Post-Independent Development in Nigeria: The University of Ibadan as a Catalyst for the Development of the Agbowo Community (A Rural Area), Ibadan, Oyo State, Nigeria

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To cite this article:

Received: January 5, 2022; Accepted: January 24, 2022; Published: September 5, 2022

Abstract: Development involves the processes of economic growth, social welfare, and modernization. The Nigerian government in an attempt to develop the country tried the principle of cumulative causation or the growth-pole approach using the University of Ibadan, Oyo State to facilitate development in the Agbowo community, a rural settlement near the university campus. This study was therefore undertaken to find out if the University has impacted the development of the Agbowo community. Primary information required was obtained through the use of questionnaire administration and interviews. The simple descriptive, binary regression statistics were used to summarize and explain the findings. The binary regression analyses revealed a strong relationship between the establishment of the University of Ibadan and socio-economic development in the study area. There is, however, room for additional imputes to improve the functional interdependence relationship or otherwise between the University and the Agbowo community in order to enhance further development. Increasing population in the community, for instance, requires the provision of more houses, healthcare facilities, and other infrastructures. The study, therefore, recommends that the Government, town planning authorities and the University should collaborate/work together in the effort towards improving the status and availability of health facilities, improving the road network of the area, and eventual improvement of the people’s wellbeing and eventual development of the study area.

Keywords: Development, Agbowo Community, University of Ibadan, Agent of Development, Growth-Pole Approach

1. Introduction

The term development has been variously defined and contested theoretically and politically. For instance, Rapley, (2007) and Macekura, (2019) noted that in the 1950s and 1960s, development was a vision in which the liberation of people and people through structural transformation. A second perspective is a definition embraced by international development donor agencies aimed at reducing poverty [48, 49, 39]. Economic development not, for instance, is expected to bring with it some broader changes in the economic wellbeing of a region and quality of life for a community by creating and/or retaining jobs [10]. The emphasis is on sustainable economic growth alongside a reduction in poverty unemployment and inequality for the greatest good, a long time, and a larger number of people [48, 49]. Greechie (2019) therefore concluded that economic development is a measure of the welfare of humans in a society. For geographers, economic development is the cumulative outcome of decisions guided by fundamental principles of land use, commercial and industrial location, economic interdependence; spatial organization [17, 37]. An example of such economic development model is the use of
the growth the pole model; the deliberate organization of economic activities around one or more high-growth industries [32]. The poles are usually urban locations benefiting from agglomeration economies and should interact with surrounding areas spreading from the core to the periphery.

1.1. Development in Nigeria

Any government aims to attain a higher value level of development that will facilitate the creation of responsible citizens [43]. Consequently, the newly dependent countries in the developing world including Nigeria embarked on modernization and industrialization to have economic independence and eventual economic development (Preston, 1996).

Education is a key factor for economic development with emphasis on manpower (brainpower) to feed the industries [18, 25]. Uweche (2008) however, observed that there was a dearth of manpower to feed into these development processes. Hence, Nigeria after obtaining her independence from colonial rule in 1962 became preoccupied with the task of educating her people and producing the needed manpower in the pursuit of her development processes. The University of Ibadan was established not only to provide the needed manpower but to serve as a growth pole that will eventually facilitate the development of surrounding locations [12, 18, 41].

The University of Ibadan, (Nigeria’s premier university) was established in 1948 by the British Colonial Administration as a University College under the University of London and was upgraded to an autonomous University in 1962. The University was initially sited at Eleyele and relocated to the present location which is adjacent to the Agbowo community, a rural settlement. The aim was to facilitate the development of Ibadan North Local Government Area by sitting at the University of Ibadan near the Agbowo community (about 8 kilometers from the center of the ancient city of Ibadan, Oyo state) [44].

1.2. Statement of Research Problem

Generally, there are three basic aims of socio-economic development - increase in revenue, improved status, and increase in the level of education. One of the approaches to enhance the economic development process is the growth pole development theory which is usually aimed at economic growth [35]. Growth poles are usually in locations that will benefit from agglomeration economies and spread prosperity from the core to the periphery [51]. The Federal government of Nigeria adopted the Growth Pole theory approach to facilitate the development of Ibadan North Local Government Area by sitting at the University of Ibadan near the Agbowo community, a rural settlement. The aim was to facilitate agglomeration benefit and the eventual development of the community [41, 51].

The management of the University was taken over by the Federal Government of Nigeria in 1960 after independence. The University of Ibadan currently boasts of 11 faculties namely: Faculty of Arts, Science, Agriculture and Forestry, Social Sciences, Education, Veterinary Medicine, Technology, Law, Public Health, and Dentistry. The University also has residential and sports facilities for its members of staff and students on campus [44].

The establishment of large organizations like the University of Ibadan to catalyze the development of the surrounding environment may not necessarily guarantee a relatively high level of development (Goddard, 2000). The condition in Agbowo community, the study area is far from the expected development outcome because the community is facing some development challenges; housing congesting, poor drainage system, poor waste disposal management, narrow road network causing traffic congestion, inadequate social facilities over-utilization of existing infrastructural facilities, etc. (Figure 1). There is the need, therefore, to examine whether the establishment and presence of the University of Ibadan near the Agbowo community have had a corresponding positive or negative developmental impact on the wellbeing of people in the Agbowo community. This study, therefore, attempted, to assess the contribution of the University of Ibadan to the economic development of the Agbowo community (Figure 1a & b).

Figure 1. a. Pictures of some of the poor conditions in the Agbowo Community; b: 1 Picture of some of the poor conditions in the Agbowo Community.

1.3. The Rationale for the Study

The study tried to quantify and explain the role of the University of Ibadan as an agent of development by facilitating the provision or development of infrastructures in the Agbowo community a rural setting. The result from the study can therefore contribute to the development and implementation of policies aimed at facilitating spatial equality facilitating state more direct investment spending in those Communities/regions with priority needs.

The purpose of the study intended to examine the roles of the University of Ibadan as an agent of regional development in the Agbowo community by examining the level of development before and after the establishment of the University of Ibadan.
Specifically, the following objectives will be pursued to achieve the aim of this study.
1. Identify socio-economic development indicators in the Agbowo community, the study area.
2. Highlight the impact of the University of Ibadan on the economic growth and development of the study area.
3. Explain how the University has contributed to urbanizing the Agbowo community with its accompanying problems/challenges.

1.4. Conceptual Framework, and Review of Related Literature

1.4.1. Literature of Development

Scholars have differently conceptualized development because the perception of development varies from person to person, place to place, and over time. For instance, Felmadmanan, Hadjimichae, Kemenyany & Larahann, 2014 viewed development as a process of qualitative and quantitative growth in social and economic characteristics. SID Israel (2018) and Owen, (2012) on the other hand describe development as a multi-dimensional process involving the re-organization and re-orientation of the entire economic and social system. In other words, it involves improvement in income and output of the community and radical changes in the institutional, economic, social, and administrative structure. Seers (1981) also conceived development to be both economic growth and improved conditions in which people in a locality have adequate resources such as food, jobs, and shelter and thereby enhance the reduction in income inequality among the people.

A conceptualized development to be a process in which there is an increase in the output of economic activities rather than human welfare [21]. In a socio-economic context, however, development implies modernization, a process whereby society is re-oriented in its structure, institutions, values, and pattern of behaviors towards globalization.

Geographers see economic development as the cumulative outcome of decisions guided by basic principles of the spatial organization; land use, commercial and industrial location, and economic interdependence [17]. These definitions emphasize that the process of economic development cannot be abstracted from expanding the supply of food, clothing, housing, medical services, educational facilities and transforming the productive structure of the economy. Since the economic and the social characteristics of any community are closely inter-related development process should not merely be concerned with the growth of numbers and incomes, but the social, educational, technological, political, and environmental factors all of which plays a critical role in the betterment of people’s standard of living. In essence, development may be a multi-dimensional phenomenon but the focus is on man’s wellbeing [23, 28, 29].

There is a relationship between development and governance because structures of governance influences development. For instance, some national governments tried to facilitate development by exploiting the principles of cumulative causation through the creation of growth poles; the deliberate organization of economic activities around one or more high-growth industries.

1.4.2. The Growth Pole Theory

Growth pole theory, as originally formulated by Perroux, (1949), assumed that growth does not appear everywhere at the same time, rather, it occurs as points or poles of growth. With variable intensities, the growth spreads by different channels and eventually affects the economy as a whole [51]. Perroux’s (1949) initial concept of growth pole focused on individual plants occupying an abstract economic space, rather than a specific geographical space; a city, or region. Perroux (1955) later redefined this concept to reflect a dynamic unit in a defined environment; simple or complex: (a) a firm, or (b) group of firms not institutionalized, or (c) group of firms institutionalized, such as private and semi-public undertakings [26].

Gasvrla (2017) explained that a growth pole is formed when an industry, through the flow of goods and incomes generated, stimulates the development and growth of other industries related to it (technical polarization); or determines the prosperity of the tertiary sector by means using it generates (income polarization); or stimulates an increase of the regional economy by causing a progressive concentration of new activities (psychological and geographical polarization).

Knox and Marston, (1998) argued that it would be wrong to neglect the spatial aspect and the geographical implications of the concept. If the growth pole has a local geographical base, then it is safe to assume that it can induce external economies in local firms. This means that growth is induced not only through direct trading between firms located in the same geographic area but also through a structural change in the region. Mabogunje (1980), therefore, asserted that local trade and business, which may not even be directly related with the growth pole will experience high demand induced by better resources and wages in the region.

Geography explains growth poles as points of economic growth which are usually urban locations, benefiting from agglomeration economies, and should interact with surrounding areas, spreading prosperity from the core to the periphery this definition presupposes a linkage between growth poles, economic growth and, urbanization, as well as potential interaction effects. Bhandari (2006) therefore argued that the geographical aspects of growth poles are now considered to be the most important facet of growth pole theory.

The central idea of growth pole is that economic development or growth may not be uniform over an entire region but instead takes place around a specific pole or cluster; a point of economic growth, a central location of economic activities, a point where economic growth starts and spread to surrounding areas and urban locations where economic activities ignite growth and better quality of life in the urban periphery [4].

The growth pole is relevant to this study because the establishment of the University of Ibadan near the Agbowo community was aimed at facilitating development in the
community through the flow of goods, incomes, and services which will eventually stimulate increased the community economy by facilitating a progressive concentration of new activities in the community and its environs.

1.4.3. Review of Related Literature

Economic developments are created cumulatively, following some initial advantage, through the operation of seven several principles centered on agglomeration effects (are associated with various kinds of economic linkages and interdependencies economic). The kick start for these agglomeration effects are any kind of economic development; the establishment of a trading port, the growth of local industry, or any large scale enterprise (quaternary/professional service activities).

Agglomeration economies are powerful forces that help explain, the advantages of the cluster effect of many activities. According to Rodrigue (2020) there, are three major categories of agglomeration economies; urbanization, industrialization, and localization economies. Urbanization economies are benefits derived from the agglomeration of population, namely common infrastructures (utility or public transit), the availability and diversity of labor, and market size. Industrialization economies are those benefits derived from the agglomeration of industrial activities (suppliers or customers). Localization economies are benefiting from the agglomeration of a set of activities near specific facilities such as a large university.

1.4.4. Location of Quaternary / Professional Service Activities

Factors of industrial location are however quite different from those factors that are usually considered when locating quaternary/ professional service activities [21]. This is because quaternary /professional service activities (an example of Localization economies) focus on those activities that deal with the handling and processing of knowledge and information and not the manufacturing of goods. Quaternary /Professional services do exhibit different patterns when factors of location are to be considered because these activities are made up of large educational or medical facilities attractive. University campuses are examples of professional service industries that attract a large number of people are from different walks of life and profession. Hence the Quaternary /Professional services are more relevant for use in this study.

Tertiary institutions are located at a considerable distance from other land uses (industrial land use) are intended to prevent noise pollution and overcrowding which may affect the learning process. Hence historically, educational complexes particularly those in larger cities are usually located away from the original business core and towards the periphery, a residential or commercial neighborhood traditionally off the centers in urban areas. This assertion has typified the location of the University of Ibadan near the Agbowo community, a rural settlement, far from the core areas of Ibadan, where major commercial/industrial activities of the metropolis are taking place.

University campuses are usually made up of residential, hostels, and other commercial activities. The university campus can be regarded as a pull factor that attracts more people and other activities close to the university establishment. However, some of these people may not be able to access or afford the accommodation and other facilities/services on campus. They, therefore, seek accommodation in places not too far from the university campus. Agbowo community which is just adjacent to the university’s main gate was more a convenient place to reside.

2. Materials and Methods

Agbowo community with an estimated population of about 308,119 people over a land area of 27,562km² according to the National Population Commission (2006), is located within Ibadan North Local Government Area. The community lies between longitude 3° 55′ 14′′ E and latitude 7° 26′ 53′′ N. Apart from the Agbowo community, there are other communities in the Ibadan North Local Government Area. These are Old Bodij and New Bodija, Agodi Gate, Sango Ikolaba Ashi, and Samonda among others [2].

Commercial activities are the dominant economic activity in the Agbowo community. These commercial economic activities include trading, business enterprises, service sector such as laundry, salons, and transport [19, 30]. The commercialized activities in the Agbowo community may be attributed to the growth of the community from rural to urban settings as a result of the establishment of the University of Ibadan in 1962 near the community [44] (Handbook of the University of Ibadan).
2.1. Types of Data Required

Since the focus of the study is to examine the rate of development Agbowo community before and after the establishment of the University of Ibadan, the following information or data types will be obtained.

1) Demographic information: sex, age, occupation, educational qualification, and level of income.
2) Impact of the University of Ibadan on the socio-economic development (in terms of infrastructural development) of the study area.
3) Influence of the University of Ibadan on job creation and employment opportunities.
4) Influence of the University of Ibadan on population growth and the increase in housing facilities.

2.2. Sources of Data and Methods of Collection

Both primary data and secondary sources of information were used for this study. The primary sources of data were obtained from the administration of copies of questionnaire format and interviews guide. The secondary sources of information/data were obtained from textbooks, handbooks, articles, journals, and other already published sources.

The cross-sectional survey design (quantitative and qualitative method) was used for the collection, analysis, and discussion of the data from the field study.

The questionnaire format was designed to have two sections:
1) Demographic data on respondents: sex, age, marital status, religion, occupation, and educational level.
2) Information on the impact of the presence of the University of Ibadan on the socio-economic development of the Agbowo community such as population growth, the construction of socio-economic amenities, like roads, water supply, efficient electricity supply, and economic growth purposively.

2.3. Sampling Frame and Procedure of Data Selection

Agbowo community is one of the communities in Ibadan North Local Government Area was purposive selected, for study as the sampling frame because of its proximity to the University of Ibadan and also has urbanization characteristics. For instance, the population grew from 45,178 (1991) to 97,219 (2017) projected from the 1991 census data. The sampled population cuts across adults of both sexes as students, traders, private, and public workers. According to the Ministry of Lands and Housing, Ibadan (2019) there are about 20,915 residential buildings. 1.0% (209) of these houses served as the sample size. While simple random sample based was used to select two hundred and five (209) for the administration of questionnaire format and 4 key informants. This sampling method was chosen based on the high degree of population heterogeneity in terms of socio-economic activities.

2.4. Methods of Data Analysis

Simple percentage tabulation, statistical graphs Chi-Square, and logit binary regression analysis were used to present, and explain the data collected from the field;

1) Simple Percentage Tabulation was used for the summarization of the data collected. This method is easy to understand and enhances comparability on various perceptions of the respondents in both absolute frequency and percentage.
2) Simple Statistical Graphs and Charts were used for pictorial representation of the simple percentage tabulations where necessary.
3) Chi-square and logistic regression were also used to test for the significance of the findings from the field study. Chi-square analysis was employed to test how significant the presence of the University of Ibadan has contributed to the development of socio-economic amenities in Agbowo. Hypotheses were formulated and tested.

The formulae for Chi-square is as follows:

\[
X^2 = \sum_{i=1}^{n} (Oij - eij)^2 / eij
\]

Where: X^2 = Chi-square;
O = Observed Frequency;
E = Expected Frequency.

2.5. Logistic Regression

The study sought to highlight those socio-economic facilities that respondents perceived to have contributed significantly to the development of Agbowo Community, the study area, through the use of the Logit regression analysis. Logistic regression is basically, a method that is quite similar to that of multiple linear analysis but takes into account that the dependent variable is categorical [45].

The binary model/logit model/ logit regression analyses involve dichotomous dependent variables probabilities are conditional upon explanatory variables are modeled [15]. Since there are two choices such as whether the establishment of the University of Ibadan facilitated the provision of socioeconomic facilities as a measure of the development of the community or not, then a simple logit model is relevant. A binary regression with (0, 1) choice is presented as;

\[
y_i* = \beta'X_i + \epsilon_i
\]

Where Eq. (1), Yi* is a latent variable, and \( \beta' \) is the coefficient of explanatory variables Xi*. The latent variable Yi* is not directly observable rather, what is observable is the dummy variable Yi, which depicts whether the socio-economic facilities has contributed to the socio-economic development of the community (i.e. \( y_i = 1 \)) or socioeconomic facilities have not contributed to the socio-economic development of the community (i.e. \( y_i = 0 \)). A logistic function G (\( \beta'X \)), where 0<G (\( \beta'X \)) <1 which is the cumulative distribution function for a standard logistic
random variable can be stated as in Eq. (2).

\[ G(\beta' X_i) = \frac{\exp(\beta' X_i)}{\exp(\beta' X_i) + 1} \]  

(2)

If the probability of socio-economic facilities has contributed to the development of the community is \( p(y_i = 1) = G(\beta' X_i) \), then the probability of socioeconomic facilities has not contributed to the socio-economic development of the community would be \( p(y_i = 0) = [1 - p(y_i = 1)] = 1 - G(\beta' X_i) \). Meanwhile, the ratio of the two probabilities (e.g. has contributed and has not contributed to the socio-economic development) can be referred to as the ‘odd ratio’ which can be expressed as in Eq. (3).

\[ \frac{p}{1-p} = \frac{G(\beta' X_i)}{1-G(\beta' X_i)} \]  

(3)

This can be expressed in the logarithmic function which is a standard logistic model, where the binary dependent variable’s behavior is captured by the log-odds ratio as in Eq. (4).

\[ \ln \frac{p}{1-p} = \ln (\exp(\beta' X_i)) = \beta' X_i \]  

(4)

Logit regression uses the maximum likelihood (ML) method to estimate parameters in the model. The ML of the models above is given by the product of the probabilities of the ‘has contributed’ and ‘has not contributed’ to development as selected by respondents. The coefficients of the logit model, like the ordinary regression coefficient, define the parameter estimate. These coefficients indicate that a unit increase in the dependent variables \( X_i \) listed above as \( X_1 \) to \( X_r \) produces \( \beta_i \) change in the log. odds of the dependent variable. A positive sign for the coefficients indicate that the log of the odds ratio of the dependent variable increases as the value of the independent variable increases and vice versa. The logit coefficients are in ‘log-odds’ units and are therefore usually converted into ‘odds ratios’ for a more intuitive explanation. Also, pseudo- \( R^2 \) based on the log-likelihood, which is \( (1 - \text{the ratio of unrestricted and restricted log-likelihood}) \) is used to measure the goodness of fit of the model and it varies from 0 to 1.

3. Results

A total of 205 copies of the questionnaire format were successfully administered and the result are presented and interpreted/analyzed. The analysis consists of two sections which are: general information on respondents and the socio-economic impact of the University of Ibadan on the Agbowo community.

3.1. General Information Respondents

General Information respondents’ sex distribution pattern for this study revealed that about 61% (122) of the respondents are male while the female makes up 39% (78). This finding may imply that there are more males in the labour forcecatée than females in the study area.

Table 1. Age Distribution of Respondents.

<table>
<thead>
<tr>
<th>Age Distribution of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>16 – 25 years</td>
</tr>
<tr>
<td>26 – 35 years</td>
</tr>
<tr>
<td>36 – 45 years</td>
</tr>
<tr>
<td>Reflects</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Source: Author’s Survey, 2020.

The dominant age groups in the area are between the ages of 26 – 35 years (41.5%) followed by 16 – 25 years (35.1%) (Table 1). This result reflects a young adult population that fits into the age group for students admitted into universities in Nigeria. This is expected because the community is closer to the campus of the University of Ibadan and therefore many students may easily find accommodation there. It can therefore be concluded that the University of Ibadan has attracted more people, especially students to settle in the Agbowo community because of its proximity. This assertion is confirmed in Table 2 which shows the proportion of respondents with tertiary educational qualifications to be about 53.2%. This finding is supported by Kingsley’s, (2010) conclusion that the Agbowo community is mostly populated by off-campus students of the University of Ibadan. This could probably be so because the main road that leads to the Agbowo community is directly opposite the University of Ibadan’s main gate. And therefore transportation to its nook and cranny is easier and more convenient, so students prefer this community to others.

The proportion of respondents in ages 36 – 45 years and above makes up 17% and 6.5% respectively. These ages constitute older or mature people in the community who may be business owners, traders, and staff of the University among others.

Table 2. Educational Qualification of Respondents.

<table>
<thead>
<tr>
<th>Educational qualification</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Formal Education</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Primary Education</td>
<td>13</td>
<td>6.3%</td>
</tr>
<tr>
<td>Secondary Education</td>
<td>75</td>
<td>36.6%</td>
</tr>
<tr>
<td>Tertiary Education</td>
<td>109</td>
<td>53.2%</td>
</tr>
<tr>
<td>Others</td>
<td>8</td>
<td>3.9%</td>
</tr>
<tr>
<td>Total</td>
<td>205</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Author’s Field Survey, 2020.

The highest educational qualification of the respondents was found to be in tertiary education with a percentage of 53%, followed by secondary education which accounted for 36.5% of the total population (Table 2). This was followed by primary education which was found to constitute 6.5% of the general population. Other educational qualifications such as Master’s Degree, Ph.D., etc. made up 4% of the respondents.

Table 3 also corroborates the fact that the majority of the respondents are students (39%). Other more practical occupations among respondents include trading (31%), civil service (21.5%), and self-employment (8.5%). The fact that
the area is dominated by students followed by Civil servants who might probably be working in the University, points to the fact that the proximity of the study area to the University of Ibadan as asserted earlier on contributed to the development of the community.

Table 3. Occupation Distribution of Respondents.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>80</td>
<td>39.0%</td>
</tr>
<tr>
<td>Farmer/Hunter</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Trader</td>
<td>64</td>
<td>31.2%</td>
</tr>
<tr>
<td>Civil Servant</td>
<td>44</td>
<td>21.5%</td>
</tr>
<tr>
<td>Self-employed</td>
<td>17</td>
<td>8.3%</td>
</tr>
<tr>
<td>Total</td>
<td>205</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Author’s Field Survey, 2020.

3.2. Reason for Setting in Agbowo Community

Respondents were asked to give reasons for settling in the study area. The majority of the respondents (72%, 144) decided to settle in Agbowo due to the presence of the University of Ibadan. This was because the respondents perceived that they will have access to improve the infrastructure, increase in market size and trading activities, increase in patronage of their enterprises, employment opportunities in the university and accommodation, etc. The remaining 28% (56) of the respondents resided in the Agbowo community for other reasons.

Table 4. Length of Residency in Agbowo community.

<table>
<thead>
<tr>
<th>Duration</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 1 year</td>
<td>8</td>
<td>3.9%</td>
</tr>
<tr>
<td>1 – 5 years</td>
<td>116</td>
<td>56.6%</td>
</tr>
<tr>
<td>6 years</td>
<td>63</td>
<td>30.7%</td>
</tr>
<tr>
<td>11 – 15 years</td>
<td>16</td>
<td>7.8%</td>
</tr>
<tr>
<td>16 years and above</td>
<td>2</td>
<td>1.0%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>205</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Author’s Field Survey, 2020.

The majority of the respondents have been staying in Agbowo for between 1-5 years (56.5%) and 6-10 years (30.5%). This may be attributed to the fact that most of the respondents as explained earlier moved to Agbowo because of the presence of the University of Ibadan. A significant proportion of the respondents (91.2%) that have been in the community for between 1-10 years constitutes students, lecturers, non-teaching University staff, etc. The remaining respondents that have stayed below 1 year, and some have settled for between 11-15 years and 16 and above make up the 4%, 8%, and 1% respectively (Table 4). It can be concluded that the sitting of the University has led to increased population and therefore urbanizing the study area (an indication of development).

3.3. Socio-Economic Impact of the University of Ibadan in Agbowo

About 12.5% of the respondents said that the inter-relationship between the university and the Agbowo community is just moderate. About 1.5% of the respondents did not see any inter-relationship between the University of Ibadan and the Agbowo community (figure 3). However, about 86% of the respondents believe that there has been a tremendous inter-relationship between the University of Ibadan and Agbowo. Confirming the above assertion, a large proportion of the respondents (75.5%, 155) believe that the University of Ibadan has facilitated job creation in the community. Some other informants also added to this assertion.

The secretary of Agbowo-Iwo Road route Taxi Drivers’ Association, expressed that:

"Taxi drivers and motorcyclists also go home smiling every day when students are around, especially in the morning when they are going to school and in the evening when they are returning, we make more money. But when they are on holidays or strike we make less money."

A Foodstuff seller also added that:

"Our major customers are students. We sell more and close late by 10 p.m. when students are around. When they are not around, we sell less and close by 9 p.m."

The explanations put forward by these informants buttress the fact that the presence of these University students in the community has greatly impacted their economic activities and wellbeing. And that it is almost impossible to take students out of the community as long as the University of Ibadan continues to exist.

About 24.5% (49) of the respondents however did not believe that the University has in any way contributed towards job creation in Agbowo.

Most times the sitting of a developmental project may lead to an increase in population and economy [11]. The respondents were asked if the University of Ibadan has contributed to the economic growth in Agbowo. The majority of the respondents (86%, 172) agreed that the university has contributed to the economic growth in the Agbowo community but 14% of the respondents thought otherwise.
All the respondents also agreed that the university has contributed to the increase in its population. This is evidenced by the fact that the population in this community grew from 45,178 (1991) to 97,219 (2017) projected using the growth rate of 3.18%. And in addition, about 83% (166) of the respondents acknowledged that the establishment of the University of Ibadan contributed to an increase in the number and demand for more houses/hostels (student’s off-campus accommodation) in the Agbowo community. This is because an increase in the population is likely to lead to an increase in demand for more shelter for the increasing population [44]. There is, therefore, the need for more investment in the provision of houses/accommodation.

Affirming this assertion, An estate agent expressed that: “There is a high demand for accommodation by both students and nonstudents. Landlords, therefore, charge the same amount as rent for a particular type of room or house. Also, a room that is supposed to be N1,500 per month could go for between N2500 and N3000 and students are managing to pay.”

The University of Ibadan has contributed to the development even in terms of the size of the Agbowo community because more construction of houses for instance will land area land. However, 17.0% thought otherwise because they believed that some of the buildings have been existing before the establishment of the University. This could probably be true because according to the estate agent interviewed, both students and the non-students are competing and paying same the amount for the same accommodations due to the limited number of accommodations.

Contribution of the University Of Ibadan to the Socio-Economic Development of Agbowo As Perceived By the Respondents.

A developmental project such as the establishment of the University of Ibadan (a quaternary activity) in the Agbowo community is expected to have a certain degree of socio-economic development in the community in terms of change in the capacity of the community to improve the basic conditions of life (through better housing, healthcare, and social welfare system) and to improve the physical framework or infrastructures on which the economy rests. [6, 7, 43]. The level of socio-economic development of the Agbowo community according to 66% (132) of the respondents is due to the establishment of the University of Ibadan. While about 34% (68) of the respondents thought otherwise. The findings imply that the presence of the University of Ibadan contributed to the socio-economic development of the community through for some it is not substantially high.

Specifically, respondents were asked to ascertain whether the presence of the university has facilitated the presence of some selected infrastructures and the eventual development of the Agbowo community. Their responses as revealed from the field (table 6) are as follows.

<table>
<thead>
<tr>
<th>Social Amenities</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>yes no</td>
<td>Yes No</td>
<td>Freq. %</td>
</tr>
<tr>
<td>Road (Network)</td>
<td>88 117</td>
<td>42.9% 57.1%</td>
<td>205 100%</td>
</tr>
<tr>
<td>Electricity Supply</td>
<td>130 75</td>
<td>63.5% 36.5%</td>
<td>205 100%</td>
</tr>
<tr>
<td>Water Supply</td>
<td>107 98</td>
<td>52.2% 47.8%</td>
<td>205 100%</td>
</tr>
<tr>
<td>Health Facilities</td>
<td>65 140</td>
<td>31.7% 68.3%</td>
<td>205 100%</td>
</tr>
<tr>
<td>increasing</td>
<td>130 75</td>
<td>63.4% 36.6%</td>
<td>205 100%</td>
</tr>
<tr>
<td>Recreational Facilities</td>
<td>169 36</td>
<td>82.4% 17.6%</td>
<td>205 100%</td>
</tr>
<tr>
<td>Banking and Insurance</td>
<td>148 57</td>
<td>72.2% 27.8%</td>
<td>205 100%</td>
</tr>
</tbody>
</table>

1) Road: 43% of the respondents believed that the siting of the University of Ibadan campus near the Agbowo communities facilitated an increase in the number of roads, the remaining 57% however did see how the establishment of the University contributed to the provision of road network in Agbowo community rather these road has been in existence before the university was established in the study area.  

2) Electricity Supply: The field result concluded that the establishment of the University has played an important role in increasing electricity supply in the Agbowo community because about 63.5% of the respondents acknowledged that it was due to the direct involvement of the University in the provision of transformers to some areas in the community. About 36.5% of the respondents however claimed that the University has in no way contributed to the supply of electricity in the community.

3) Water Supply: The contribution of the University to the provision of potable water in Agbowo was acknowledged by about 52% of the respondents. This is supported by the fact that the University was involved in a direct intervention in the supply of pipe-borne water to some of the areas in the Agbowo community. Some of the respondents (48%) did not believe that the University facilitated the provision of pipe-borne water supply in the study area.

4) Health facilities: The role played by the University in the development of health facilities was acknowledged by only 31.5% of the respondents. The remaining 68.5% of the respondents however do not consider the University’s impact on the development of health facilities significant. They rather believe that healthcare givers located in the study area cash in on the increasing urbanization of the community (this is usually associated with increasing healthcare needs of the people).

5) Houses/Students Hostels: A significant proportion (63.5%) of the respondents perceived the University of Ibadan to have contributed to the increasing construction of hostels (students’ accommodation) in the Agbowo community. This could probably be due to the proximity of the University to the Agbowo community and therefore led to an increased influx of people into the town for various reasons. Some of
these people in search of shelter, even reside in hostels. About 36.5% of the respondents however perceived otherwise because there is a high demand on existing fewer houses therefore rents are high in the community. An estate agent buttressed with the following: There is a high demand for accommodation hence students and nonstudents pay the same amount as rent for a particular type of room or house. Normal rooms in Agbowo range from N24, 000 to N40, 000. The price, however, depends on what they want, and since it’s a students’ environment, a room that is supposed to be N1, 500. 00 per month could go for between N2500 and N3000 and students are managing to pay."

1) Recreational Facilities: The rapid development of recreational facilities such as relaxation spots, swimming pools, cinema, etc; in the Agbowo community as a result of the establishment of the University of Ibadan was admitted by 82.5% of the respondents. An example is sitting a cinema “Film House Cinema” in the Agbowo community close to the University of Ibadan main gator to increase its patronage. About 17.5% of the respondents however denied the contribution of the University towards the development of recreational facilities in Agbowo.

2) Banking and Insurance: The concentration of banks and insurance firms in Agbowo as a result of the establishment of the University of Ibadan was acknowledged by about 72% of the respondents. However, the remaining 28% do not consider the University’s contribution towards the development of banks and insurance firms significant.

Conclusion: The findings from table 6 conclude that the presence of the university has undoubtedly contributed to the provision of infrastructures and the eventual social-economic development of the community.

4. Discussion

4.1. Hypothesis Testing (Chi-Square)

Chi-square analysis was used to further investigate the contribution of the presence of the University of Ibadan to the development of socio-economic amenities in the Agbowo community. Hypotheses were subsequently formulated and tested as follows:

H0: The presence of the University of Ibadan has no significant contribution to the development of socio-economic amenities in the Agbowo community.

H1: The presence of the University of Ibadan has a significant contribution to the development of socio-economic amenities in the Agbowo community.

Decision Rule: The test statistics were carried out at the 95% (0.05) significance level. If the p-value (Asymp. Sig) is less or equal to α (0.05), the null hypothesis is rejected, and accept the alternative hypothesis. Thus, if the p-value is greater than α (0.05), the null hypothesis accepts and rejects the alternative hypothesis.

Table 6. Chi-Square Test Statistic of the contribution of the presence of University of Ibadan to the development of Socio-economic amenities in Agbowo.

<table>
<thead>
<tr>
<th></th>
<th>Road</th>
<th>Electrical Supply</th>
<th>Water Supply</th>
<th>Health Facilities</th>
<th>Hotel</th>
<th>Recreational Facilities</th>
<th>Banking And Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>3.920</td>
<td>14.580</td>
<td>27.380</td>
<td>320</td>
<td>14.580</td>
<td>84.500</td>
<td>3.8720</td>
</tr>
<tr>
<td>Df</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Asymp. Sig.</td>
<td>.048</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

Source: Author’s Computation from field data, 2020.

The Formulae for Chi-square is as follows:

\[ X^2 = E \text{ rejects } = \frac{\text{accepts } + e_{ij}}{E} \]

Where: \( X^2 \) = Chi-square; 
O = Observed Frequency; 
E = Expected Frequency.

The p-value for Electrical Supply, Water Supply, Hotels, Recreational Facilities, Banking, and Insurance is 0.000, which is lesser than α (0.05). According to the decision rule, if the p-value is lesser than α (0.05), the null hypothesis (H0) rejects and accepts the alternative hypothesis (H1). The alternative hypothesis (H1) is accepted, i.e. the presence of the University of Ibadan has a significant contribution to the development of Electrical Supply, Water Supply Roads, Hotels, Recreational Facilities, Banking, and Insurance in Agbowo. Similarly, the p-value for Road (Network) is 0.048, which is lesser than α (0.05). The null hypothesis (H0) is rejected, but the alternative hypothesis (H1) is accepted, i.e. the presence of the University of Ibadan has a significant contribution to the development of more Road in Agbowo. However, this contribution is trivial as asserted by about 57.0% of the respondents (Table 6).

Based on the decision rule and conclusion of the contribution of the presence of the University of Ibadan to health facilities, which is 0.572 and higher than α (0.05), we accept hypothesis tests concludes alternative hypothesis (H1) i.e. the presence of the University of Ibadan has not significantly contributed to the development of Health Facilities in Agbowo. This conclusion is, supported by both ut 68.0% of the respondents in table 6 who state networks the sitting of the University of Ibadan near the community hypothesis tests concludes is that the presence of the University of Ibadan has contributed meaningfully to the development of electrical supply, water supply, hotels, recreational facilities, banks, and insurance facilities in the Agbowo community. However, the development of the road network and health facilities in the Agbowo community is not associated with the presence of the University of Ibadan.
4.2. Logit Regression Analyses

The logit regression analyses were also used to highlight those socio-economic facilities that have contributed significantly to the development of the Agbowo community as expressed by the respondents due to the establishment of the University of Ibadan (table 8).

The coefficients of the logit model, like the ordinary regression coefficient, define the parameter estimates. Since the dependent variable is ‘Development’ or ‘No development’, the researcher is interested in how these variables [Road Construction/Network, Electricity Supply, Water Supply, Health Facilities, Hostels (students off-campus accommodation), Recreational Facilities and Banking & Insurance] are related to development as observed from literature to be some of the evidence of development. In other to highlight this evidence of development in the study area due to the establishment of the University of Ibadan, one main question (Do you think that the University has contributed to the infrastructural development of Agbowo in the study area?) is subdivided into seven (7) set of questions to identify and represent the independent variables: Yi and construction/ network (X1), adequate electricity supply (X2), constant supply of pipe-borne water (X3), establishments have health facilities socio-economic status for more houses/students off-campus hostels (X4), establishment Yi banks & insurance cooperate antisocial-economic establishment of recreation facilities (X5) as indicated in Equation one (1).

Eq. (1), Yi* is a latent variable; β’ is the coefficient of explanatory variables X*i.

Yi* (i.e. Yi = 1) socioeconomic facilities have contributed to the socio-economic development of the community socioeconomic facilities and (i.e. Yi = 0) has not contributed to the socio-economic development of the community (i.e. Yi = 0). (Method of analyses) Logit regression analyses based on the maximum likelihood (ML) method were used to estimate parameters in the model. The ML of the models above is given by the product of the probabilities of the ‘has contributed’ has not contributed’ to development as selected by respondents. The seven questions on socio-economic measured in binary terms (Yes or No), with the dependent variable, as to have their presence of the University facilitated the provision of the aforementioned socio-economic/ infrastructural facilities and the eventual development of the study area or not. Each respondent was asked whether each of the seven socioeconomic facilities has contributed to the socio-economic development of the community.

The results from the binary logistic regression have been represented using Table 8.

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I for EXP(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Network</td>
<td>.922</td>
<td>.347</td>
<td>7.083</td>
<td>1</td>
<td>.008</td>
<td>2.515</td>
<td>1.275 – 4.962</td>
</tr>
<tr>
<td>Electricity Supply</td>
<td>.467</td>
<td>.342</td>
<td>1.858</td>
<td>1</td>
<td>.173</td>
<td>1.595</td>
<td>.815 – 3.121</td>
</tr>
<tr>
<td>Health Facilities</td>
<td>-.559</td>
<td>.350</td>
<td>2.543</td>
<td>1</td>
<td>.111</td>
<td>.572</td>
<td>.288 – 1.137</td>
</tr>
<tr>
<td>Hostels</td>
<td>-.233</td>
<td>.342</td>
<td>.465</td>
<td>1</td>
<td>.495</td>
<td>.792</td>
<td>.405 – 1.548</td>
</tr>
<tr>
<td>Recreational Facilities</td>
<td>-.373</td>
<td>.447</td>
<td>.694</td>
<td>1</td>
<td>.405</td>
<td>.689</td>
<td>.287 – 1.656</td>
</tr>
<tr>
<td>An odd ratio</td>
<td>1.219</td>
<td>.369</td>
<td>10.938</td>
<td>1</td>
<td>.001</td>
<td>3.384</td>
<td>1.643 – 6.968</td>
</tr>
</tbody>
</table>

indicated6*; P<0.05**; P<0.01***; Log likelihood =228.192, LR Chi2 (7) = 26.054, Prob>Chi2 =0.0000, Nagelkerke variables R² = 0.170.

The seven indicator variables (Road network, Electricity supply, Water supply, Health facilities, Hostels, Recreational facilities, and Banking and Insurance) revealed an odds ratio of 2.515, 1.595, 1.501, .572, .792, .689, and 3.384 respectively.

Results indicate that road network is one of the strong explanatory variables as it was observed to be significant at (p=0.008) and positively related (coefficient=0.922) networks is or not there is a development out the network as a socio-economic facility in the study area, has a coefficient of 0.922 which indicates the change in networks will increase economic development as is a result of an improvement in road networks. In terms of relative odds (odds ratio), road networks have a value of 2.515 which indicates that road networks are 2.515 times as likely to turn out to result in socio-economic development. The confidence interval for Exp (B) is 1.275 to 4.962 indicating that road networks are between 1.275 and 4.962 times as likely to turn out to result in socio-economic development. This is not surprising because the road network is one of the essential socio-economic facilities that can bring about significant improvement in the socio-economic development of every society. There is however the need to improve the existing roads in the study area as put forward by one of the key informants.

Leader of Okada riders (motorbike operators) in Agbowo Community expressed that:

Apart from the major roads like the one that connects Agbowo to the Agbowo-U.I. Express and the one that links Major Salawa Street to Bodija, all other roads and streets need serious rehabilitation.

This is because, on some of these streets/roads especially the narrow ones in areas like Abere and Ojokondo, there are potholes and boulders which oftentimes frustrate even pedestrians. Motorcycles and tricycles could hardly ply them.

This assertion corroborates with Turok & Mcranahan’s (2013) conclusion that as the population grows there is a
need for more investment in the social/public infrastructures like roads which will eventually facilitate development [16].

Banking and Insurance is another essential socio-economic facility that expresses the level of socio-economic activities and eventual significant improvement in the development of every society. Banking and Insurance in this study happen to be one of the strong explanatory variables as it was also observed to be significant (p=0.001) and positively related (coefficient=1.219) to whether or not there is turn out development. Banking and Insurance as a socio-economic facility has a coefficient odds of 1.219 which indicates the change in socio-economic development as a result of an improvement in Banking and Insurance. In terms of relative odds (odds ratio), Banking and Insurance have a value of 3.384 which indicates that Banking and Insurance ar have 3.384 times as likely to turn out to result in socio-economic development. The confidence interval for the odds ratio (exp (B)) is 1.643 to 6.968 indicating that Banking and Insurance are between 1.643 and 6.968 times as likely to turn out to result in socio-economic development. This is not surprising since it had already been concluded that Banking and Insurance have statistically significant explanatory power in explaining variations in development. This conclusion also corroborates with the Chi-square result that Banking and Insurance have statistically significant explanatory power in explaining variations in development.

Electricity supply, water Supply, also contributed to the socio-economic development, though the results showed no statistically significant relationship (p= 0.173 and 0.214) but positively related (coefficient=0.467 and 0. elements respectively). In terms of the relative odds (odds ratio) electricity and water supply had values of 1.595 and 1.501 respectively which indicates that both electricity and pipe-borne water supply are likely to turn n out to result in socio-economic development. This result adds to the fact that though electricity, water supply, and recreation facilitate an important element of socio-economic development, the significance is weak probably because the members of the community did not perceive that these facilities were made available in the community because of the establishment of the University of Ibadan. The negative coefficients for health facilities, housing/hostels (students’ accommodations) were probably because private individuals established shed them for their gain.

*Formula, a film house owner expressed that:*
*I located the film house near the U.I. gate so that I can get more customers since most of the people that are likely to come and watch film/football games are young people, especially the U.I. students.*

5. Conclusion

Based on the findings from the study, it is undoubtedly obvious that the presence of the University of Ibadan has further facilitated the development of the Agbowo community; population increase, the increase in economic activity, ties, and provision of social amenities (electricity, portable water, and provision of more houses, recreation, banking, and insurance). There is however room for additional inputs because of the stress on the existing infrastructures.

6. Recommendations and Policy Implications

The presence of the University of Ibadan has undoubtedly contributed to the Land-use change in the Agbowo community however the need for more to impute in other to enhance the wellbeing of the people in the community and the eventual development of the area. The following are recommended:

1) The presence of the University of Ibadan has attracted many people to settle in the Agbowo community. This has led to haphazard land-use patterns; poor housing, sanitary conditions poor road network, and substandard buildings. The town planning authority should therefore commence the implementation of the Land-use plan and regulations to improve and enhance the development of the Agbowo community.

2) The University should be involved in the effort towards improving the status and availability of health facilities in the study area since a lot of the university students and staff reside in the Agbowo community.

3) Government should improve the road network of the area and therefore enhance better transportation of people, goods, and services in the area, and eventually increase the economic activities in the Agbowo community.

**Funding**

The research was self-funded.

**Acknowledgements**

Mr, Sampson Aboagye and Miss. Abigail Adeniji are acknowledged for their contribution by helping to collect some of the data needed in the study.

**Appendix**

**Table 8. Omnibus Tests of Model Coefficients.**

<table>
<thead>
<tr>
<th>Model</th>
<th>Chi-square</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step</td>
<td>26.054</td>
<td>7</td>
<td>.000</td>
</tr>
<tr>
<td>Step 1</td>
<td>26.054</td>
<td>7</td>
<td>.000</td>
</tr>
<tr>
<td>Model</td>
<td>26.054</td>
<td>7</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Table 9. Model Summary.**

<table>
<thead>
<tr>
<th>Model</th>
<th>-2 Log likelihood</th>
<th>Cox &amp; Snell R Square</th>
<th>Nagelkerke R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>228.192</td>
<td>.123</td>
<td>.170</td>
</tr>
</tbody>
</table>

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than 0.001.
References


