		
	45-59 years	14	17		
	60 and Above	17	83**		
Education	postgraduate	0.0	4	1.149	.663
	primary	14	0.0		
	secondary	0.0	21		
	vocational	28	32		
	undergraduate	57	28		

Note: The asterisk indicates a statistically significant difference at the p<.01 level

It is observed that females in contrast with males were more exposed to career change (71% and 33% respectively, Φ=1.016, Cramer's V= .718). However, the results indicated that the returnee's education was not a significant determiner of career change. Males and people aged between 25-34 years were the least likely to change careers based on our results.

3.2.2.   Urban-rural migration impacts on migrants' income

Parameter estimates and maximum likelihood estimates across the measured independent variables as presented in Table 3-5.

Table 3-5: Probit Model Bivariate estimates for income change on returned migrants

Variables (Determinants)	Coefficients	Marginal effect	*Std Error*
-individual attributes			
Female	0.087	-0.123	*0.057*
Male	0.096	0.093	*0.089*
25-34years	0.178	0.041	0.097
35-59years	0.399**	0. 421	0.213
60 and Above	-0.369**	-0.312	0.224
-Education			
primary	-0.459**	-0.226	0.327
secondary	0.197	0.083	0.019
college	0.241	0.135	0.184
Undergraduate degree	0.232	0.234	0.195
postgraduate degree	0.513**	0.591	0.333
-Employment			
self-employed/business	0.068	0.102	0.034
employed in government	0.372**	0.220	0.138
part time Job (Yes=1)	0.083	o.105	0.069
experience more than 7 years	0.161	0.161	0.031
experience less than 2years	0.097	0.217	0.044
self-employed/business	0.068	0.102	0.034
employed in government	0.372**	0.220	0.138
-Land Size in the Rural Area			
Less than 2 acres	0.274	0.170	0.191
Above 2.5 acres	0.507**	0.473	0.474
Sample size	49		
Wald Chi-square	3.891		
Wald test of ρ=0.00	0.014		
Log pseudolikelihood	9.701		

Note: The asterisk indicates a statistically significant difference at the $p<.01$ level

Table 3.5 reveals the coefficients of the income change model and their significance. The results reveal a significant change in income for returning migrants across different socio-economic and demographic features. Age 35-59years (R^2=0.399, p<.001) and postgraduate degree (R^2=0.513, p<.001) land above 2.5acres (R^2=0.507, p<.001), and returnees employed in government (R^2=0.372, p<.001) predicted a significant and positive change in returnee's income. By contrast, returnees above 60 years of age (R^2=-0.369, p<.001), primary school leavers (R^2=-0.459, p<.001) significantly predicted a negative monthly income change. The Wald chi-square value 3.891 and test of p-value 0.014 imply that the null hypothesis of significant income change across models is rejected at at p≥0.01 levels. For marginal effect, when all the other socio-economic predictor variables are held constant varies; those who had more than 2.5acres of land obtained a marginal income rise of 47.3%, part-time jobs, and the self-employed, the marginal income rise was 10.5% and 10.2% respectively. Among returnees with more than 7 years of experience, the marginal probability of income rise was 16.1%. Besides, returnees that left the city to assume government-related jobs in the rural areas were at 22% likelihood of income increment. Individuals aged 35-59years experienced a 42.1% marginal increase in income after migration. Females were susceptible to marginal decline of 12.3%.

3.2.3. Urban-rural migration implications on migrants' career

Maximum likelihood estimates across the measured predictor variables. The results establish a significant likelihood for occupational change upon reallocating to the rural area for migrants aged 60 year and above, primary school, and farmstead labourers.

Table 3-6: Probit Model Bivariate estimates of migrant and career change

Variables (Determinants)	Coefficients	Marginal effect	Std Error
-individual attributes			
Female	0.326**	0.310	0.241
Male	0.219	0.119	0.107
25-34years	0.113	0.108	o.068
35-59years	0.256	0.193	0.143
60 and Above	0.797**	0.651	0.688
- Education			
education (primary)	0.348**	0.312	o.068
secondary	0.268	0.168	0.019
college	0.207	0.151	0.184
Undergraduate degree	0.113	0.130	0.195
postgraduate degree	0.092	0.294	0.333
- Marital status			
separated/divorced=3	0.129	0.137	0.067
married = 2	0.288	0.069	0.187
Employment			
Self-employed/business	0. 269	o. 096	0.934
employed in government	0.196	0. 125	0.125
experience more than 7years	0.082	0.167	0.023
experience less than 2 years	0. 416**	o. 520	0.391
-Land size in rural area			
Less than 2acres	0.203	0.216	0.183
Above 2.5 acres	0.517**	0.527	0.479
Sample size	49		
Wald Chi-square	3.891		
Wald test of ρ=0.00	0.0314		
Log pseudolikelihood	7.362		

Note: The asterisk indicates a statistically significant difference at the p<.01 level

Based on these results, female gender (R^2 =0.326), primary level of education (R^2 =0.348), land size above 2.5acres in the rural areas (R^2 =0.517) and working experience less than 2 years (R^2 =0.416). Also migrants aged 60 years and above (R^2=0.797) were significant predictors of occupational change. Conversely, marital status (R^2 =0.129 divorced, R^2 =-0.288 married), degree holders (R^2=0.113 and 0.092 respectively), experience more than 7years (R^2=0.082) were weak determinants towards occupational change. Returnees with less than 2 years of working experience (R^2 =0.269). It is essential to note that having returnees that were either employed in government or those with more than 7years of experience were reluctant to occupational change (R^2=0.196, R^2=0.082) respectively. The elderly migrants could have reached the decision to return back home for retirement. Those with low educational attainment, might have been susceptible to unforeseeable layoff, hence decided to return to their rural homes. The marginal effect of migration reveals that returnees of above 60+years had 65.1%. Also, the size of land owned by the migrants above 2.5 acres in the rural area predicted a chance of 52.7% career change after migration. Migrants with less than 2year of working experience and returnees of female gender (52.0% and 34.8% respectively). Land size in rural areas was a prime factor associated with occupational change since the likelihood of joining agriculture after assigning dummy variables, and setting the baseline at two years, especially for returnees with more than 2.5acres of land size was noteworthy to change career at 52.5%. Wald test of p-value =0.00314. The null hypothesis for occupational change across models is rejected at p≥0.01.

4. Discussion

This study focused on the urban-rural migration in Kenya and its implications for income and career change. Along with other research techniques, we exerted a probit model to estimate the marginal effects on income and career change as well as key contributing factors to these changes. Study participants comprised 49 adults, mean age=41years, SD=15.95, female 48%, employed 68%, married 59%, and university 29%. Notably, 60% of the selected males were household heads, compared to 43% of the females. In terms of family composition in the rural area, the male dependents were between three and five while the females were between two and four. This can be viewed as a typical depiction of the Kenyan family structure; children are more likely to stay with the father's family when both parents are alive or dead, and with the mother when the parents are divorced or separated. The household composition also illuminates on Kenyan familial expectations. With the increasing popularity of family planning programs in Kenya, more parents have embarked on bearing the number of children that they can sustain; wealthier people tend to bear more children than their less-wealthy counterparts because they have a higher capability of raising many children comfortably.

Results found that 31% of the male migrants were employed before migration compared to 12% of females, which could be attributed to gender labour market disparities and economic investment patterns in Kenya urban settings. In terms of specialisation the study reveals that a majority of the males were working in the civil service, education and research while females were largely working in the cottage industry. For the 76% of study participants, household income ranged between Ksh15, 500 and Ksh50, 600. Before migration, the incomes ranged between Ksh 17, 100 and Ksh 53, 100. This demonstrates that employed people have a lower likelihood of returning to the rural homes but most importantly, more employed males are likely to

migrate home than their female counterparts. A higher average income before migration than after the migration also suggests that the average earnings might not be the key motivation to move away from cities.

The research established determinants to income changes after return migration. Those working as civil servants and aged between 35-50 years experienced a significant increase in income after the migration. Previously, their incomes were slightly lower than Ksh 45,000. After migration, the income was about 51000. Migrants in the manufacturing sector, the income before migration was Ksh 40000. This income rose to about Ksh 48, 000 after migration. A similar trend was experienced among people who were small business owners. Ordinarily, people are likely to migrate to areas where there are increasingly lucrative economic opportunities and more income. Civil servants would relocate to their rural areas to assume new roles after job promotions. However, in this research, there is a decline in the average income of some of the respondents, which indicates the presence of other incentives for return migration other than the collectively accepted economic opportunities.

Further, the research tested the probability of income increase after going back home based on the economic and demographic attributes. From table 3-5, the probability of people aged above 40 experiencing an increase in income was 42.1%. The corresponding probability for postgraduate degree holder's and possessing more than 2.5 acres of land was 59.1% and 47.3% respectively. Gender (being female) had a negative impact of 12.3% on the possibility of experiencing increase in income after going back home. The probability of earning more for the migrants who were in self-employment before returning home was 10.2% while that for those who were initially working in the civil service was 22%. Migrants who left the city to pick up public service jobs in the rural areas, had an average of 22% probability of increase in income. The Wald chi-square value and maximum likelihood estimates across the measured independent variables in table 3.5 reveal the probabilities of income changes are statistically significant at $\alpha=0.01$ and $\alpha=0.005$, which implies a rejection of the null hypothesis (the changes in income after return migration is significant, $P<.01$). The research attributes the high impact of education (postgraduate degree) and having more than 2.5 acres of land is attributed to gain of jobs in rural areas and engaging in productive agriculture respectively. That said, the negative impact of gender can be associated with the patriarchal nature of Kenyan societies which limits female's access to resources such as land and limitations on the types of jobs that women can do.

The second objective was to determine career change after return from cities. As indicated in table 3.6 results, the proportion of respondents involved in agriculture prior to migration was about 5%, and this rose to about 19% after migration. Those employed in education and research were about 20% before migration, and the percentage dropped to 14% after migration. The members working as civil servants before migration were 18%. After the migration, the percentage shot up to about 36%. The research also indicates that before migration, the proportion of the members in the cottage industry was 20% and this dropped to about 5% after going back home. In addition, about 30% of the respondents claimed to be workers of the manufacturing sector before migration. The percentage dropped to less than 5% after the migration. Those who were in small-scale business before migration were approximately 15%. The percentage rose to 25% after the migration. Thus, it is evident that return migration led to changes in workforce gains across various sectors. More people were attracted to civil service and entrepreneurship. Besides, there were major shifts

from manufacturing, education to cottage industries upon migration. The shift to the informal sector could be best described as a means for the returnees to easily regain livelihood opportunity since the sector, specifically in Kenya serves as a buffer between unemployment and employment.

Again, from table 3-6, the probability of married spouses changing their careers after migration was 6.9% while that of separated and divorced migrants was 13.7%. The results also indicate that people above 60 years have a probability of 65.1% likelihood of changing their careers when they migrate to the rural areas, which is highly associated with retirement and possible shift to other activities such as rural farming. The probability of people with only a primary school education level had a higher probability of changing careers after returning to the rural areas than those above university education (31.2% versus 13%). One can explain this using distinct favourableness of cities to people with varying levels of education. Precisely, people that are more educated are more likely to land on better jobs in the city and opt to stay there compared to those that are less educated. The educated people have a higher likelihood of landing in civil service jobs that are better-paying than the jobs they take in the cities or engage in lucrative businesses with city-acquired entrepreneurial acumen. It is also reasonable to argue that for this category, income is a significant incentive for return migration. On the other hand, the less educated people are less job-selective compared to their skilled counterparts, hence can take lowly-paying jobs after going home, which explains their low likelihood of experiencing income increase. Results also suggest that marriage has a significant influence on return migration; single people are less likely to migrate to rural areas than the married ones.

The sectoral labor gains and losses in terms of population also illuminate on the change of careers among the respondents. Notably, the percentage of those involved in the agricultural sector increased from 5% to 19% after migration. One of our primary assumptions here is that the devolution policy of Kenya increased the payoff in this sector, thereby making it increasingly attractive to respondents who were in the cities. Since it presented a new cash generation opportunity, some urban dwellers who had land back at home opted to return to the rural areas to take on the opportunity. It can also be seen that the number of respondents in the civil service rose from 19% to 36%. This represents the highest change in career. The phenomenon can be attributed to the enactment of the devolution policy in 2013, leading to creation of new job opportunities in the civil service back at home. An anticipation for a likelihood to get employed in the county government made the respondents working in various sectors in the city to go back to the rural areas.

Education and research, the percentage dropped from 20% to 15% while the cottage industry experienced a drop of 14% from 20% to about 6%. Various factors can be associated with these declines. The education and research decline can be attributed to shifts of new jobs in the county government while that of the cottage industry can be ascribed to the decline in its lucrativeness. Precisely, concerning the former, people previously employed in the education sector could be of high demand as county governments want educated people to run their activities, and those in the education sector seized on this opportunity. Regarding the latter, most people consider the informal sector to be less lucrative, which means that their propensity to changing to other sectors when opportunities arise is high. Given this, a significant number of people could have opted to work outside the sector (such as venturing in personal enterprises and agriculture back at home). The largest decline was experienced in the manufacturing sector. The proportion

of the respondents in the sector fell from 30% to about 3% as those working as small business owners rose from 15% to 30%. The trend in manufacturing indicates that most of the respondents from the cities work in the manufacturing sector while that of entrepreneurship indicates that more people tend to venture in private businesses after leaving the city.

5. Conclusion

This study sought to establish income and career change implication upon reverse migration under the devolved system of governance in Kenya. Results found that some people's incomes increase while others decline, which implies that income is not the necessary motivation to return to the rural areas. Results also found that the tendency of going to rural areas depends on demographic characteristics. People who are less educated, having more land at home, and married are more likely to migrate to the rural homes than their single/divorced, educated and having smaller size of land. The probability of less educated youths returning home from the city was higher than their educated counterparts, but the probability of experiencing income growth is lower. The few migrants with postgraduate degrees had a significant income surge. Though, the results found that, this group returned to their rural areas to assume better paying formal jobs. Using the results, we are at ease to conclude the following;

i. The career dynamics reflect on the preferences of people; those in the cottage industry as well as college educational level and below, exhibited a significant probability of career change as compared to highly skilled university degree holders.

ii. Migrants that are more than 35 years, having university education and large pieces of land have a higher chance of experiencing income growth. A significant proportion of respondents ventured in private enterprises and agriculture upon return, which was attributed to the socio experience gained while in the city, which possibly encouraged attitude change towards self-employment and economic changes that have made the agricultural sector an increasingly lucrative business.

iii. The ongoing rural development programmes generate more lucrative job opportunities and novel economic activities that the educated and skilled youths in the city could perhaps be inspired to reallocate to their rural areas to obtain multiple economic gains from such opportunities.

6. Evaluation Of Results

In its existing form, the model presented some limitations. First, the study does not find sufficient evidence of the presence of a high endogeneity and heterogeneity issues for returning migrants' choice to venture in self-employment after returning from the city. Also, in case the undetected heterogeneity might have led to some limitation on influence on the rural-urban migrant decision for being self-employed. Also, the returning migrant variable and individual attributes variable might have correlated with the error term ε_i, leading to possible endogeneity in the selected study sample. Though, the study used the recursive bivariate probit model to reduce the errors emanating from unobservable endogeneity and heterogeneity [31, 32].

Declarations

Acknowledgments

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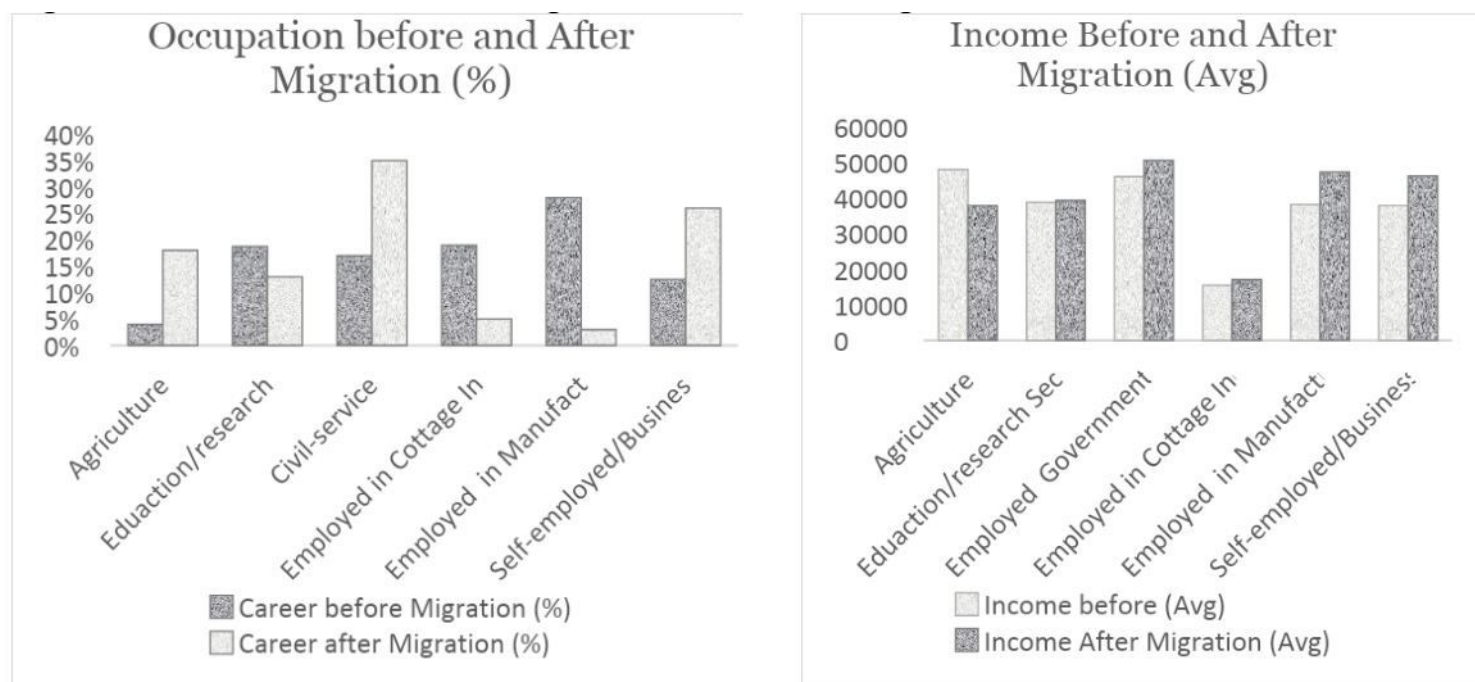
Figures

Figure 1

Income and Career Change (Before and After Migration)