

# Effect of Household Investment in Human Capital On Economic Development in Oyigbo Local Government Area of Rivers State, Nigeria

Ugochukwu Henry Agbarakwe

Department of Economics, Faculty of Social Sciences

University of Port Harcourt, Port Harcourt, Nigeria

doi: <https://doi.org/10.37745/gjahss.2013/vol12n21533>

Published February 23, 2024

---

**Citation:** Agbarakwe U.H. (2024) Effect of Household Investment in Human Capital On Economic Development in Oyigbo Local Government Area of Rivers State, Nigeria, *Global Journal of Arts, Humanities and Social Sciences*, Vol.12, No.2, pp.15-33

---

**ABSTRACT:** *This study investigated the effect of “Household Investment in Human Capital on Economic Development in Oyigbo Local Government Area of Rivers State” using health care, poverty reduction and political participation as proxies for development. It made use of primary data collected using the instrument of questionnaire administered to the residents in the area. Statistical tools such as frequency distribution table, percentages and mean were used to present and analyze the data while the chi-square was used to test the formulated hypothesis. The study showed a significant positive effect of household investment in human capital investment on economic development in Oyigbo Local Government Area of Rivers State. It therefore recommended that households should be granted some tax reliefs to increase their disposable income capability for sustained human capital investment and sustainable economic development. The government is also advised to redouble their investment on infrastructure and the educational sector to support the effort the households.*

**KEYWORD:** household, human capital, investment, sustainability, economic development

---

## INTRODUCTION

Sophisticated indigenous human capital has become more important especially in this era of globalization, when capitalists are penetrating every nook and cranny of the world economy, investing and repatriating their profit. To be able to participate profitably in such a world economy, there is need for a properly educated work force, scientists and technologies, (the South Commission 1990; South Centre 1998). According to Itte (2011) as globalization spreads, linkages

define future relationships and education and training determines who does business with whom. This new world would favour those countries that have an educated and intelligent workforce. What is happening in China, South Korea and Ireland today buttresses this point. These countries invested in their university system, the result has been a trained and educated workforce that has attracted industries to re-locate and out-source to them.

There can be no significant growth in any country without adequate investment in human capital, which is attained through both formal and informal education. Hence, the United Nations recommended that developing countries should invest 15%-20% of their annual budget on education and the World Health Organization specified that at least 5% of annual budget be allocated to health. Nigeria has not been able to meet this bench mark. In 2012, the education sector got a meager of 8.4% of the budget while the health sector got about 6% of the budget (source; 2012 National Budget-Provisional). Budget on education was 8% in 2017, 7% of the 2018 budget was for education and 4.3% of the budget went to health which-is less than the required percentage recommendation by the World Health Organization (Daily Trust, February, 2018). This is an indication that there is no adequate investment in human capital in Nigeria.

The Human Development Index (HDI) has three indicators: income, life expectancy (proxy for health) and knowledge (proxy for education). The rank of countries (as indicated in the 2011 report page 131) showed that Nigeria ranked 156 with a value of 0.459 among 187 countries. The millennium development goal no.2 specified that primary education should be made free and compulsory come 2015. However, the primary school enrolment rate in Nigeria has be reducing drastically over the years. The Health Development Index (HDI) 2013 report showed that Nigeria ranked 153 with a value of 0.471 among 187 countries. These are indicators that investment in human capital is not given priority in Nigeria.

How has Nigeria fared in the advancement of their educational institutions, this invaluable tool of development? Up to the early 1980s, institutions were relatively well funded and equipped hence they produced high quality graduates that competed favourably with their counterparts elsewhere. The early 1980s to 1986 came with complications when the world economy witnessed the oil glut which led to the decline of the Nigerian national income; this led to a restriction in the national budgets and a reduction in the funding of the Universities. According to the world (1987) expenditure on education reduced in the low income countries from 13.2% to 7.6%. Tudun-wada (1992) has it that most often, the shortfall between the amount required by the National University

Commission (NUC) and that approved by the government often went as high as 30- 40% in Nigeria.

The funding inadequacies tended to shift the responsibility of human capital investment away from the government to the already impoverished households that have understood the powerful connection between it and human development. This ugly trend has continued till today and the outcome of the incessant industrial action by the Academic Staff Union of Universities (ASUU) buttresses the inadequacies in funding and grief of academic staff and the educational system in general.

### **Statement of the Problem**

Investment in human capital through education and health is expected to guarantee economic growth and development of a nation. In Nigeria, and indeed Rivers State and Oyigbo local Government Area, it has been seen that government investment in human capital is very low. This government failure has forced households to own up the responsibility in Oyigbo Local Government Area with each investing as much as 30% of their annual income. Due to the level of poverty, a larger percentage of the household borrow heavily to be able to invest in human capital and as a result, live the rest of their lives without the basic necessities of life.

The household most often continue, without any choice, with this poverty until the time of maturity of their investment, a period when their sons and daughters have graduated and gotten jobs. But because of the level of unemployment in the economy, most of these investor households were not lucky enough to have their sons employed and so they continued with abject poverty after such investment. With grave economic implication faced with the duality of outcome of human capital investment, some people have commented that such investment leads to economic development. While others say it has not and instead led to under-development of households. There is need to ascertain which of these views is true. Unfortunately, empirical study in this area is not readily available. Most studies on the impact of investment in human capital on economic development were conducted at the national scale without considering its impact at the States or local levels. In view of this, the present study intends to fill the gap as it examines human capital investment and economic development in Oyigbo Local Government Area of Rivers State.

### **The Objectives of the Study**

The aim of this study is to investigate the effect of household investment in human capital on economic development in Oyigbo Local Government Area of Rivers State. Specifically, the study is intended to examine the effect of household:

- a) Investment in human capital on health care in Oyigbo Local Government Area of Rivers State.
- b) Investment in human capital on poverty reduction in Oyigbo Local Government Area of Rivers State.
- c) Investment in human capital on political participation in Oyigbo Local Government Area of Rivers State.

### **Research Hypotheses**

The following hypothesis will guide this study,

- Ho<sub>1</sub>: There is no significant effect of human capital investment on health in Oyigbo Local Government Area.
- Ho<sub>2</sub>: There is no significant effect of human capital investment on political participation in Oyigbo Local Government Area.
- Ho<sub>3</sub>: There is no significant effect of human capital investment on poverty reduction in Oyigbo Local Government Area.

Using descriptive research survey design, structured questionnaires were administered to purposefully selected respondents that are expected to have information on investment in human capital and economic development of their community in Oyigbo Local Government Area of Rivers State. Specifically, data collected are primary data on the effect of household investment in human capital on housing and income in Oyigbo LGA of Rivers State. The sample size of 400 was determined using Taro Yamane (Yamane 1973) formula with 5% or 0.05% confidence level. Accordingly, 180,300 persons from the 2022 projected census for Oyigbo Local Government, the calculation formula of Taro Yamane is presented as follows

$$n = \frac{N}{1 + N(e)^2}$$

Where

n= Sample size

N = Population size

e = Level of Precision or Sampling Error

This is  $\pm 5\%$  or  $0.05\%$

But the population size is 180,300

$$n = \frac{180,300}{1+180,300(0.05)^2}$$

$$n = \frac{180,300}{451.75}$$

$$n = 399.11$$

400 (approx.)

Data collected would be presented and analyzed using statistical tools such as distribution table, percentage and mean. Chi-squared would be used for testing the formulated hypothesis.

## LITERATURE REVIEW

### Human Capital Theory

Human capital theory view schooling and training as investment in skills and competences (Schultz, 1960 and 1961). It is argued that based on national expectation of return on investment, individuals make decisions on the education and training they receive as a way of augmenting their productivity. A similar strand of studies focuses on the interaction between the education and skill levels of the workforce and measurements of technological activities (Nelson and Phelps 1996). According to this theory, a more educated and skilled workforce makes it easier for a firm to adopt and implement new technologies; thus, reinforcing returns on education and training. Empirical studies provide evidence supporting the aggregate effects of education and training.

As the global economy shifts towards more knowledge based sectors (e.g. the manufacture of ICT based services, R & D), skills and human capital development becomes a central issue for policy makers and practitioners engaged in economic development, both at national and regional levels (OECD, 1996). This theory has T.W. Schultz (1902-1998), and Gary Becker (1930-1920), as the major proponents. This shows how education leads to increase in productivity and efficiency of workers by increase in the level of their cognitive skills. Theodore, Schultz, Gary Bucker and Jacob Mincer introduced the notion that people invest in education so as to increase their stock of human capabilities which can be formed by combining innate abilities with investment in human beings (Babalol, 2000). Human capital theorists have established that basic literacy enhances the productivity of workers in low-skill occupations.

### **The Modernization Theory**

The proponents of this theory are Walter Rostow, W.A Lewis and talcott parson. This theory is used to explain the process of modernization within societies. Modernization refers to a model of a progressive transition from a pre-modern or traditional society to a modern society. The theory looks at the internal factors of a country while assuming that with assistance, traditional countries can be brought to development in the same manner more developed countries have been.

Modernization theory both attempts to identify the social variables that contribute to social progress and development of societies and seeks to explain the process of social evolution. This theory focuses on how education ‘transforms an individual’s value, belief and behavior. Exposure to modern institutions such as schools, factories, and mass media inculcate modern values and attitudes. The attitude include openness to new idea, independence from traditional authorities, willingness to plan and calculate further exigencies and growing sense of personal and social efficacy. According to the modernization theorists, these normative and attitudinal changes continue throughout the life cycle, permanently altering the individual’s relationship with the social structure. The greater the number of people exposed to modernization institutions, the greater the level of individual modernity by the society. Once a critical segment of a population changes in this way, the pace of society’s modernization and economic development quickens. Thus, educational expansion through its effects on individual values and benefits sets in motion the necessary building blocks for a more productive workforce and a more sustained economic growth.

### **The Dependency Theory**

The proponents of this theory include: Karl Marx, Raul Prebisch, Hans Singer and Paul A Baran. This theory arose from Marxist conceptualizations based on the dynamic world system that structures conditions for economic transformation in both the core and periphery of the world economy. Certain features of the world polity such as state fiscal strength, degrees and regime centralization and external political integration may contribute to economic growth in the developing world. Here, the notion is that resources flow from a “periphery” of poor and underdeveloped states to a “core” of wealthy states, enriching the latter at the expense of the former. It is a central contention of dependency theory that poor states are impoverished and rich ones enriched by the way poor state are integrated into the “world system”. It is basically concerned with how developing countries are dependent on developed countries.

The premises of dependence theory are that: poor nations provide natural resources, cheap labour, a destination for obsolete technology, and market for developed nations, without which the latter could not have the standard of living they enjoy. Wealthy nations actively perpetuate a state of dependence by various means. This influence may be multifaceted, involving economic, media control, politics, banking and finance, education, culture and sports.

### **Human Capital Development Policies in Nigeria**

Although there are many ways to assess human capital development, only a few important ones that are readily measurable shall be considered. They include: poverty reduction and empowerment of Nigerians in rural and urban areas to be economically productive. Under the poverty reduction program, the government states that the strategy to be employed will be to empower Nigerians both in rural and urban areas to be economically productive with a view of improving their quality of life. To avoid the mistakes of the past projects and measures to be implemented was to be people oriented. The people concerned, as stakeholders were expected to take ownership for significant improvement in water supply, basic educational facilities, (both under the universal basic education (UBE) scheme and mass adult literacy program) and basic health facilities will be embarked upon immediately on nationwide basis (FGN, 1999).

On the basis of the above statement, looking at the scorecard with respect to education, it is discovered that under education, adult literacy did not improve by any margin. The number of pupils per primary increased while the number of pupils per teachers also increased. Also, the number of pupils per secondary school increased while the number of pupils per teacher stagnated.

**National Poverty Eradication Program (NAPEP):** This program was established under section 153 of the 1999 constitution of the federal republic of Nigeria by the General Olusegun Obasanjo (Rtd) led government aimed at poverty reduction absolute terms. It was focused on the provision of strategies for the eradication of absolute poverty in Nigeria, and it Considering NAPEP as one of the national poverty eradication programs, nothing very serious has taken shape as it is yet to identify any tangible project undertaken under this program. Most of the sub-programs under the NAPEP remain on paper. Again, some of the preliminary studies on the content, nature and coverage of the NAPEP show that contrary to government pledge to involve stakeholders in determining the projects and to take ownership, the poor were not in any way part of the decision making as their opinion was neither sought nor their inputs accepted.

**National Economic Empowerment Development Strategy (NEEDS):** In trying to tackle the poverty in the nation, the president Olusegun Obasanjo led administration birthed a policy to alleviate the malady lurking around the economy this brought about N E E D S . This policy was to develop the nation the action of human resources on the natural resources to produce goods necessary to satisfy the economic needs of country. NEEDS as a federal government strategy was complemented by equivalent approaches at state and the local government levels.

### **Oyigbo Local Government Area**

Oyigbo Local Government Area is situated in Rivers State, South-South geopolitical zone of Nigeria with its headquarters in Oyigbo town. Several towns and villages make-up Oyigbo Local Government Area and these include:

#### **Oyigbo District:**

Asa  
Komkom  
Obeama  
Oyigbo

#### **Ndoki District:**

Afa Uku	Mrihu	Egberu	Okoloma
Afam	Obeakpu	Mgboji	Okponta
Afam Nta	Obete	Umuagbai	Umuosi
Azusogu	Obumku		

The estimated population of Oyigbo Local Government Area as at 2022 is 180, 300 (National Population Commission/National Bureau of Statistics). Inhabitants with several languages such as Ogoni Kalahari and Ikwerre spoken in the area. Christianity is the widely practice religion in Oyigbo, LGA. Trading is one major economic activity in Oyigbo LGA; especially in Oyigbo District. Another occupation of the people of Oyigbo is farming. Oyigbo central market is a major hub of commercial activities, especially buying and selling; so much that the entire market-stretch along the old Aba-Port Harcourt road can be considered as the central business district (CBD) of the town.

### **Empirical Literature**

Several studies, have been carried out to examine the relevance or importance of human capital development in the achievement of economic development. Some of the empirical studies reviewed include Haribison and Myer (1964), Wilson and Briscoe (2003), Odubunmi, Saka and Oke (2012), Yaqub (2013), Mehrara and Musai (2011), Barro (1996), Barro (2001), Adeniyi and Abiodun (2011), Ordior (2011), Olaniyi and Adams (2000), Chete and Adeoye (2002), Odusola (1980), Greine (2005), Aenor (2007), Strauss and Thomas (1998), Martins (2005)Sankay, Ismail and Shaari (2010), Amassoma and Nwosa (2011), Riman and Akpan (2010), Lustig (2006),



Musibau and Rasak (2005), Bakare (2006), Dauda (2010), Adelokun (2011), Mayer (2004) Wilhelmson and Gerdtham (2006), Mizushima (2008), Edward (2005), Lucian, Stracive, Maghiar, and Ciprian (2010), Rivera and Currais (2003), Bloom, Canning, and Sevilla (2001) and Akram (2011).

There seem to be a consensus from most of these studies that the development of human capital engender or enhance economic development. A lot of them were carried out at the national level using secondary data. This study is rural based and focused on Obigbo Local Government Area of Rivers State in Nigeria. As mentioned earlier it made use of primary data.

### Data and Analysis

Table 4.1 Showing the respondents to the four hundred (400) questionnaires.

Number	Response	Percentage
Total distributed	400	100%
Completed and returned	380	95%
Unreturned	20	5%

Source: Survey questionnaire, 2023

The table shows that 400 copies of questionnaire were distributed to 400 persons in the study area: 380 questionnaires were completed and returned, while 20 copies of the questionnaires were not returned. Analysis will therefore be based on the returned 380 copies of the questionnaire returned.

Table 3.2: General Data Presentation.

S/No.	Human Capital Investment	Male	Female	SA	A	DA	SD	Total
1	Health: Infant and maternal health.	12	26	25	10	2	1	38
2	Health: food and Sanitary	17	23	28	10	2	0	40
3	Health: Hospital patronage	19	19	30	6	1	1	38
4	Health: Doctor's prescription	20	16	25	5	4	2	36
5	Poverty: Welfare and Living condition	28	8	20	15	1	0	36
6	Poverty: Reduction in Level	22	13	18	14	1	2	35
7	Political Participation: Active Partisan Politics.	24	11	20	13	2	0	35
8	Political Participation Awareness And Decision-Making Role.	28	12	21	18	1	0	40
	<b>Total</b>	<b>266</b>	<b>114</b>	<b>232</b>	<b>122</b>	<b>18</b>	<b>8</b>	<b>380</b>

Source: Survey questionnaire, 2023

**Data Analysis.**

By the Likerts scale: 4,3,2,1; the respondents' data for the human capacity investment (HCI) for economic development corresponds to the table below:

SA = 4, A = 3, DA = 2, SD = 1

$$\text{Mean of the Likert's scale, } \bar{x} = \frac{\Sigma X}{N} = \frac{4+3+2+1}{4}$$

$$= \frac{10}{4} = 2.5$$

But, for a better measure of the positive value of the respondents data, let  $\bar{x} = 3.00$ . Thus, any mean or average below 3.00 for any of the human capital investment (HCI) basis for economic development will be rejected.

**Table 3.3. Health: Infant And Maternal Health Improved As A Result of Human Capital Investment.**

S/No	Response	X	$\bar{X}$	F	FX
1	SA	4	3	25	100
2	A	3	3	10	30
3	DA	2	3	2	4
4	SD	1	3	1	1

$$\Sigma F = 30 \quad \Sigma FX = 135$$

$$\text{Mean } \frac{\Sigma FX}{\Sigma F} = \frac{135}{38} = 3.55 = 3.6 \approx$$

**Comment:** The mean of average for **infant and maternal health is 3.6:** above the 3.0 standard specified. So, it confirms item 1 in the questionnaire: **The quality of infant and maternal health has improved as a result of investment in human capital.** Hence, we reject the specific hypothesis: **There is no significant effect of human capital investment on infant and maternal health in Oyigbo Local Government Area.**

**Table 3.4 Health: Food and Sanitary Condition has improved.**

S/No	Response	X	$\bar{X}$	F	FX
1	SD	4	3	28	112
2	A	3	3	10	30
3	DA	2	3	2	4
4	SD	1	3	0	0

$$\Sigma F = 40 \quad \Sigma FX = 146$$

$$\text{Mean } \frac{\Sigma FX}{\Sigma F} = \frac{146}{40} = 3.65 = 3.7 \approx$$

**Comment:** The mean or average for **food and sanitary conditions** is 3.7: above the 3.0 standard specified. This confirms item-2 in the questionnaire: **“The health condition of the people in Oyigbo has improved as a result of improved quality of food and sanitary condition from human capital investment”**. Therefore, we **reject** the specific hypothesis: **“there is no significant effect of human capital investment on the food and sanitary conditions of people of Oyigbo Local Government Area”**.

**Table 3.5 Health: Hospital Patronage Has Improved.**

Response	X	$\bar{X}$	F	FX
SD	4	3	30	120
A	3	3	6	18
DA	2	3	1	2
SD	1	3	1	1

$$\Sigma F = 38 \quad \Sigma FX = 141$$

$$\text{Mean, } X = \frac{\Sigma FX}{\Sigma F} = \frac{141}{38} = 3.71 = 3.7 \approx$$

The mean or average for **hospital patronage is 3.7**. Thus, it confirms item-3 in the questionnaire: **“as a result of human capital investment by health education, people now patronize hospitals instead of spiritualists and herbalists when they are sick”**. Therefore, we **reject** the specific hypothesis: **“there is no significant effect of human capital investment on the patronage of hospitals by the sick in Oyigbo Local Government Area”**.

**Table 3.6 Health: Commitment to Doctors Prescription Has Improved.**

Response	X	$\bar{X}$	F	FX
SD	4	3	25	100
A	3	3	5	15
DA	2	3	4	8
SD	1	3	2	2

$$\Sigma F = 36 \quad \Sigma FX = 125$$

$$\text{Mean } \frac{\Sigma FX}{\Sigma F} = \frac{125}{36} = 3.47 = 3.5 \approx$$

The mean or average for **commitment to doctor’s medical prescription is 3.5**. It confirms item-4 in the questionnaire. **“As a result of human capital investment by health education, people now take medication according to doctor’s prescription and get health faster”**. Thus, we **reject** the

specific hypothesis: “There is no significant effect of human capital investment on the commitment of people to doctor’s prescription of medication faster healing when they are sick”.

**Table 3.7 Poverty: Welfare and Living Conditions Has Improved.**

Response	X	$\bar{X}$	F	FX
SD	4	3	20	80
A	3	3	15	45
DA	2	3	1	2
SD	1	3	0	0

$$\Sigma F = 36 \quad \Sigma FX = 127$$

$$\text{Mean } \frac{\Sigma FX}{\Sigma F} = \frac{127}{36} = 3.52 = 3.5 \approx$$

The mean (or average) for **welfare and living conditions is 3.5** This justifies item-7 in the research questionnaire: “The welfare and living standard of people in Oyigbo have generally improved as a result of investment in human capital”. Thus, we reject the particular hypothesis: “**There is no significant effect of human capital investment on the welfare and living standard of people in Oyigbo**”.

**Table 3.8. Poverty Level Has Reduced As A Result of Human Capital Investment.**

Response	X	$\bar{X}$	F	FX
SD	4	3	18	72
A	3	3	14	42
DA	2	3	1	2
SD	1	3	2	2

$$\Sigma F = 35 \quad \Sigma FX = 118$$

$$\text{Mean } \frac{\Sigma FX}{\Sigma F} = \frac{118}{35} = 3.37 = 3.4 \approx$$

The mean (or average) for **poverty reduction/alleviation is 3.4**. This supports item-8 in the research questionnaire: “The incidence of poverty in Oyigbo has reduced as a result of investment in human capital”. Therefore, we reject the particular hypothesis: “**There is no significant effect of human capital investment on the poverty level in Oyigbo Local Government Area.**”

**Table 3.9. Political Participation: Participation in Partisan Politics Has Improved As A Result of Human Capital Investment.**

Response	X	$\bar{X}$	F	FX
SD	4	3	20	80
A	3	3	13	39
DA	2	3	2	4
SD	1	3	0	0

$$\Sigma F = 35 \quad \Sigma FX = 123$$

$$\text{Mean } \frac{\Sigma FX}{\Sigma F} = \frac{123}{35} = 3.351 = 3.5 \approx$$

The mean (or average) for **Productivity is 3.5**: above the 3.00 standard specified. This supports item-9 in the research questionnaire. “The productivity of people in Oyigbo has improved as a result of improved human resource skill through political participation”. Therefore, we reject the particular hypothesis: “**There is no significant effect of human capital investment on the active political participation of people in Oyigbo Local Government Area**”.

**Table 3.10 Political Participation: Political Awareness And Decision-Making Role Has Improved As A Result of Human Capital Investment.**

Response	X	$\bar{X}$	F	FX
SD	4	3	21	84
A	3	3	18	54
DA	2	3	1	2
SD	1	3	0	0

$$\Sigma F = 40 \quad \Sigma FX = 140$$

$$\text{Mean } \frac{\Sigma FX}{\Sigma F} = \frac{140}{40} = 3.5 \approx$$

The mean or average for **political awareness and participation (especially by voting) is 3.5**. above the 3.00 standard specified. This supports item-10 in the research questionnaire. “**The political awareness of people in Oyigbo has improved as a result of investment in human capital**. Therefore, we reject the particular hypothesis: “**There is no significant effect of human capital investment by political education on the political awareness and decision-making role of people in Oyigbo Local Government Area**”.

**Test of Hypothesis Using Chi-Square, X<sup>2</sup>**

$$\text{Chi-Square, } X^2 = \frac{\sum(f_o - f_e)^2}{f_e}$$

Where  $f_o$  = observed frequency as presented in the data from respondents (see table-----)

$f_e$  = Expected frequency to be calculated for each HCI indicator.

**Calculation of Expected Frequency,  $f_e$**

S/No	HCI for Economic Development	Fe1	Fe2	Fe3	Fe4
1	Health: Infant And Maternal Health	$\frac{38}{380} \times \frac{232}{1}$ = 25.20	$\frac{38}{380} \times \frac{122}{1}$ = 12.20	$\frac{38}{380} \times \frac{18}{1}$ = 1.80	$\frac{38}{380} \times \frac{8}{1}$ = 0.80
2	Health: Food and Sanitary	$\frac{40}{380} \times \frac{222}{1}$ = 24.42	$\frac{40}{380} \times \frac{122}{1}$ = 12.84	$\frac{40}{380} \times \frac{18}{1}$ = 1.89	$\frac{40}{380} \times \frac{8}{1}$ = 0.84
3	Health: Hospital Patronage	$\frac{38}{380} \times \frac{232}{1}$ = 23.20	= 12.20	= 1.80	= 0.80
4	Health: Commitment to Doctor's prescription	$\frac{36}{380} \times \frac{232}{1}$ = 21.98	$\frac{36}{380} \times \frac{122}{1}$ = 11.56	$\frac{36}{380} \times \frac{18}{1}$ = 1.71	$\frac{36}{380} \times \frac{18}{1}$ = 1.03
5	Poverty: Welfare and Living condition	$\frac{36}{380} \times \frac{232}{1}$ = 21.98	= 11.56	= 1.71	= 1.03
6	Poverty: Reduction in Level	$\frac{35}{380} \times \frac{232}{1}$ = 21.37	$\frac{35}{380} \times \frac{122}{1}$ = 11.24	$\frac{35}{380} \times \frac{18}{1}$ = 1.66	$\frac{35}{380} \times \frac{8}{1}$ = 0.74
7	Political Participation: Active Partisan Politics.	$\frac{35}{380} \times \frac{232}{1}$ = 21.37	11.24	1.66	0.74
8	Political participation: Awareness and Decision-Making Role.	$\frac{40}{380} \times \frac{232}{1}$ = 24.42	$\frac{40}{380} \times \frac{232}{1}$ = 12.84	1.89	0.84

**Calculation of X<sup>2</sup>**

S/No	HCI Indices	F <sub>0</sub>	F <sub>e</sub>	F <sub>0</sub> -f <sub>e</sub>	(F <sub>0</sub> -f <sub>e</sub> ) <sup>2</sup>	<u>(F<sub>0</sub>-f<sub>e</sub>)<sup>2</sup></u> f <sub>e</sub>
1	Health: Infant and Maternal health.	25	23.20	1.80	3.24	0.14
		10	12.20	-2.20	4.84	0.40
		2	1.80	0.20	0.04	0.02
		1	0.80	0.20	0.04	0.05
2	Health: Food and Sanitary	28	24.42	3.80	14.44	0.59
		10	12.84	-2.84	8.07	1.63
		2	1.89	0.11	0.01	0.05
		0	0.84	-0.84	0.71	1.85
3	Health: Hospital patronage	30	23.20	6.80	46.24	1.54
		6	12.20	-6.20	38.44	3.15
		1	1.80	-0.80	0.64	0.36
		1	0.80	0.20	0.04	0.05
4	Health: Doctor's prescription	25	21.98	3.02	9.12	0.36
		5	11.56	-6.56	43.03	3.72
		4	1.71	2.29	5.24	3.07
		2	1.03	0.97	0.94	1.91
5	Poverty: Welfare + living condition	20	21.98	-1.98	3.92	0.18
		15	11.56	3.44	11.83	2.02
		1	1.71	-0.71	0.50	0.29
		0	1.03	-0.03	-1.06	1.03
6	Poverty: Reduction in level	18	21.37	-3.37	11.36	0.53
		14	11.24	2.76	7.62	1.68
		1	1.66	-0.66	0.44	0.26
		2	0.74	1.26	1.59	2.15

7	Political Participation: Active Partisan Politics.	20	21.37	-1.37	1.88	0.09
		13	11.24	1.76	3.10	0.28
		2	1.66	0.34	0.12	0.07
		0	0.74	-0.74	0.55	1.74
8	Political Participation: Awareness and Decision-making Role.	21	24.42	-3.42	11.70	0.48
		18	12.84	5.16	26.63	2.07
		1	1.89	-0.89	0.79	0.42
		0	0.84	-0.84	0.71	1.84

$$X^2_{cal} = \sum \frac{(F_o - f_e)^2}{f_e} = 45.48$$

#### Determination of $X^2$ in the $X^2$ Distribution Table.

- (i) **Degree of freedom:** There are four (4) column and ten (10) Rows in the research data table. (see table ---) Thus, R=10 and C=4.  
Degree of freedom =  $(R - 1)(C-1)$   
 $= (10-1)(4-1)$   
 $= 9 \times 3 = 27 = 28$  (nearest in the chi-square table)
- (ii) **Significant/Confidence Level:** The standard norm for social science research is 5%, that is 0.05 on ratio basis.
- (iii)  **$X^2_{tab}$ :** At a degree of freedom of 28 corresponding to a significant or confidence level of 0.05 in the Chi square distribution table, the  $X^2_{tab} = 41.34$   
Thus, calculated chi-square,  $X^2_{cal} = 45.48$  and table chi-square,  $X^2_{tab} = 41.34$   
Hence  $X^2_{cal} >$  (greater than)  $X^2_{tab}$ .
- (iv) **Decision Rule:** By the standard decision rule for chi-square,  $X^2$ ; if
  - (a)  $X^2_{cal} >$  (greater than)  $X^2_{tab}$ : **Reject Hypothesis**
  - (b)  $X^2_{cal} <$  (less than)  $X^2_{tab}$ : **Accept Hypothesis**
  - (c)  $X^2_{cal} =$  (Equal to)  $X^2_{tab}$ : **Inconclusive/Indifferent.**



Therefore, since  $X^2_{cal} > X^2_{tab}$ , the hypothesis that “investment in human capital has no significant effect on economic development in Oyigbo Oyigbo local government area in Rivers State” is hereby rejected. Rather, investment in human capital has a significant positive effect on household economic development in Oyigbo Local government area in Rivers State.

## CONCLUSION AND POLICY RECOMMENDATIONS

The Chi-Square calculated is greater than the Chi-Square table (i.e  $45.48 > 41.35$ ) in absolute term. It is therefore concluded that there is a significant positive effect of household investment in human capital on economic development in Oyigbo Local Government Area of Rivers State.

The study therefore recommended that:

- i. Government should encourage households to continue to invest in human capital. Such encouragement can come in form of reduction in personal income tax, improved provision of infrastructure like electricity, good roads, cheaper means of transportation etc. These measures will increase the disposable income of households, so that they can invest more in human capital.
- ii. Government should generally invest more in primary, secondary and tertiary education, including vocational and technical schools. Such investment will improve the skill-capacity base of education offered by public schools. This will attract more households to bring their children to public schools.

## REFERENCES

- Adawo, M.A. (2011) Has education (human capital) contributed to the economic growth of Nigeria? *Journal of Economic and International Finance*, 3(1), 46-58.
- Adedeji, S.O. and Bamidele R.O (2013) Economic Impact of Tertiary Education on Human Capital Development in Nigeria in: Human Resources Development in Africa. Selected papers for 2002 Annual Conference, Nigerian Economic Society, Ibadan 499-522.
- Amassoma, D. and Nwosa, P.I. (2011). Investment in Human capital and Economic Growth in Nigeria: A Causality Approach. *Canadian Social Science*, 7(4), 114-120.
- Anyanwu, J.C, S.A. Oyefusi, H.E. Oaikhen, & F.A. Dimowo (1997). The structure of the Nigerian Economy (1990-1997). Joanee Educational Publishers Ltd.
- Atif, R.O, A. Jadoon, K, Zaman, A. Ismail, & R. Seemab, (2010). Trade Liberalization, Financial Development Economic Growth: Evidence from Pakistan (1980-2009). *Journals of international Academic Research*, 10(2), 1-12.

- Awopogba, P.O (2003). Human resources High-level Manpower and the Development of Nigeria Economy. In Iyoha M.A & Itsede C.O (Eds) Nigeria Economy Structure, Growth and Development. Benin City: Mindex Publishing Co.Ltd. 105-135.
- Barro, R. (1991). A Critique of Human Capital Formation in the U.S. and the Economic Returns to Sub-Baccalaureate Credentials. *Educational Studies: A Journals of the American Educational Studies*, 45(1), 24-38.
- Becker, G.S. (1964) Human capital: a theoretical and Empirical analysis, with special reference to education. New York. National Bureau of Economic Research, 1964.
- Bloom, D. and D. Canning (2008) Population Health and Economic Growth. World Bank Working paper No. 24
- Bloom, D. E.D. Canning and Sevilla (2004). The Effect of Health on Economic Growth: A population Function Approach. *World Development*, 32(1):1-13.
- Boldizzoni (2008). Means and ends: the idea of capital in the West; 1500-1970, New York: Paigrave Macmillan.
- CBN, (2009). Central Bank of Nigeria Statistical Bulletin
- Central Bank of Nigeria (1997). The Nigeria Educational System Policy Option for Improved Education Development. Occasional Paper No. 22.
- Chete, A and S. Adeoye (2002). Human Resources Development in Africa. The Nigeria Economic Society Selected Papers for the 2002 Annual Conference, 79-102.
- Chietos, M. and C. Kollias (1997). Testing Wagner;s Law Using Disaggregated Public Expenditure Data in the Case of Greece: 1958-1993, *Applied Econometrics*, 29:371-77.
- Dae-Borg, K. (2009). Humana Capital and its Measurement “The 3<sup>rd</sup> OCED World Forum on Statistics, Knowledge and Policy” Korea 27-30 October, 2009.
- Dauda, R.O. (2010). Roir of Human Capital in Economic Development: An Empirical Study of Nigeria Case. Oxford: Oxford Business and Economic Conference Program.
- Davidson, S. and R. Mackinnon (1993). Military Expenditure and Growth in Less Developed Countries, *Journal of Conflict resolution*, 27,335-353.
- De La Fuente, A. & Cicone, A. (2002). Le Capital Human dans uneconomic mondiale sure La connaissance. Report pour La Commission Europe enne, Brussels.
- Ejere, S.I. (2011). Human Capital Formation as Catalyst for National Development: Nigeria in Perspective *International Business and Management*, 2(2), 98-104.
- Fitzsimons, P. (1999). Human Capital theory and education. *The Encyclopedia of Education*. London: Macmillan.
- Frank, R.H & Bernanke B.S. (2007). Principle of Macroeconomics (3<sup>rd</sup> ed). New York: McGraw-Hill/Irwin.

- Harbison, F.H. (1973). *Human Resources as the Wealth of Nations*. New York: Oxford University press.
- Isola, W.A. and Alani, R.A (2012). Human Capital Development and Economic Growth: Empirical Evidence from Nigeria. *Asian Economic and Financial Review*, 2(7), 813-827.
- Johnson, A.O. (2011). Human Capital Development and Economic Growth in Nigeria. *European Journal of Business and Management*, 3(9), 29-38.
- Mackinnon, J.G. Haug, A.A and Michelis. L. (1999) Numerical Distribution Functions of Likelihood Ratio Tests for Cointegration. *Journal of Applied Econometrics*, 14(5), 563-77.
- Nigeria, Abuja, UNDP, 2008-2009.
- OECD-Organization for Economic Cooperation and Development. *The knowledge based economy*, Paris: OECD, 1996.
- Okojie, C.E.E. (1995). Human Capital Formation for productivity Growth in Nigeria. *Nigeria Economic and Financial Review*, June, 44-55.
- Oladeji S.I. and Adebayor A.A. (1996). The Scope for Human Resource Development Under the Adjustment Programme in Nigeria. *Nigeria Economic Society*. Ibadan, NES 441-460
- Oluwatobi, S.O., Oluranti, O.I. (2011). Government Expenditure on Human Capital Development: Implication for Economic Growth in Nigeria. *Journal of Sustainable Development*, 4(3),72-80.
- Rastogi, P. N. (2002). Knowledge Management and Intellectual Capital as a Paradigm of Value Creation. *Human System Management*, 21(4).229-240.
- Romar P.M. (1990). Endogenous Technological Change. *Journal of Political Economy*, 98(5),7-102.
- Rosen H.S.(1999). *Public Finance*. New York: McGraw-Hill.
- Sankay O.J. Ismail., R. and Shaari, A.H. (2010). The impact of human capital development on the Economic Growth of Nigerian. *Prosiding Perkem V*, Jilid, 1,63-72.
- Schultz, T.W. (1961). Investment in Human capital. *American Economic Review*. 51, 1-17.
- United Nations Development Programme (2009). *Summary. Human Development Report*.
- Woodhall, M. (2001). Human Capital: educational aspects, *International Encyclopedia of the Social & Behavioural Sciences*.