HUMAN CAPITAL INVESTMENT ON ECONOMIC GROWTH AND POVERTY REDUCTION IN NIGER

Seyni Mamoudou, PhD
Faculty of Law of Economics, and Management
Department of Economics and Management
University of Tahoua, Niger, Box 257, Tahoua, Niger
E-mail: msmaiga@hotmail.com

KEYWORDS:

investment,

development, human capital,

poverty reduction,

Niger

ABSTRACT

This paper examines and explains the relation between human capital investment and poverty reduction in the Nigerien economy, inspired by the neoclassical growth model developed by Islam (1995), which makes it possible to benefit from the advantages of panel analysis, one of which is the consideration of both temporal and individual effects. The Islam model (1995) is essentially a specification of the model of Mankiw et al. (1992) but on panel data. Mankiw et al. (1992), for their part, have taken the foundations of Solow's model (1956), in which they incorporate the concept of human capital. Two types of capital are then included: physical capital and human capital. Also, the paper adopts a Cobb-Douglas production function and the Ordinary Least Squares method of estimation. It also looks at the relation between real gross domestic product and economic variables such as labour force, total government expenditure on education and real gross capital formation. The empirical analysis carried out shows that labour force, government expenditure on education and real gross capital formation have a positive and significant effect on real gross domestic product, with government expenditure surprisingly having the least effect. This can be attributed to misallocation by the government among the levels of education, etc. This study, therefore, reveals that there exists a positive and significant relationship between human capital investment and economic growth in Niger; therefore, investment in human capital in Niger is a necessity for economic growth in Niger. the government should increase its revenue allocation to the education sector to enforce strict compliance with the policies in education sector

1. Introduction

The term Human Capital Investment is a more recent phenomenon in the history of economic growth in twentieth century has been dubbed the "age of human capital investment", as the main determinant of a country's standard of living is the extent to which it manages to develop and use skills, knowledge, health, and the work ethic of its people. The economic development thinking that exists between investing in human capital and combating poverty is all the more important as improving productivity through investment in education, health and nutrition constitutes an essential component of poverty eradication policies.

The development of human capital constitutes the essential knowledge of the productivity of individuals and nations. Once again an essential tool for ensuring sustained economic growth and combating poverty which is also of paramount importance in itself. The relationship between development and education is based on the microeconomic work of Becker (1964), but also of Mincer (1958). For the latter, education is an investment since it will provide wage gains. From wage gains to productivity gains and therefore to growth, there is only one step, taken late by Romer (1986) and Lucas (1988) from a theoretical point of view whereas the education-growth relationship had already been tested in 1962 by Denison (1962) Sylvie Charlot (1997), the education-growth relationship: recent theoretical contributions and empirical tests University of Burgundy.However, education today is concentrated in three main areas:

- ✓ That of the contribution of education to economic development;
- ✓ That of individual demand for education (links between education and the labor market);
- ✓ That of the management of educational systems.

Education has always been a key investment for the future, for individuals, for the economy and for society as a whole. So education becomes the basis of an intangible investment, or intellectual investment, the purpose of which is to produce and reproduce the "stock" of human capitalhe importance of human capital in the process of socio-economic development in Niger. The 21st century seems to be the one which devotes and deploys more resources to the fight against poverty with the launch from its beginning in 2000 of the Millennium Development Goals Development (MDG), expanded since 2015 into Sustainable Development Goals (SDGs).Pierre Bezbakh et Sophie Gherardi, (2011), live in an indivisible world where the rich can no longer ignore the poor explains Amartya Sen(1976).Recognized only two totally interchangeable factors of production: labor and capital. Man contributed to growth in the same way as capital, by engaging his labor powerthe view of classical economists about the human contribution to individual and collective wealth and presented to a quantity or force of labor (a number of hours of labor).

Some such as Schultz, 1961 and Becker, 1964 trace it back to the work of Adam Smith in the 18th century. The concept strongly emphasizes the importance of the human factor in knowledge- and skill-based economies. It is useful to distinguish between the different forms of "capital" used in economic activities - especially physical and human. Human capital, according to the OECD (2001), human capital covers « the knowledge, skills, competences and other qualities of an individual that promote personal, social and economic well-being. Individual characteristics which facilitate the creation of personal, social and economic well-being»

The objective of the paper is to show that education contributes to economic growth that is to say that there is a link between the variables of education and the economic growth of Niger. There are several studies that have looked at the relationship between education and economic growth from a microeconomic as well as macroeconomic perspective, both theoretically and empirically. Empirical studies that have been done around the world do not agree that education has a positive effect on economic development. This ambiguity led us to participate in the debate by testing the effect and effectiveness of education on the national productivity of Niger. The latter occupy an important part in the process of economic development of Niger. Indeed, the sectors (primary, secondary and tertiary) in which the companies are distributed contribute more than 80% to the gross domestic product of Niger in 2011.

We differ a little from the empirical studies which have studied the relationship by starting directly from the link between education (represented by these quantitative and qualitative variables) and economic growth (represented by gross domestic product). We hypothesize that if human capital positively influences the productivity of firms and if it is efficient, the resulting productivity gains will in turn increase economic development, all other things being equal. The use of the methods and the approach by the stochastic production frontier, allowed us to find that education produces a positive effect on the economic development of Niger, through the positive impact of the chief's education levels. Business and employee productivity. This allowed us to provide an answer to our research question. Adopting the Data Envelopment Method (DEA), the objective of this study is to examine investment in human capital and the fight against poverty in Niger.There are also specific goals, including:

1) What is the relationship between human capital and poverty reduction?

2)What are the viable suggestions on how the level of investment in human capital in

can be improved?

3)What are theinvestment in human capital does not affect poverty reduction?

4) Why invest in human capital to get out of poverty?

2. Methodology

This work is inspired by the neoclassical growth model developed by Islam (1995) which makes it possible to benefit from the advantages of panel analysis, one of which is the consideration of both temporal and individual effects. The Islam model (1995) is essentially a specification of the model of Mankiw et al.(1992) but on panel data. Mankiw et al.(1992) for their part have taken the foundations of Solow's model (1956), in which they incorporate the concept of human capital. Two types of capital are then included: physical capital and human capital. The production function is of the Cobb-Douglas type:

$$y(t) = K(t)^{\alpha} H(t)^{\beta} (A(t)L(t))^{1-\alpha-\beta}$$
$$0\rangle\alpha\rangle 1 \; et \; 0\rangle\beta\rangle 1$$

Or:

Y (t): represents the production function

K (t): represents physical capital,

H (t): human capital,

L (t): work and,

A (t): technological progress.

Labor L is assumed to increase at an exogenous rate n due to population growth and exogenous increase in labor productivity.Technological progress **A** is exogenous and grows at rate **g** and human capital **H** increases at rate **(n + g).**

Model Specification

In order to affirm or refute our basic hypotheses, we have distinguished three models, namely:

• Model 1: Without Integration of Human Capital.

$$ln(y_i^*) = \alpha + \beta_1 ln(s_{ki}) + \beta_2 ln(n_t + g + \delta) + \varepsilon_{it}$$

It is a question of appreciating the impact of variables such as the rate of savings and the rate of population growth on the level of **GDP** per capita. In order to verify the Solow model

• Model 2: With Integration of Human Capital.

With the introduction of the human capital variable which is broken down into the three fundamental axes of education primary **(h prim)**, secondary **(h sec**), higher (**h sup).**

• Model 3: with integration of human capital according to the quality of the education system.

$$ln(y_i^*) = \alpha + \beta_1 ln(s_{ki}) + \beta_2 ln(h_i^{prim}) + \beta_3 ln(h_i^{sec}) + \beta_4 ln(h_i^{sup}) + \beta_2 ln(n_t + g + \delta) + \varepsilon_{it}$$

The introduction of the human capital variable which is presented by **(hprim, hsec, hsup)** is estimated on countries according to the quality of the education system; One of the methods of determining the subjective poverty line is to use the income that individuals consider to be the minimum to **"make ends meet"(MIQ, minimum income question).**

FGT Indices (Foster, Greer and Thorbecke)

The indices proposed by Foster, Greer and Thorbecke (1984) solve the problem of aggregating the poverty indicator.

$$P_{\alpha} = \frac{1}{n}\sum_{i-1}^{q}\left(\frac{z - y_i}{z}\right)^{\alpha}$$

With **n** the total population, **q** the number of poor households, **α** a poverty aversion parameter, **z** the poverty line and **yi** the well-being of household **i**. Depending on the value of **α**, three characteristic indices can be specified. These are the "**three i's of poverty**. When the poverty aversion **α is 0, P_0**measures the incidence or the ratio of poverty, that is:

$$P_0 = \frac{q}{n}$$

Although simple to construct and easy to understand, this index does not tell us either about the extent of deprivation of the poor compared to the rest of the population, or about the dispersion of the poor in relation to one another.Therefore, two other clues are offered.When **α** is equal to **1, P_ (1)**measures the intensity or depth of poverty, that is, the distance from the income of the poor to the poverty line.His expression is written:

$$P_1 = \frac{1}{n}\sum_{i-1}^{q}\left(\frac{z - y_i}{z}\right)$$

Finally, a value of **2** for the parameter α makes it possible to define the inequality of poverty **P_ (2).**It measures the income gap between the poor themselves. Its expression is given by:

$$P_2 = \frac{1}{n}\sum_{i-1}^{q}\left(\frac{z - y_i}{z}\right)^{2}$$

However, the importance of the FGT indices depends on the respect of two essential axioms highlighted by Sen (1976) and Atkinson (1987for the axiomatic foundations of poverty measures:

1)the axiom of mono tonicity which states that "all things being equal, a reduction in well-being a household below the poverty line must increase the poverty index" Sen. (1976).

2)the transfer axiom which states that "all other things being equal, a transfer of welfare from a household below the poverty line to any richer household must increase the poverty" Sen. (1976). However, the incidence of poverty **P_0** respects neither of the two axioms, since it represents only the share of poor households in the total population. As for the intensity of poverty **P1**, it obeys only the axiom of mono tonicity. On the other hand, the **P2** poverty inequality respects Sen's two axioms, in particular the transfer axiom since it gives a high weight

to households that are further from the poverty line.

The methodology was inspired by that proposed in the CREFAT / CREG manual. It makes it possible to follow the movements of poverty within a cohort. This approach requires having at least two surveys. Regarding methodologies relating to the movement of poverty, the World Bank recommends approaches seeking to capture the movements in and out of the poverty situation in terms of probability, duration or frequency. In this specific context, the analytical method used in this work is inspired by the work of Dang and Lanjouw (2013) and Dang, Lanjouw, Luoto and McKenzie (2011). These authors explore an alternative statistical methodology for the analysis of mobility within poverty, based on two or more cross-sectional data. Unlike traditional, pseudo-panel methods which require multiple sets of cross-sectional data to study the dynamics of poverty at the cohort level, the methodology proposed by Dang and Lanjouw (2013) and Dang et al (2011) can be applied to parameters with just two rounds of surveys, and also allows for a more disaggregated analysis at the household level. In short, these authors start with an income model that they estimate using data from a first survey, using a specification that includes only time invariant variables. The parameter estimates from this model are then applied to the same time explanatory variables from a second survey to obtain an estimate of the first survey income (unobserved) for the respondents in this second survey. The transition analysis can then be based on the actual income observed at the second survey level with this estimated income for the first survey. These observations constitute the pseudo panel or, in the words of the authors, "the synthetic panel". Consider the case of two series of cross-sectional surveys denoted **round 1** with a sample of **N1 households**, and **round 2** with a sample of **N2 households**.

Let **x**i1 be a vector containing the characteristics of household **i** from the **round 1**survey which are observed (for different households) in both series of surveys at the same time. This includes time-invariant characteristics of the household and / or **head of household(language, religion, ethnicity, sex, education, place of birth, etc.),** deterministic characteristics such as age (which can be determined by knowing hisvalue at a given round and the time interval if retrospective questions about the values of these characteristics from **the round 1** survey are asked in the **round 2** survey. For the population as a whole, the linear projection of the income of **round 1** noted **y** i1 on the characteristics **x** i1 is given by:

$$y_{i1} = \beta_1' x_{i1} + \varepsilon_{i1} (1)$$

Similarly, considering, by considering **xi2** as the set of characteristics of household i in the **round 2** survey which are observed both in **round 1** and in **round 2**, the linear projection of **round 2 income (y (i2)) on x i2 is:**

$$y_{i2} = \beta_1' x_{i2} + \varepsilon_{i2} (2)$$

Let **Z_1 and Z_2**represent respectively the poverty thresholds of period **1 (t_1)**and period **2 (t_2).**The objective is to estimate the joint distribution of poverty and non-poverty in **t_1 and t_2**.For example:

$$P(y_{i1} < z_1 \; et \; y_{i2} > z_2 (3)$$

Which represents the probability of being poor at time t_1 and of being non-poor at tempst_2. Identifying the point estimate in (3) is not possible without imposing a structure on the data-generating process. Since the probability in equation (3) depends on the joint distribution of the two error terms, the estimation of the bounds becomes simpler:

$$P(\varepsilon_{i1} < z_1 - \beta_1' x_{i1} \; et \; \varepsilon_{i2} > z_2 - \beta_2' x_{i2}) (4)$$

The correlation between the two error terms captures the correlation of these parts of the household income in the two periods which are explained by the characteristics **x_i1** and **x_i2**of the household.Intuitively, the more individuals cross the poverty line, the weaker the correlation between **ε_i1**and **ε_i2**.An extreme case occurs when the two error terms are completely independent of each other. Another extreme case is obtained when these two error terms are perfectly correlated. Assuming that the error terms **ε_i1**and **ε_i2**have a bivariate normal distribution with standard deviations **σ_ε1**and **σ_ε2**respectively and a known correlation coefficient **ρ**, then the estimate of relation (4) gives:

$$P(\varepsilon_{i1} < z_1 - \beta_1' x_{i1} \; et \; \varepsilon_{i2} > z_2 - \beta_2' x_{i2}) = \Phi_2\left(\frac{z_1 - \beta_1' x_{i1}}{\sigma_{\varepsilon 1}}, -\frac{z_2 - \beta_2' x_{i2}}{\sigma_{\varepsilon 2}}, -\rho\right) (5)$$

Where **Φ_2** (.) Represents the bivariate function of cumulative normal distribution **(ϕ_2 (.)** Being the density function of the bivariate normal distribution). However, the correlation coefficient ρ is not generally known. In this case, Dang and Lanjouw (2013) suggest to consider the approximation of the correlation coefficient ρ_ **(y_i1 y_i2)** between the household consumption of the household in the two rounds, then to estimate ρ by the formula:

$$\rho = \frac{\rho_{y_{i1} y_{i2}} \sqrt{var(y_{i1}) var(y_{i2})} - \beta_1' var(x_i) - \beta_2}{\sigma_{\varepsilon 1} \sigma_{\varepsilon 2}} (6)$$

It should be noted that some important assumptions apply to this methodology. The first hypothesis requires that the population from which the sample comes to be the same for the **round 1** survey and the **round 2** survey. This hypothesis will not be satisfied if, for example, the population changes through births, deaths or births. Migrations. The second hypothesis forces the correlation between the error terms **ε** i1 and **εi2** to be non-negative. This assumption is taken into account in most methods using household survey data for at least three reasons: if the error term contains a fixed household effect, then households that have a higher income than what is predicted from the **x** variables in **round 1** will also have a higher income than what is predicted based on the variables **x** of **round 2**; if income shocks have some persistence, and if income responds to these

shocks, then income errors will also show a positive autocorrelation, the kind of factors that can lead to a negative correlation between income over time are unlikely to apply to an entire population at the same time. In view of these assumptions, the estimates of the upper bound of the poverty transition are given by the probability in relation (5) when the two error terms are completely independent of each other, while the estimates of the lower bound of the poverty transition are given by the probability of expression (5) when the two error terms are identical. Thus, relation (5) provides a framework for analyzing two-by-two movements in poverty (poor and non-poor) using the transition matrix. Indeed, it makes it possible to determine the following indicators:

- PP:designates the individuals (or households) who were poor in period **t-1** who remained always poor in period **t_2**.They have therefore not changed their state of poverty.

-PP means chronic poverty or the poverty trap.

- NPP: these are those who were non-poor in period **t_1**but who fell into poverty in period **t_2**.

- PNP: these are those who were poor at the start (i.e. in year **t_1**) but who emerged from poverty in year **t_2**.

-NPNP: these are the individuals (or households) who experienced a prolonged state of non-poverty over the two years **t_1**and **t_2**.

-NPNP indicator therefore denotes pure non-poverty.

The synthetic index of exiting poverty (ISSP).This aims to capture, among populations in a transitory situation or in a static state, those who are actually emerging from poverty. Mathematically, the ISSP is presented as a geometric mean of two sub-indices: the transition index and the stability index. These are obtained from the formulas below:

$$\textit{Transition index} = \frac{PNP}{PNP + NPP}$$

And

$$\textit{stability index} = \frac{NPNP}{NPNP + PP}$$

The transition index captures the degree of transition from poverty to non-poverty among the vulnerable or the transient poor's for the stability index, it measures the weight of pure non-poor households among households that remain in a stable state over the two periods.Thus, the ISSP thus reflects the potential for emergence in terms of improving the level of well-being in a given area.

2.1 The Conceptual Issues

The role of human capital in growth and development is well established. In recent years, developed capitalist countries have placed emphasis on integrating this concept into the center of their new policies for economic growth and development. In one of the founding texts of human capital

theory, Theodore W. Schultz (1961) manage to explain the introduction of human capital into an aggregate production function, in the same way as physical capital or the quantity of labor. In macroeconomic production functions, two types of human capital approaches are used: the flow approach on rate variables versus the stock approach on human capital stocks. According to Aghion and Howitt (1998), we can distinguish two approaches to its knowledge:

- ✓ **The human capital flow approach:** verify the empirical validation of previous theoretical models by regressing the literacy rate, the supervision ratio, the mortality rate between 0 and 4 years and fertility on the growth rate per capita product and investment.The first group of authors uses flow variables in particular, Lucas (1988), Romer (1989), Barro (1991), Mankiw, Romer and Weil (1992), Benhabib and Spiegel (1994), Barro and Sala-i-Martin (1995).

- ✓ **The human capital stock approach:** is the main engine of growth and not the difference in rates, the growth differences between countries are determined by the differences between their human capital stocks and therefore, by their respective capacities to generate technical progress[1]. The second, on the other hand, used the stock variables Barro (1994), Borenszensztein, De Gregorio and Lee (1994), Bahalla (1995), Lau, Jamison, Liu and Rivkin (1993).), Bloom and Mahal (1995).

The approach by flow or by stock of human capital, it appears fully justified because of the results of the tests and empirical work. As a result, most of the studies inspired by this reality are based on the essential idea that the differences in economic growth between countries are explained by their initial endowments in stocks of physical and human capital as well as their capacity to innovate. Romer (1989) extended the test of convergence of economies and concluded that absolute convergence no longer held for a large, heterogeneous sample of countries. Romer (1989) The approach by the flows of human capital: In his analysis, sought to verify the empirical validation of his previous theoretical model by regressing the literacy rate in 1960 on the growth rate of the product per capita and the investment of 94 countries between 1960 and 1985. Barro (1991) the human capital flows approach estimated in cross-section, the growth rate of the product per capita using the initial values of the human capital. Primary and secondary school enrollment rate, the literacy rate, the supervision ratio, the mortality rate between 0 and 4 years and fertility and by

introducing, moreover, two characteristic indicators of Africa and Latin America. The study by Maria Adelaide and Marta Cristina (2001) who says "The role of investment in education on growth according to different specifications of human capital. A study applied to the sample of countries bordering the Mediterranean. By distinguishing two sources of human capital accumulation namely, education and learning by doing. Lucas takes up the analysis of Becker (1964) for whom growth is essentially determined by the accumulation of human capital (in terms of flow). His analysis thus joins those of Mankiw, Romer and Weil (1992) and Barro (1991), is underpinned by: The idea that growth is essentially explained by rate of human capital accumulation, so that the differences in growth rates between countries are mainly explained by the differences in the rates at which these countries accumulate human capital» Nelson-Phelps (1966) and more recently with Benhabib and Spiegel (1994) rather highlight the role of the stock of human capital variable from stock. For Nelson and Phelps, rates of growth in productivity and innovation are positively correlated with the number of individuals with secondary and higher education. Nelson and Phelps (1966) show that the stock of human capital is the main engine of growth and not the difference in rates: the differences in growth between countries are determined by the differences between their stocks of human capital and therefore, by their respective capacities to generate technical progress. However, a rapidly growing population with a demographic growth rate of 3.9% (between 2001 and 2012), one of the highest in Africa, is slowing the technical progress made in poverty reduction. To combat this phenomenon of poverty, the State of Niger, with the support of development partners, has drawn up and implemented several reference development plans and strategies:

- ✓ The Poverty Reduction Strategy (PRS): 2002-2011;
- ✓ The Accelerated Development and Poverty Reduction Strategy (SDRP): 2011-2012;
- ✓ The Economic and Social Development Plan (PDES, 2012-2015);
- ✓ The Sustainable Development and Inclusive Growth Strategy (SDDCI, 2035): 2015-2035;
- ✓ The Economic and Social Development Plan (PDES, 2017-2021).
- ✓ The Sustainable Development and Inclusive Growth Strategy (SDDCI, 2035) will be broken down into five-year PDES, the first of which is the PDES, 2017-2021.

3.Context of Poverty and Inequality in Niger

This analysis of the poverty context focuses on the results of the two Surveys on Household Living Conditions and Agriculture (ECVMA, 2011 and ECVMA, 2014) carried out as a panel and comparable

from a methodological point of view. These two surveys were conducted by the National Institute of Statistics (INS) with technical and financial support from the World Bank (WB).It mainly deals with monetary poverty.

3.1 Poverty Situation at the National Level

The incidence of poverty, which is the proportion of the population living below the povertyis line was estimated at 189.223 F CFA per year and per person in 2014, has decreased slightly by around 3 percentage points, from 48.2% in 2011 to 45.4% in 2014Despite this drop, the number of poor people increased by around half a million between the two surveys, due to strong demographic growth: 7.8 million in 2011 against 8.3 million in 2014.

However, the level and trend of poverty observed at the national level hide deep disparities according to the area of residence, the region, the agro-ecological zone), the socio-demographic characteristics (the sex of the head of household, the age of the head of householdand household size) and household socioeconomic (education level, socioeconomic group and industry of the head of household.

3.2 Poverty Situation According to the Context of Residence

3.2.1.1 Depending on the Residence Environment

Poverty affects urban areas much less than rural areas (17.9% against 54.6% in 2011, and 9.1% against 52.4% in 2014). In addition, it fell more in urban areas (8.8 percentage points) than in rural areas (2.2 percentage points). In contrast to the incidence, between 2011 and 2014, the depth and severity of poverty increased in rural areas and decreased in urban areas. The severity of poverty is in fact thirteen times higher in rural areas than in urban areas.

3.2.2.2 According to Regions

The spatial analysis of poverty shows that the phenomenon affects households differently depending on their region of residence, in 2011 as well as in 2014. Thus in 2014, the regions with the highest poverty rates are those of Dosso (59.4%), Maradi (67.2%) and Zinder (52.9%), where contrary to the recorded national downward trend, the incidence of poverty even increased between 2011 and 2014. On the other hand, over the period 2011-2014, the incidence of poverty decreased significantly in the regions of Tahoua (from 47.9% to 28.8%), Tillabéri (from 56% to 41.8%) and especially that of Agadez where the poverty rate fell from 20.7% in 2011 to 9.7% in 2014. In terms of depth and severity of poverty, the regions of Maradi, Dosso and Zinder (the most poor) also come out on top while the rest of the regions register values below the national level.

(i) According to Agro-Ecological Zones

The agro-ecological zone refers to the rural economic activity characteristic of a given area, which in turn depends mainly on rainfall. According to this subdivision, the rural environment of the country is divided into agricultural, agro-pastoral and pastoral

zones. The examination of poverty according to these zones shows that it affects more the agro-pastoral and agricultural zones which shelter 77% of the population (respectively 58.4% and 52.3%) than the pastoral zone (36.3%) in2014.

3.2.3.1. According to the Sex of the Head of Household

The analysis of the incidence of poverty according to the sex of the head of household showed that the poverty rate is higher among households headed by men (46.9%) than among households headed by women (32, 0%). This result confirms all the results previously found concerning poverty according to the sex of the head of household in 2014.

3.2.3.2. According to the Age of the Head of Household

In 2014 - households headed by heads aged between 35 and 54 experienced a higher poverty rate at the national level (around 50%). Households headed by younger (under 35) or older (over 54) have experienced a lower poverty rate than those aged 35-54. - The size of households may explain this situation. Indeed, the households of young heads have fewer members and grow as the number of children increases. Conversely, the size of households decreases - from a certain age of the heads with the independence of the children, and by extension poverty. In addition, at an older age, heads of household constitute an important social capital. Which-They receive transfers to enhance their level of consumption. Whatever the age group of heads of households considered, there is a decrease in poverty, except for 25-34 year olds who saw their level of poverty increased between 2011 and 2014 from 36% to 42.7%. A significant drop of more than 15 percentage points is observed among households headed by people over 65 - where the incidence fell from 49.5% in 2011 to 34% in 2014.

(iii)Depending on the Size of the Household

The analysis of the incidence of poverty by household size shows that in 2014, larger households appear to be more affected by poverty than small households. Thus, the poverty rate is around 24.2% among households made up of 3 to 5 people. It is a plus of 7% for households with one or two people. It exceeds 8% when the household size exceeds 15 individuals. This shows that the large household size is associated with a high level of poverty in Niger.

4.Human Capital Investment have a Positive or Negative Relationship with Economic Growth

Not only does investment in health and education directly improve the well-being of populations, but it also indirectly contributes to the strengthening of various forms of human capital, which contributes to increased income. Consequently, the development of human capital is both an essential tool for sustained economic growth and a means of combating poverty, on the one hand, and a significant end in itself, on the other. The arguments for investing in human capital lie in the material and non-

material benefits it generates for education and health. Broadly speaking, these benefits could fall into three closely related categories, namely direct benefits, indirect benefits and general growth spillovers:

Direct Benefits of investing in human capital should consider the following **five points:**

- ✓ First, given that the education of a generation spans several years, adult education does not seem to be a direct substitute for the education of young people, the education offer could be " adapt more slowly than changes in demand, leading to excess supply or shortages in the labor market. The assessment of the rate of return will be influenced by such an imbalance between supply and demand, which could be provisional.

- ✓ This point is inherent to the first the value of the investment in capital human

dependence on investment in other forms of capital. Although the capital human can play a leading role, it will be defeated, unless we put in place the necessary policies to

ensure productive investment in other forms of capital.

- ✓ Third, the benefits of additional years of education can be of little use if there is no information on the quality of education in the countries where the poor quality of education and stagnant enrollment rates are the major problem (Glower, 1996). When the quality of instruction varies considerably in time and space, the number of years of study can be a very insufficient indicator of the level of human capital, and simple estimates of the Private rates of return on education can be misleading. Data concerning the Ghana show that improving the quality of education has greater benefits important than the additional years of instruction, given the current quality of educational system.

- ✓ Fourth, better and more education is not the only factor increased income. Evidence shows that education leads to an increase income in different ways, including the migration of individuals or employment in certain sectors.

- ✓ Fifth, it is generally established that there is a positive correlation between nutrition and health indicators, including height, education and mobility, at the level of individuals in a given society. Therefore, some effects of the increase in income and productivity, which has been attributed to education concerns more health.

Indirect Benefits: education, health, nutrition and fertility are intertwined. Education expenses can have an impact on the health and education of parents can benefit children. Health spending can, in

turn, influence the value of education. Thus, investing in human capital through increased social services, including education and health, has direct benefits for individuals and their families, as well as indirect benefits for the overall socioeconomic situation. Although the correlation between different aspects of human capital is multifaceted and complex.

Spillovers for General Economic Growth: The debate on the direct and indirect spillovers from investing in human capital has so far focused on evidence at the micro level. While this evidence can serve as a source of inspiration for government policy making, it is also important to highlight the impact of human capital on macroeconomic growth, as well as its impact on development.

Human capital: Macroeconomic studies have shown that periods of sustained growth in national output per unit of output go hand in hand with improvements in education, nutrition, health and mobility (see Schultz, 1998). They have provided evidence that there is, in both industrialized and developing countries, a positive correlation between a nation's investment in education and its economic growth (Haddad and al, 1990).

5. Recommendations

Thus, governments at all levels make conscious efforts to plan with the knowledge that people should be put at the centre of development by empowering them with a view to improving their quality of life. But from this study it can be seen that there is a declining level of standard of education in the country thus leading to a low quality of human capital in the country. Therefore, this study suggests the following recommendations to tackle the problem of low-quality human capital investment:

- Government should increase the amount of educational financing by increasing the budgetary allocation to education to meet with the enormous needs for manpower development of the nation's present stage of economic development.
- There is high need for specialized schools in Niger such that there will be schools that will attend to the peculiar gifts and interests of individuals in the country in order to promote specialization by focusing on expanding the knowledge and developing the interests and skills of the individuals so as to effectively contribute to the developmental process of the nation. Schools should focus on various aspects such as business, music, science, leadership, arts, and sports
- The teachers should also be at the core of issues so that they are adequately trained, selected and remunerated, and this should be the responsibility of one of the educational agencies, which is to ensure that he teaching standard in all ramifications in the country

is kept at a highly acceptable level.

6. Conclusion

This paper examines the close and transparent correlation between investment in human capital and poverty reduction. The development of human capital is both an essential tool for ensuring sustained economic growth and combating poverty, and is also of paramount importance in itself. Human capital is all the more important as improving productivity through investment in education, health and nutrition is an essential part of poverty eradication policies. Knowledge has become a primary factor in the productivity of individuals and nations. The twentieth century has rightly been called the "Age of Human Capital", as the main determinant of a country's standard of living is the extent to which it manages to develop and use skills.

The value of investing in human capital depends on investing in other forms of capital. It would be wrong to believe that investing in human capital alone will be enough for development. It would be equally fallacious to assert that investment in human capital must wait for economic growth. The strategy needed to make progress over the next few year's calls for concerted actions both to stimulate economic growth and to enhance human capital through improved education and health services. About education, public resources should be redirected towards the achievement of universal primary education which, in addition to its appreciable economic benefits, deserves high priority for reasons of equity and external advantages. However, the emphasis should not be placed on basic education to the detriment of higher education, as good higher education is essential not only for training teachers and trainers for basic education, but also for longer-term capacity development. In the health sector, governments should focus on funding a basic personal health care package that would be made available to the majority of the population. This package should take into account antenatal and obstetric care; family planning; care for sick children; treatment of malaria and tuberculosis; sexually transmitted diseases; and acute bacterial infections such as meningitis and pneumonia. Basic health packages should be complemented by support services, including health information and family planning. For these investments and related investments, Niger will need external assistance, otherwise the achievement of internationally agreed social goals would be jeopardized. Taking regional specificities into account in budget allocations in order to reduce or compensate for the observed disparities, taking into political way, programs and projects of the gender aspect to reduce inequalities in development, a substantial allocation inyouth employment to reduce youth poverty.

References

Aghion, P. and P. Howitt. (1998). Endogeneous Growth Theory, MIT Press, Cambridge.

Altinok, N. (2006). Capital humain et Croissance: l'apport des enquêtes

internationales sur les acquis des élèves. Publique Économie, IREDU pages. 177-209.

Altinok N. (2006), « Human Capital and Growth: the contribution of international surveys on student achievement ", Publique Economie, IREDU pages 177-209

Adamu. (2002). The Impact of Human Capital Formation on Economic Development in an Error Correction Approach. Human Resource Development in AfricaNigerian Economic Society Annual Conference NES, pp. 54-57.

Appleton, S. and F. Teal. (1997), Human Capital and Economic Development.

Benhabib, J. and M. Spiegel. (1994). "The Role of Human Capital in Economic Development: Evidence from Aggregate Cross-Country Data", Journal of Monetary Economics, vol. 34, 143-

Chete and Adeoye (2002). Human Capital and Economic Growth: The Nigeria Evidence Human Resource Development in Africa; Nigerian Economic Society Annual Conference of the Nigerian Economic Society, pp.79-101.

Dorothée Boccanfuso D, Savard L et Savy E.B. (2009), Capital humain et Croissance : Evidences sur données des pays africains , Université de Sherbrooke

Maria Adelaïde, S.D et Marta Cristina N.S. (2001), Le rôle de l'investissement dans l'éducation sur la croissance selon différentes spécifications du capital humain.

MINCER, J. (1958). Investment in Human Capital and Personal Income Distribution. Journal of Political Economy, 66, 281-302.

Matthew, A. Oluwatoyin. (2003). human capital investment: effect on economic growth in nigeria (1970-2004) department of economics & development studies, college of business & social Sciences, Covenant University, Ota, Ogun State, Nigeria.

OECD (2001), On the Well-Being of Nations: The Role of Human and Social Capital, Paris, p18.

OCDE (1998), L'investissement dans le capital humain: une comparaison internationale, Paris, Editions de l'OCDE.

Psacharopoulos, G. (1994), Returns to Investment in Education: A Global Update, World
Development, 22, 1325-44.

Mr. REZINE Okacha Thèse De Doctorat En Sciences Economiques capital humain, education et croissance économique Une approche économétrique

Schultz, T.P. (1998), "The Formation of Human Capital and the Economic Development of Africa: Returns to Health and Schooling Investment

Schultz, T. W. (1961). Investment in Human Capital. *American Economic Review, 51* (1), pp 1-17.