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Household Size and Socio-Economic Resources: A Case Study of Ika North East Local Government Area of Delta State of Nigeria (Pp. 226-238)

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Abstract

The paper examined the relationship between Household size and socio-economic variables in Ika North-East Local Government Area of Delta State. Household size simply put, refers to the number of persons living together in the same house and share common catering arrangement, social and economic relationships and assist one another under a leader known as the head of household. The head of household could be a male or female. Socio-economic resources are materials that human beings use their numbers, skills, and talents, labour, technical knowhow to produce in order to satisfy their interest and needs. A total of 2,245 questionnaires were administered using the stratified random sampling technique. Data was analysed using the multiple regression statistical technique. A high positive correlation of $r = 0.787$ between Household size and the identified socio-economic variables was recorded. Consequently, the hypothesis (H_1) for the study, that Household size is a function of socio-economic variables was accepted. The policy implications for the socio-economic development of Delta State in particular and Nigeria in general were heightened.

Key Words: Household, Social, Economic, Development, Delta Nigeria

Introduction

The concept of household size refers to the number of persons living in the same house and share common catering arrangement, social and economic relationship and assists one another under a leader known as the head of household. The head of the household may be a man or woman (population and family life monograph 1988 p. 25). Again, the household size could also be define as a person or group of persons living together usually under the same roof or in the same building or compound who share the same source of food and recognize themselves as a social unit with a head of household. Thus, the regular household must have a common catering arrangement, sense of belonging together as a social unit and must have the head of household whether man or woman (NPC 2006: P.16).

According to Akinbode (2002), social-economic resources are the materials that human beings use their number, skills, talents, labour, technical know-how and know-why to produce in order to satisfy interest and needs. However, the inaccessibility of socio-economic resources is a product of overpopulation which sets pressure on resources thereby affecting the living conditions of the people.

According to Kothari (2001), the universal declaration on Human Rights, Articles 25 of the United Nations Organisation (UNO) states that everybody has the right to a standard of living adequate for the health and wellbeing of himself and his family including food, clothing, housing, medical care, and necessary social services and the right to security in the event of unemployment, sickness widowhood, old age or other lack of livelihood in circumstances beyond his control.

The focus of the different National Development plans of Nigeria since independence in 1960, has been the improvement of the living conditions of people through the use of human and material resource with which the country is so richly endowed. All development policies and programmes, politics and social economic planning are concerned with people and resources (Population Education Monograph 1988).

Farmer (1970) has observed that the family as a reproductive nucleus of the society is at the core of population issue. Therefore, much focus must be directed at the family/Household to enable it assume an informed position to make the right decision about its size and desirable quality of life for its members.

Furthermore, it has been observed that there are national and international dimensions to population issues, but the role of individuals and families cannot be overstressed in population matters. Truly, the household affects and contributes significantly to population problems (Ajaegbu, 1985).

Furthermore, the increase in fertility begins with the family/household which is the reproductive unit of the society. According to the world population report (2007) the population of Nigeria will be 258.1 million people by the year 2050. However, the average household size was 5.42 in the rural areas and 4.56 in the urban area of the country. The national average of household size was slightly higher 0.52 than earlier figures obtained in 1979/80. This indicates an upward trend in population growth generally and thereby, large household size considering the prevailing extended family structure (Nigeria Fertility Survey, 1981/82 Survey Report NOS 45/SR/83/1).

In addition, the availability of essential social amenities will make for a standard of living, which will in turn remove the fear of social insecurity, which invariably is a factor responsible for the desire to have many children.

Deriving from the above, the paper critically examines the relationship between household size and the socio-economic resources in Ika North-East Local Government Area of Delta State of Nigeria.

The Study Area

Ika North-East Local Government Area lies between Latitude $5^{\circ}45'$ North of the equator and between Longitude $5^{\circ}31'$ and $6^{\circ}14'$ East of the Greenwich meridian. It is bounded in the North by Edo State and Ika South Local Government Area. However, Ika South Local Government Area marks its Southern and Western limits, while Aniocha North and Aniocha South Local Government Areas mark its Eastern margin.

In terms of size, Ika North East occupies a land area of about 430km^2 with a population figure of 126,560 in 1991 with 61,303 males and 65,255 females. It has a population density of 294 persons per km^2 . However, by the year 2006 the population has increased to 183,637.

Physical Features

Ika North East LGA lies in between two rivers – Orogodo river and the Namomah river. Both rivers flow southwards to the coast and have great potentials for the socio-economic lives of the people.

Generally, the terrain of Ika North East is characterized by undulating lowland. The soils are sandy and loamy in nature and are rich for agriculture and socio-economic activities.

Vegetation

The vegetation consists of secondary vegetation which provides land in areas of high population concentration. However, in the rural areas with low population density are forest reserves.

Human Activities

The people of Ika North East Local Government area are mainly farmers. Both the civil servants and self employed artisans and traders engaged in farming. The crops grown include yams, cassava, maize, coco-yam, okro, pepper, tomatoes, melon and vegetables. The wet and dry season, which last from April to September and October to March respectively favour the cultivation and harvesting of variety of crops. It should be noted that Ika North East is one of the food baskets of Delta State, especially in the production of yams, cassava, melon, and vegetable to mention but a few.

Conceptual Framework

The study is based on the Demographic Transition Theory (D.T.T.) propounded by Thompson (1929) as a descriptive interpretation of the transformations that took place in European demographic patterns many years ago.

The theory proceeds along three stages of fertility and mortality deriving from fundamental economic and social changes of development or modernization.

According to the theory, the stage I of the D.T.T. depicts the characteristic of behaviour of human species disposed to high mortality and high fertility. This stage is encapsulated in the stability of population, which balances high through fluctuating death rates with high birth rates in pre-modern era (Hameed, 1999). At this stage infant mortality is high and fertility is similarly high. The high rate of mortality is taken as inevitable in the absence of modern forms of sanitation, agriculture, communication, medicine, recreation and housing. Given the high rate of mortality, a similarly high birth rate is required to bridge the gap left by mortality (Stolnitz, 1964). In order to maintain the high fertility, societies in stage I of the Demographic Transition are characterised by strong pronatalist norms supported by popular values, both sacred and secular, that are effectively

enforced by a variety of societal sanctions which are highly institutionalised and slow to change. (Stolnitz, 1964). However, the transition theory views control of death rates beyond the reach of pre-modern societies. But as soon as the societies begin to experience the effects of modernization, improvements in nutritional values and health standards, there will evolve a gradual decline in mortality, leaving fertility remaining at its high level.

The stage II of the demographic transition is characterised by declining mortality with fertility remaining at the previous high levels under the control of traditional social institutions. This is the stage described as “Population Explosion” by Davis (1963).

The stage III of the D.T.T. is characterized by the high birth rate gradually declining towards equilibrium with the already declined death rate (Teitelbaum, 1975). The reduction of fertility typically lags behind mortality decline because fertility cannot decline until the traditional, social, and economic institutions supporting it are weakened and new social changes create pressure that will favour smaller family size. Thus, the small family culture is a product of industrial and urban transformations of the 19th century Europe.

In addition, the industrial and urban life are seen as agents of substantial modifications of the role of the family in the areas of production, consumption, education and recreation. The reduced importance of the family weakens the social pressures favouring high fertility, since it is through the extended agrarian families that many of these pressures originate.

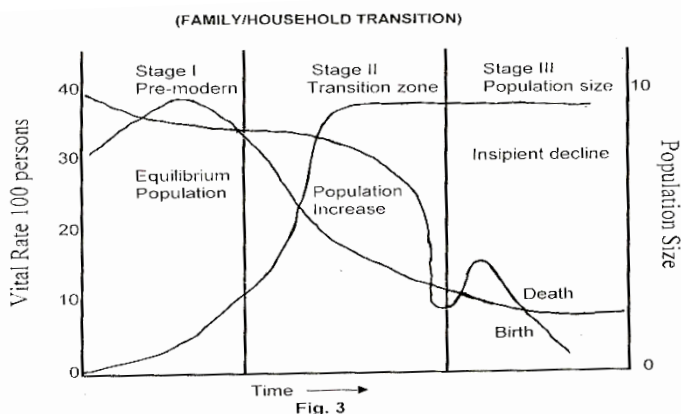
According to Stolintiz (1964), when the institution that favours high fertility is weakened, the economic value of children is correspondingly lowered by the growth of widespread compulsory education, which removes children from potential labour force. People therefore come to perceive at this stage that mortality has declined substantially and that fewer births are required to achieve a certain family size of children. Through this magnitude of major social transformations, the pressures of high fertility are weakened and the idea of conscious control of fertility gradually gains strength.

Again, it has been observed that the theory of the demographic transition is still at the initial stage of high fertility and high mortality in Africa, while the countries of Western Europe, North America and Australia according to the theory have reached the final stage of the Demographic Transition theory. Other regions of Africa still display growth patterns reflecting different

degrees of progression from the initial to the terminal stage in keeping with their level and rate of economic development.

Deriving from the above, the D.T.T. provides an analytical framework for explaining the relationship between fertility decline and socio-economic development of a place. The product of this process is the response to socio-economic transformation from Agrarian economy to a modern industrialized economy. Thus, the present study is an analysis of the relationship that exists between household size and socio-economic resources in the Ika North East Local Government Area of Delta State of Nigeria.

Fig. I: Demographic Transition Theory (D.T.T.)



Source: Adopted from Warren Thompson (1929) in Demographic Perspectives:

Methodology

The data used for this study was generated from two major sources viz: primary and secondary sources. The primary source comprised the questionnaire and interviews while the secondary sources included, textbooks, journals, magazines and seminar papers to mention but a few.

The study area was divided into 9 major areas based on the existing communities. The stratified random sampling technique was adopted in the demarcation of the 9 areas. According to the 1991 population census, the population of the study area was 126,560. However, based on the constraints of time and cost 2,245 questionnaires were administered in the nine

communities such as: Owa 238, Umunede 220, Ute-Okpu 182, Akumazi 196, Igbodo 208, Idumu-Esah 168, Mbiri 118, Otolokpo 114, Ute-Ogbeje 108, Alinwachokor 25, Oweme-Ute-Ogbeje 95, Owa-Alero 195, Owa-Eke 38, Owa-Ofie 51, Owa-Alizomor 80, Alidinma 64; and Ali-Iweriokparu 15.

The variables included in the questionnaire are as follows: the dependent variable of households of one-person and multi-person households. The socio-economic independent variables of: food, housing, health, education, water, energy, communication, recreation/leisure and security/safety.

In addition, trained field assistants, were used in administering the questionnaire in the study area.

The statistical technique used to measure the relationship between the dependent variable Y, and the socio-economic independent variables X's, is the multiple regression.

It has been observed that the multiple regression is the most frequently used method for measuring the relationship between the dependent and the independent variables. It has the formular

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_nX_n + e$$

Where

Y = dependent variable (Household)

X's = Independent variables

X₁ = Food

X₂ = Housing

X₃ = Health

X₄ = Education

X₅ = Water

X₆ = Energy

X₇ = Communication

X₈ = Recreation/Leisure

Hypothesis (Hi)

The hypothesis tested in the study is: Household size in Ika North East Local Government Area of Delta State of Nigeria is a function of socio-economic variables.

Discussion

This section of the paper examines the relationship between household (Y) and socio-economic variables (X's) as shown by their correlation – coefficients in table 1 below.

X₁ – Food: The results in table 1 above shows that there exists a strong positive relationship of 0.601 between Household size (Y) and Food consumption (X₁) in the study area. Thus as household sizes increase within the study area, food consumption also increase. It should be noted that Ika North East is basically an agrarian community which produces food items. It is the food basket of Delta State and also acts as a source of income to the people and neighbouring states such as Anambra State.

According to Olayide (1975) in a study of food production in Nigeria, noted that with an average fertility of 7 children per woman, the food shortages as projected for 1980 and the year 2000 stood at 2.1 million tons and 6.4 million tons respectively. However, Salas (1984), observed that food is an essential element of life and its availability is of utmost importance for the continuity of human existence. At the moment of food crisis, in a household, it is the head of the household that suffers the frustration of not being able to provide a decent diet for its members.

X₂ – Housing: The correlation between Household size and housing is also positive 0.466. As household sizes increases in the study area, there is also a corresponding increase in the demand for housing. Eni (2005), observed that adequate housing has been defined by the United Nations Committee as Economic, Social, and cultural rights as the access to privacy, security, lighting, ventilation, basic, infrastructure, and adequate location with regards to work and basic facilities which should be at reasonable cost. In addition, Nigerian houses have far too many people staying in them. These people may either be staying permanently or temporarily or visiting at anytime. Thus, the carrying capacity of the home, especially its size and spacing influence significantly the quality of life of the residents.

X₃ – Health: The relationship between Household size and health is 0.514 in the study area. Thus, as household sizes increase in the study area, the health

needs of the households also increases. Veitch (1972) noted that residents in urban centres make greater use of available health facilities than those in rural areas. In addition, there exist a significant relationship between the distance-to-hospital/healthcare centre and the use he makes of it, especially in the rural and suburban areas.

X₄ – Education: The correlation between Household size and education is positive 0.423. Thus, as household sizes increases, the educational needs of households also increase in the study area. However, Akinyemi (1982) noted that the high cost of living coupled with the huge expenses of children's schooling and other factors would lead families to consider having fewer children than ever before.

Again, Adesina et al (1982) explained that the inadequacy of school facilities have resulted from a large and fast growing population. Thus, it has become evident that only those with adequate education have the opportunity of getting well-paid jobs from government, companies or private employers.

X₅ – water: The relationship between households and water resources in the study area is high and positive represented by 0.564. Thus, as households increase in size their water requirements or needs also increase in the study area. Udo (1979) noted that the vast majority of the rural residents regard water as their most valuable basic need. The residents of the study area access water from boreholes and other sources of water daily for domestic and other purposes.

X₆ – Energy: Household size and energy resources in the study area has a low positive correlation of 0.341. As household sizes increases in Ika North-East, their energy consumption also increases. It has been observed that the maximum power demand on the National Electricity Grid rose from 256MW to 758MW in 1977. This represents an increase of about 236% over a seven years period (Federal Republic of Nigeria 1981 – 85).

X₇ – Communication: Communication has a very high positive correction with household size with 0.706. Thus as household sizes increase in the study area, there is a corresponding increase in the communication needs of the people.

According to the Third National Development Plan (1975 – 1980) the operation of modern economy or society will be difficult if not impossible without the provision of adequate and reliable communication services. These services can only be satisfactorily rendered through adequate supply of

transportation network, good roads, uninterrupted telephone services, telex, Newspapers, and Magazines as well as television and radio network.

Wang and Bushell (1991) have noted that the accessibility to transport can bring benefits which include less time spent on travelling, cheap travel, a great choice of holiday destination and increased trade. Transport is indispensable for the functioning and distribution of goods and services as well as for trade.

X₈ – Recreation/Leisure: This socio-economic variable has a low positive correlation of 0.296 with household size. Thus, as household sizes increase in the study area the need for recreation/leisure also increases. According to Ojo (1980) recreation and leisure add pleasure to life. It removes certain psychological behaviour, which include those that are unpleasant to human health. However, the primary causes of poor health conditions as explained by Nzard and Munz Perez (1994) are lack of adequate exercise and diet. Poor diet and inactivity contribute significantly to heart diseases, stroke, cancer and diabetes.

X₉ – Security/Safety: The correlation between household size and security/safety in the study area, is a low negative correlation represented by -0.117 . This implies an inverse relationship between the two variables. As household sizes increase, the population of the study area also increases while security is compromised or grossly inadequate. Maslow (1970) had noted that one of the essential needs of man is security/safety. However, Agbamira (2008) observed that the security ratio in Nigeria is one policeman to 20,000 persons which is grossly inadequate for protection of lives and property in the society. This is against the United Nations Security/Safety standard of one policeman to 400 persons.

The collective effect of the socio-economic variables (X's) on the dependent variable (Y) is shown in the summary table 2 below.

The result of the table 2 above shows that the relationship between the independent socio-economic variables enumerated above and the dependent variable of household size is high and positive represented by $R = 0.787$ or 79%. However, the total variation in the dependent variable of household size as accounted for by the independent socio-economic variables is high represented by $R^2 = 0.62$ or 62%.

Furthermore the hypothesis of the study: that Household sizes in Ika North-East Local Government Area of Delta State is a function of socio-economic factors was accepted as shown in the summary of the F-ratio in table 3.

For $N - K$ and $K - 1$ (df) = 9 and 8 respectively. The calculated value of $F = 1.451$, while the critical value is 0.306 at 0.05 level of significance. However, since the calculated value of F of 1.1451 is greater than the critical value of 0.306, there is a significant change in the value R^2 as a result of the inclusion of the socio-economic variables. Thus, we accept the hypothesis (H_i) of the study which states that: Household size in Ika North-east Local Government Area of Delta State is a function of socio-economic factors.

Policy Implications

1. The Government of Delta State, should give adequate support (i.e. the provision of technical support such as fertilizers, pesticides, etc) to rural agriculture as a source of income to the rural farmers. Agriculture provides raw materials for the home industries.
2. The government should address the problem of costly building materials as a measure of solving the problem of excessive rent and non-affordability of owner-occupier houses.
3. The government should also engage in the building of more hospitals and the recruitment of qualified medical personnel especially in the rural areas.
4. Additional educational facilities should be provided to public schools to meet the increase in pupil and student intakes.

Conclusion

Finally, the paper examined the relationship between Household size and socio-economic factors in Ika North East Local Government Area of Delta State. The study showed that household sizes in the study area are determined to a very large extent (79%) by socio-economic factors such as: food, housing, health, education, water, energy, communication, recreation/leisure and security/safety. The policy implications of the study for socio-economic planning in the Delta State in particular and Nigeria in general were highlighted.

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Table 1: Correlation Coefficient Matrix between Household Size (Y) and Socio-economic variables (X's)

	Y	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉
Y	1.000									
X ₁	0.601	1.000								
X ₂	0.466	0.173	1.000							
X ₃	0.514	0.305	0.349	1.000						
X ₄	0.423	0.223	0.517	0.536	1.000					
X ₅	0.564	0.447	0.597	0.472	0.648	1.000				
X ₆	0.341	0.266	0.335	0.661	0.498	0.539	1.000			
X ₇	0.706	0.673	0.477	0.503	0.506	0.557	0.462	1.000		
X ₈	0.296	0.331	0.255	0.195	0.407	0.373	0.200	0.279	1.000	
X ₉	-0.117	0.003	0.261	0.169	-0.127	-0.055	-0.178	0.224	0.269	1.000

Source: Fieldwork (2008)

Table 2: Summary Table of the Relationship between the Dependent and Independent Variables.

Model	R	R ²	Adjusted R	Standard Error of the Estimate
1	0.787	0.62	0.193	484.3411

Source: Fieldwork 2008

Table 3: Summary of F-ratio

	Sum of Squares	DF	Mean Square	F	Sig. Level	Critical Value	Alternative Hypothesis (H ₀)	Remark
Regression	306251552	9	340271.43					There was a significant change
Residual	18766904	8	234586.306					
TOTAL	493925.6	17		1.451	0.005	0.306	Rejected	