



Effects of Demographic Factors on Population Dynamics in Imo State, Nigeria; Implications for Farm Labor Availability and Supply

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Abstract

The study assessed the effects of demographic factors on population dynamics in Imo State, Nigeria. Multi-stage sampling technique was used select 60 respondents. Data collected were analyzed using descriptive statistics and the ordinary least square regression technique. Results showed that the area was dominated by female farmers 56.7%, and are married 66.7%. Most of the farming lands used was inherited, with more of hired laborers 76.7% used due to rural-urban drift. Results also showed that over 70% of the people migrated from rural to urban communities. Result further showed that age, gender, educational status, income level and poverty index were important and significant factors affecting population dynamics (expressed as index of rural-urban migration). The study recommended the crop farmers to join cooperative societies to raise funds to support large-scale production while the government is to provide basic rural infrastructures to checkmate rural-urban drift in the area.

Keywords: Population dynamics, Farm labor supply, Rural-urban drift, Farm productivity, Demographic factors, White collar jobs, Efficient labor utilization, Food shortage, Cost of labor, Imo state.

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Contribution of this paper to the literature

The paper posited novel implications of rural-urban drift in Imo State, Nigeria as it affects farm labor availability and supply. It equally averred the various socio-demographic factors influencing population dynamics, productivity and efficient utilization of labor supply in Imo State, Nigeria.

1. Introduction

In recent times, there has been concerted campaign to increase the food production level in Nigeria to feed her teeming population of about 162 million [1]. Efforts have been geared at indigenously encouraging food production, production of agricultural raw materials, agricultural value-chain addition and establishing a formidable platform for the overall growth of the agricultural sector [2]. These and many others are periodically affected by population dynamics which influences agricultural production cum farm labor availability. Population dynamics refers to short and long term changes in the size and age composition of populations and the biological and environmental processes influencing those changes. It deals with the way populations are affected by birth rate, death rate, immigration and emigration [3]. Population dynamics is the study of how and why populations change in size and structure over time. World Bank [4], viewed “population dynamics” as a media used to convey changes in the numbers, age, class distribution, sex ratio, and behavior of a population through time and space, determined by inherent characteristics of the individuals and mediated by environmental conditions, food resources, and interacting biotic agents. Population dynamics is centered on studying peculiar characteristics of a selected population; these characteristics include changes in population growth rates, age structures and distributions of people [5]. It is the responsive and long-term changes in the numbers, individual weights and age composition of individuals in one or several populations, and the associated physical discrepancies influencing the population at a time [4]. Population dynamics in this study is expressed as an index of rural-urban migration, (internal migration) which is in contrast to international or intercontinental migration, and this refers to movement within a country. It refers to the movement of people from the countryside that is from rural areas to cities often metropolitan cities of the country [3]. This change of residence is often related to labor migration and career change, i.e. from the primary to the second or third sector. This movement of people usually results in two outcomes that is one side or the destination area gains population, while the other side loses people respectively. In order to ensure a sustainable growth of both rural and urban areas, cooperation, networking and coordination between both parties are completely important and must be taken into consideration [6]. In developing countries such as Nigeria, numerous factors are known to cause rural-urban migration mainly - the push and pull factors. Push-factors drive migrants out of rural areas while the pull factors draw migrants to urban areas. Migration factors and determinants are very complex and can be separated into economic and non-economic factors. Economic drivers include rural unemployment or underemployment, low wages and no assets while non-economic drivers play an additional role and primarily involve poor rural infrastructures relating to housing, roads, educational opportunities, healthcare systems, thus, these causes’ people to move in search for new jobs and better economic opportunities [7]. Again, natural disasters, drought, famine, war and conflicts are additional factors that cause people to migrate. The nexus between population dynamics and farm labor availability is very complex; intense debates and widespread discourse have continued over several decades on population growth as it affects agriculture and farm labor availability. For the past decades, agricultural growth has been declining rapidly due to the mass movement of people out of the rural areas to the urban cities/town partly due to unfavorable living conditions and patterns and this exodus had resulted in the shortage of farm labor which is not readily available again [8]. Agricultural intensification in the state is ought to be boosted by farm labor supply arising from increasing population but this is not the case in the area as most of their able-bodied young men had migrated to cities/towns in search of greener pastures. The high population growth leads to intensified pressures on available farm lands, forest and other economic resources, thus leading to increasing poverty and low agricultural productivity [7]. Furthermore, overpopulation has resulted in land resource scarcity, fragmentation of farm plots, and ecological imbalance and degradation such as increasing emissions, soil erosion, deforestation, and over-use of natural resources, thus producing adequate food for the rapidly growing population remains a prime challenge. Despite series of agricultural development policies in the state, it had suffered multifaceted challenges ranging from land scarcity, deforestation, malnutrition, recurrent drought and lack of improved agro-technologies [9]. The existing agricultural land is unable to feed the over growing population and thus many of the crop farmers had remained trapped in vicious circle of poverty, disease and hunger. Rising hikes in food prices, unemployment, lack of pasture for livestock, and intensive removal of natural vegetation further aggravates food shortages [10]. Land holdings has remained small and subjected to more divisions and fragmentations due to increasing or rising population as more demand is made on available lands, and however, land re-distribution is not anticipated in the near future. Consequently, the rising population is expected to provide farm labor both in the short and long run basis, of which when efficiently utilized would results in increased agricultural production and output [11]. On accounts, where farm labor supply is grossly unavailable and inadequate due to labor migrations, this evidently undermines agricultural production and further induces food importations. The issue of population dynamics is quite necessary to provide government; the adequate tools needed for fresh proper planning, implementation, monitoring and evaluation of any proposed developmental plan, without which the expected economic development will remain a mirage and will not be achieved. This is because the ability of a nation to function effectively as a social, cultural and economic entity is based on its population dynamics [12]. Efforts need to be put in place to bring forth a formidable growth plan for agricultural development especially (the rural areas of the country being at the core front as a result of cultivable lands available to them with the requisite labor supply readily available relative to the urban areas). Nigeria as a nation has over 71 million hectares of cultivable land of which half of it is barely used, with the nation relying solely on food importations which depletes our foreign reserves. It has reached at an appalling stage that importation of food has sustained an increase of 11% per annum [6]. This rising percentage has continued to affect both local and/ or indigenous production as well as increased unemployment in the nation. Again, increase in population density has further exacerbated and degraded the vegetation’s of most cultivated arable lands, hence forcing farmers to cultivate on marginal lands, with its attendant consequences [12]. In addition, population pressure has remained the most potent force for increased poverty and soil infertility among

household farmers. Studies had shown that efforts are being made to cushion soil infertility via fertilizer distribution based on soil maps so that farmers can apply a custom-based fertilizer to mitigate the depletion of soil nutrients. This operation is implemented by means of internally adopted and externally induced technologies. It is on this backdrop that the paper presents the implications of demographic factors on population dynamics and its effects on farm labor availability in Imo State, Nigeria based on the current evidences in knowledge on agriculture, population and farm labor supply or availability. However, the novelty of this study is consequent upon the implication of population dynamics on farm labor supply in the state which has not been documented.

2. Methodology

The study was undertaken in Imo State, which is one of the 36 states in Nigeria. It lies in the southern part of Nigeria with Owerri as its capital and its largest city. Imo State has 27 (Twenty-Seven) Local Government Areas and it is located between Latitude 4° 45'N and 7° 15' and Longitudes 6° 50'E and 7° 25'. Imo State is bounded on the east by Abia State, north by Anambra State, south by Rivers State and on the west by Delta State and River Niger. The state has a total land mass of 5530 square kilometers (2,140 square Miles) [13]. The national population census of 2006 indicated that Imo State had a population of about 3,934,899 people which comprise of both males and females. Imo State was chosen for this study due to the high level of rural-urban migration recorded in the area which urgently calls for concern. A multi stage sampling technique was used for the sample selection. Recall that Imo State is divided into 3 (three) agro ecological zones which are Owerri, Orlu and Okigwe zones respectively. Firstly, one Local Government Area (LGA) was randomly selected from each of the 3 agricultural zones of the state namely Oforola West LGA for Owerri agricultural zone, Njaba LGA for Orlu agricultural zone and Onuimo LGA for Okigwe agricultural zone. Secondly, one Autonomous Community was again randomly picked from the above selected Local Government Areas, For Owerri West LGA; Oforola Autonomous Community, For Njaba LGA; Umuele Amazano Autonomous Community and For Onuimo LGA, Owerri Okwe Autonomous Community. Thirdly, 20 farmers (respondents) each were randomly selected across the various Autonomous Communities from the sampling frame provided by the Agricultural Development Program (ADP) Coordinators in the respective zones, making a total of 60 respondents from whom information were sourced and used for data analysis. Data collected from the research were analyzed using descriptive statistical techniques such as percentages, means, frequency distributions and ordinary least square regression technique. The Ordinary Least Square Regression Technique is expressed implicitly as

$$Y = F (X_1, X_2, X_3, X_4, X_5, e) \tag{1}$$

Where:

Y = Population dynamics (Index of rural-urban migration in the area).

X₁ = Age composition of the farmers.

X₂ = Educational level.

X₃ = Gender composition of farmers.

X₄ = Income level of farmers.

X₅ = Poverty level (estimated using poverty line index).

e = Error term.

Note that individual ith households indicated dependents/household heads who were involved in rural-urban migration in the area.

The Ordinary Least Square Regression is explicitly stated thus:

Linear Functional Form:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_nX_n \tag{2}$$

Power Functional Form

$$\ln Y = b_0 + b_1 \ln X_1 + b_2 \ln X_2 + b_3 \ln X_3 + \dots + b_n \ln X_n \tag{3}$$

Semi-Log Functional Form:

$$Y = b_0 + b_1 \ln X_1 + b_2 \ln X_2 + b_3 \ln X_3 + \dots + b_n \ln X_n \tag{4}$$

Exponential Functional Form:

$$\ln Y = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + \dots + b_n X_n \tag{5}$$

(Note: X₁, X₂, X₃, X₄, X₅ remains the same as stated earlier)

3. Results and Discussion

3.1. Demo-Graphic Characteristics of the Farmers

Table 1 showed the age distribution of the respondents in the area. Majority of the respondents, 30.0% are between the ages of 51 and 60 years of age. Furthermore, 20.0% of the farmers lie within the age bracket of 61 - 70 years with a mean age of 50 years. This implies that the respondents in the area are advancing in age and not likely to migrate but rather becomes conservative and non-receptive towards the use of improved technologies. Moreover, they provide the needed farm labour used in agricultural production [14].

Table 2 revealed the marital distribution of the respondents in the area. It showed that 66.7% of the respondents were married while 8.3% and 25.0% were single and divorced. The 66.7% of the married group implied that they are likely to have some dependents who may likely support their farming activities (farm labor supply) and vis a vis less likely to migrate. This also calls for diversification of economic activities in order to meet family obligations [15].

Table 1. Distribution of respondents by age.

Age	Frequency	Percentage
21 – 30	6	10.0
31 – 40	11	18.3
41 – 50	11	18.3
51 – 60	18	30.0
61 – 70	12	20.0
71 – 80	2	3.3
Total	60	100.0

Source: Field Survey Data, (2018).

Table 2. Distribution of respondents by marital status.

Marital Status	Frequency	Percentage
Single	5	8.3
Married	40	66.7
Divorced	15	25.0
Total	60	100.0

Source: Field Survey Data, (2018).

Table 3 revealed gender distribution of the respondents in the area. From the Table, 56.7% of the respondents were females while 43.3% were males. It therefore means that females dominated the farming activities in the area and this formed a major reason while the females stayed back in the area unlike their male counterparts who largely migrated and are involved in non-farming activities in the cities. More so, women are culturally restricted from migration due to native tradition, customs and believe systems which inhibit their movement and thus, provided the needed farm labor utilized in agricultural production [16].

Table 3. Distribution of respondents by gender.

Gender	Frequency	Percentage
Male	26	43.3
Female	34	56.7
Total	60	100.0

Source: Field Survey Data, (2018).

Table 4 showed the education distribution of the respondents in the area. According to the Table, 43.3% of the respondents have no formal education, 28.3% of them had completed primary education, 21.7% had secondary education and only 6.7% had tertiary education. It was gathered that respondents who had tertiary education abandoned their farm work and migrated to cities/towns in search of white collar jobs due to poor returns from their farming enterprises. It could be noted that their exit affected farm labor supply and/or availability in the area. Education is seen as a planned process of bringing desirable changes in the behaviors, skills, attitudes and knowledge of individuals. It is believed that educated farmers are more exposed to new ideas which enhance decision makings [17].

Table 4. Distribution of respondents by level of education.

Level of Education	Frequency	Percentage
No Formal Education	26	43.3
Primary Education	17	28.3
Secondary Education	13	21.7
Tertiary Education	4	6.7
Total	60	100.0

Source: Field Survey Data, (2018).

Table 5 revealed occupation distribution of the respondents in the area. 60% of the respondent took farming as a major occupation, 16.7% took to trading and 16.7% engaged in other economic activities (hunting, okada riding, fishing, etc.) as their source of livelihood. Farming in the area was characterized with small land holdings, low income due to small scale engagement and low investment, hence resulting to high poverty profile, rural-urban drift and shortage of farm labor [18].

Table 5. Distribution of respondents by occupation.

Major Occupation	Frequency	Percentage
Farming	36	60.0
Trading	10	16.7
Artisan	4	6.6
Others	10	16.7
Total	40	100.0

Source: Field Survey Data, (2018).

Table 6 showed the farming experience distribution of the respondents in the area. 41.7% of the respondents had between 11–20 years of farming experience. The mean farming experience in the area was 18.13 years, and this indicated that majority of the farmers were relatively experienced to handle farm challenges as they arise. Their years of experience could also help to increase profitability of the farm business. Again, experience farmers are less likely to migrate since they are well exposed to handle and overcome farm pressures and challenges and thus enhance farm labor supply [19].

Table 6. Distribution of respondents by farming experience.

Farming Experience	Frequency	Percentage
1 – 10	19	31.7
11 – 20	25	41.7
21 – 30	5	8.3
31 – 40	8	13.3
41 – 50	3	5.0
Total	60	100.0

Note: Mean Farming Experience = 18.13years.

Source: Field Survey Data, (2018).

Table 7 indicated the household size distribution of the respondents in the area. Most of the respondents, 40.0% had between 9–11 persons in their household; 36.7% had between 7–9 persons. The mean household size is 7 persons per household. This indicated that on the average respondent had relatively large household size which implies that household head could engage them in agricultural activities (family labor supply) and hence reduce expenses on hired labor. It invariably indicated that the household head has more people to cater for which could cause them to migrate in search of greener pastures [6].

Table 7. Distribution of respondents by household size.

Household size	Frequency	Percentage
3 – 5	3	5.0
6 – 8	22	36.7
9 – 11	24	40.0
12 – 14	9	15.0
15 – 17	2	3.3
Total	60	100.0

Note: Mean Household Size = 7 persons.

Source: Field Survey Data, (2018).

Table 8 revealed the farm size distribution of the respondents in the area. It showed that 20.0% of the respondents had between 1.5–1.9 ha of farmland; only 16.7% of the respondents had farm size which ranges between 2.6–3.0 ha. The mean farm size is 1.7 ha. This indicated that majority of them possess relatively small farmland and practiced farming on a small-scale level. This could be as a result of the issue of land fragmentations which inhibit large scale agriculture. It could also be that the small land holdings of the farmers triggered rural-urban drift in the area, hence shortage of farm labor supply [20].

Table 8. Distribution of respondents by farm size.

Farm Size	Frequency	Percentage
0.1 – 0.4	12	20.0
0.5 – 0.9	13	21.7
1.0 – 1.4	8	13.3
1.5 – 1.9	12	20.0
2.0 – 2.5	5	8.3
2.6 – 3.0	10	16.7
Total	60	100.0

Table 9 showed the methods of land acquisition distribution of the respondents in the area. It revealed that 76.7% of the respondents acquired their land through inheritance. This means that such land is usually passed to offspring after owner’s death. This acquisition nature often leads to non-usage of such lands for agricultural purposes as the beneficiaries may not be interested in agriculture. It was gathered that most of the beneficiaries of inherited lands in the area sold off their lands and migrated to cities/towns to set up businesses with the money got from the sale off thus, creating a reduction in farm labor supply. However, 5.0% and 13.3% of the respondents hired and purchased their lands respectively [21].

Table 9. Distribution of respondents by method of land acquisition.

Land Ownership	Frequency	Percentage
Inheritance	46	76.7
Hired	3	5.0
Purchased	8	13.3
Gift	3	5.0
Total	60	100.0

Source: Field Survey Data, (2018).

Table 10 revealed the distribution of the respondents based on the type of labor used in the area. From the Table, 76.7% of the respondents used hired labor for their farming activities, while only 23.3% of the respondents used family labor. This indicated a grave consequence of rural–urban migration drift as most able-bodied young members of the households had migrated to the cities and towns in search of better economic activities and this also created a huge gap in farm labor supply [22].

Table 10. Distribution of respondents by types of labor used in farming.

Types of Labor	Frequency	Percentages
Family	14	23.3
Hired	46	76.7
Total	60	100.0

Source: Field Survey Data, (2018).

Table 11 revealed the distribution of the respondents according to age categories of labor used in the area. 33.3% of the respondents reported that they engaged people in age category of 14–60 years as hired laborers in farming activities, 40% used children under 14 years category while 26.7% employed people of above 60 years. It implied that 66.7% of the people that worked on the farms in the area were under aged children (less than 14 years) and advanced aged (above 60 years). This means that the active aged populace of the area had migrated to the cities and towns where economic activities are more favorable thus leaving the farming activities to the children and aged categories to handle [23].

Table 11. Distribution of respondents according to age categories of labor used.

Age categories	Frequency	Percentages
0 – 14	24	40.0
14 – 60	20	33.3
Above 60	16	26.7
Total	60	100.0

Source: Field Survey Data, (2018).

3.2. Cost of Labor in Farming Activities

Table 12 revealed distribution of the respondents according to the cost of labor in farming activities in the area. Majority, 33.3% of the hired laborers earned wage between ₦1, 000 – ₦3, 999, 21.7% earned between ₦ 4,000– ₦ 6,999. The mean wage was ₦4, 682.92 which is less than \$1 per day. It indicated the low income returns and status of the hired laborers in the area and hence formed the major reason for rural–urban migration drift in the area; as active aged category tend to move to cities and towns where they could attract higher wage rate per man day thereby leading to a shortage in farm labor supply in the area [24].

Table 12. Distribution of respondents by cost of labor in farming activities.

Cost of Labor Input	Frequency	Percentages
1,000 – 3,999	20	33.3
4,000 – 6,999	13	21.7
7,000 – 9,999	4	6.7
10,000 – 12,999	5	8.3
13,000 – 15,999	9	15.0
≥ 16,000	9	15.0
Total	60	100.0

Source: Field Survey Data, (2018).

3.3. Factors Affecting Availability and Efficient Utilization of Farm Labor Supply

Table 13 revealed the distribution of the respondents according to factors affecting availability and efficient utilization of labor supply in the area. It showed that 88.3% of the respondents cited scarcity of labor as a major constraints and impediment to availability and efficient utilization of farm labor. This is due to the migration of able-bodied men to cities and towns in search of better economic activities they considered less strenuous vis a vis farming. 76.7% were concerned about high cost of labor, this resulted from the huge migration of the active aged populace to the cities, thus the available remaining active category now places a high premium on labor cost 71.7% revealed inadequate fertile lands as a major issue impeding availability and efficient labor utilization as most available lands are infertile and less productive, hence requires little or no labor. Furthermore, 63.3% complained about inadequate funds to hire laborers for farming activities, it could be deduced that this factor arose from high cost of labor force as a result of rural–urban migration drift in the area [20].

Table 13. Distribution of respondents according to factors affecting availability and efficient utilization of labor supply.

Factors	Frequency*	Percentage*
High cost of labor	46	76.7
Scarcity of labor	53	88.3
Lack of adequate fund	38	63.3
Inadequate fertile land	43	71.7

Note: *Multiple responses recorded.

Source: Field Survey Data, (2018).

3.4. Reasons for Emigration of Labor Force Categories in the Area

Table 14 revealed the major reasons for emigration of labor force out of the area. It was evident that economic interest 70%, i.e. eagerness of the respondents to look for better economic opportunities outside their domain; social stratification 68.3% i.e. people desire to belong to a higher social strata, occupation difference 60%, i.e. changing from one higher occupation to another; standard of living 58.3%, i.e. improvement in living standard; social mobility 36.7%, i.e. innate desires to move from one place to another; environmental difference 13.3% i.e. changing to a new environment; and rural community difference 11.7% were major reasons for rural–urban migration drift in the area. Hence, the quest to attain higher standard of living and social and economic strata largely contributed deeply to the movement of people from the rural areas to the cities and towns [20, 24].

Table 2 revealed the marital distribution of the respondents in the area. It showed that 66.7% of the respondents were married while 8.3% and 25.0% were single and divorced. The 66.7% of the married group implied that they are likely to have some dependents who may likely support their farming activities (farm labor supply) and vis a vis less likely to migrate. This also calls for diversification of economic activities in order to meet family obligations [15].

Table 14. Distribution of respondents according to reasons for emigration of labor force categories.

Reasons for Emigration	Frequency*	Percentages*
Rural community difference	7	11.7
Environmental difference	8	13.3
Occupation difference	36	60.0
Economic interest	42	70.0
Social mobility	22	36.7
Standard of living	35	58.3
Social stratification	41	68.3

Note: *Multiple responses recorded.

Source: Field Survey Data, (2018).

x Linear, Semi-log, Cobb-Douglas and Exponential functional forms were employed to determine significant factors affecting the population dynamics in the area. In order to choose the lead equation, the functional forms were evaluated in terms of the statistical significance of the explanatory variables, the coefficient of multiple determinations (R^2), and highest F-value. Among the four functional forms estimated; Double log functional forms was chosen as the lead equation based on the above criterion. The table revealed a coefficient of multiple determination of 0.813, indicating that 81.3% of the total variations in the dependent variable were explained by the independent variables investigated. The significant F- value indicated that the model has a good predictive ability and goodness of fit. The result shows that age, gender, educational status, income level and poverty index were important and significant factors affecting population dynamics (expressed as index of rural–urban migration). It was further revealed that gender, educational and poverty status have positive relationship with the dependent variable while age and income level had an inverse relationship with the dependent variable. Gender which comprises of both males and females’ influences population dynamics to an extent, as the males being anxious to acquire wealth at all cost migrate to the cities/towns in search of better economic opportunities and good standard of living, thus leaving the female folks with no choice other than farming, thereby affecting farm labor supply and availability [21]. Empirical literatures had consistently reported the dominance of women in agriculture more than their male counterparts as a result of rural-urban drift [20]. As expected, educational level is positive and significant meaning that education exposes and equip individuals for better opportunities as the more educated individuals in the area migrate to the urban areas (cities, town) looking for white collar jobs which often not readily available, hence abandoning farming to the less educated ones who cannot read nor write. It connote that their absence created a huge gap in farm labor supply and availability in the area. It is known fact that education is a veritable tool which influences rural-urban drift as it allows individuals to take major decisions as it affects their wellbeing and environment [22]. Poverty status was equally positively significant as any percentage increase in the poverty level of the respondents will evidently induce rural–urban drift. The deeper the poverty level, the increase in rural–urban drifts. Poverty pushes individuals to seek alternative means of survival and livelihood which often may take him/her out of their immediate environment in search of greener pasture hence, creating a gap in farm labor supply in rural areas [12]. Age of the respondents and income level had an inverse relationship with population dynamics; hence any increase in age and income level of the respondents will automatically reduce rural-urban drift. This means that as farmers advance in age the eagerness to migrate to cities/towns in search of better opportunities diminishes as they prefer to stay back home and engage in any meaningful economic activities for survival and in return providing the needed farm labor supply and availability without any hindrance. Most times, the farm labor provided may not be really efficient and effective because advancement in age of the respondents [15]. This phenomenon literally explains why agriculture is still in the hands of ageing populace. Whereas, as income level of an individual increases, he/she is more relaxed and much comfortable to live in his/her immediate environment and therefore less anxious to consider rural–urban migration, thus closing the huge gap in farm labor supply and availability [18].

Table 15. Multiple regression estimates of demographic factors on population dynamics.

Variables	Linear	Exponential	*Double-log	Semi-log
Age in years	0.325 (0.692)	-0.061 (-25.935)***	-0.294 (-2.242)**	0.602 (0.808)
Gender	-0.047 (-0.684)	0.034 (0.502)	0.065 (12.438)***	0.047 (0.364)
Educational status	0.022 (1.971)*	0.023 (8.300)***	0.005 (8.407)***	-0.32 (0.244)
Income level	-0.268 (-0.569)	0.096 (0.208)	-0.278 (-5.313)***	0.382 (5.433)***
Poverty index	0.431 (1.832)*	-0.033 (-0.145)	0.558 (2.468)**	0.360 (0.838)
R^2	0.779	0.786	0.813	0.669
Adj. R^2	0.739	0.747	0.768	0.550
F- value	18.556	20.391	28.319***	5.618

Note: N/B *** = significant @ 1%, ** = significant @ 5%.

* = significant @ 10%, t- values are figures in parentheses.

4. Conclusion and Recommendations

Population dynamics connote to short and long term changes in the size and age composition of populations and the structural and environmental processes influencing those changes. Its impacts have really being felt in agriculture and as a result initiated rural-urban migration drift among the rural populace. Findings of the study showed that majority of the respondents were females, married with a household size of 7 persons. Respondents were majorly in the age brackets of 51 and 60 years. Educational status showed that only 6.7% had tertiary education which initiated rural-urban drift in the area. It is noted that education equips one for better economic

opportunities which was the case of the educated respondents met in the area. Due to the ceaseless migration of the populace, high cost of labor versus labor scarcity was highly rated among the factors influencing the availability and utilization of farm labor in the area. Again, people migrated due to occupational difference, rural community difference, social mobility, economic interest, social stratification, etc. The result further showed that age, gender, educational status, income level and poverty index were important and significant factors affecting population dynamics (expressed as index of rural–urban migration). The study recommended the farmers to join cooperative societies as to raise funds to support large-scale production while the government is to provide basic rural infrastructures to checkmate rural-urban drift.

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