Relationship between Human Capital Investment and Economic Wellbeing: A Case Study in Business Apprenticeship Training Centers (BATCs), Kaduna, Nigeria

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ABSTRACT
The paper examined the effect of the human capital investment on economic wellbeing in business apprenticeship training centers (BATCs) in Kaduna, Nigeria. A structured questionnaire was used to obtain data from 267 respondents via cluster sampling from nine local government areas of the 23 local government areas in the state. The result indicates that there was a significant positive relationship between human capital investment and economic wellbeing. Hence, BATCs acts as a tool in capacity building endeavor among the youths in the state, and this is a part of state-sponsored community development process developing youth community.

Keyword: Community development, economic wellbeing, human capital investment

INTRODUCTION
The Nigerian government faces a lot of challenges on how to address the alarming rate of unemployment, less empowered youths and poverty. The government has done various schemes and programs of youth at all levels. It is important to support the youth community by providing vocational training schemes like the Business Apprenticeship Training Centers (BATCs). BATCs have existed for four decades in each state. In the beginning, BATCs collaborated with the American Ford Foundation (AFF) and the North Central State Government (NCSG). It is an avenue to develop youth empowerment and enhanced their future
economic wellbeing. In addition, the aim is to improve their individual level of capacity building and human capital development. Together the BATCs have the following mission:

1. To raise skills of workers for better employment in industrial establishment.
2. To create better-skilled entrepreneurs among the self-employed trade men.
3. To pursue direct labour projects with a view of not only giving the students the scheme practical experience but to also ensure self-reliance when they eventually graduate.

BATCs duration is 3 years including 9 months’ internship program in various established vocational workshops, industries, government enterprises and private firms depending on each trade and individual specialize. After that, the participants will engage with the beneficiaries. As a result, the participants are economically empowered and their economic well-being enhanced. It helps to develop the community by making everyone that involved improve their competencies and capabilities. Later, it enables them to function more effectively and to manage the development processes over time (Department of Foreign Affairs and Trade [DAFT], 2006).

These programs provide vocational and skills development for the norths’ industrial worker especially Kaduna. Earlier, majority of them were southerners. They migrated because of the effect of Nigerian civil war in the early 70s. BATCs have consistently grown and expanded. At the moment, there are 24 centres in each of local government areas. To date, thousands of youths have graduated from the program and worked in Ministry of Works (MOW), the Nigerian Police Force (NPF), pioneer Nigerian National Petroleum Cooperation (NNPC), Defence Industry Corporation of Nigeria (DIC) technicians, Ministry of Science and Technology, private firms and workshops. Human capital investment is fundamental solutions in alleviating poverty and encourage self-employment. It has a direct relation impact on the youths’ economic well-being. Thus, there is a need for government to sustain the effort on emphasizing the human capital investments in accelerating economic growth in the community.

In sub-Saharan Africa, Bandiera et al. (2015) conducted a study in Uganda, where sixty percent of the population were youths. They were poor, unemployed and had health issues such as STDs and HIV infection. The girls were forced to marry and be pregnant at a young age. These issues affected their education and labour market participation. It is necessary to empower them in life skills and vocational training. So that, they are able to have a job and increase their wellbeing in the future.

Similarly, in Nigeria, a study conducted in Akwa Ibom State by Ibok & Ibanga (2014), where they examined the impact of human capital investment and economic wellbeing. They stated that human capital development was an essential component
of economic wellbeing, empowerment, and the development process. It was a strategy to fulfill the individuals’ potentials by enlarging their skills and enabling them to participate actively in their own development. It also enhanced their knowledge, productivity and inventiveness. The study noted that from 1999 to 2012, the government was the main driver of the economy. It made a positive impact on the training when the government re-training of workers in the public sector, making the public sector more vibrant, efficient and result oriented. It also helped individuals to become self-employed and employers. The authors did recommend the individuals and private sectors to increase their investment in human capital and economic empowerment in order to enhance the wellbeing.

The government needs to support any initiatives that can develop human capital in order to encourage and ensuring the youths to undergo training. The BATCs scheme in Kaduna state is one of the vocational schemes providing training for knowledge and skills development. Thus, this paper is focusing on the relationship between human capital investment and economic wellbeing among the youths who have attended the apprenticeship scheme in Kaduna, Nigeria.

**Human Capital Investment**

Human capital investment refers to the process that relates to training, education and other professional initiatives. It aims to increase the levels of knowledge, skills, abilities, values, and social assets of the potential employees that lead to the employee’s satisfaction and performance, and firm performance (Marimuthu et al., 2009; Organization for Economic Co-operation and Development [OECD]), 2001). In a human capital theory, Becker (1964) and Glaeser (2005) denoted that investing a community through education and training would result in high level long-term economic growth. In parallel, Hoymann and Faricy (2014) and Kozo et al. (2014) indicated that if individuals had high education, they would receive a high rate of return (wages). Freire (1973) also expressed when evaluating from the angle of educational discipline, education as the key to release the poor status in any society or community. As such, the human capital plays a vital role in public policy issues in human resources management (Bratti & Leombruni, 2014; Benhabib & Spiegel, 1994; Chowdhury et al., 2014; Cervellati & Sunde, 2002).

Education is widely viewed as a public good with positive externalities, which increases the efficiency of economic and political institutions and at the same time accelerating scientific advancement (Azariadis & Drazen, 1990; Barro, 2001; Black, 1996; Barron et. al, 1987; Schultz, 1988). Numerous studies see it as social input which acts as an economic bonding agent and bridging mechanism by assembling together skilled workers across industries (Barron et al., 1987; Glaeser, 2005; Nahapiet & Ghoshal, 1998; Zucker et. al, 1994). Furthermore, there is a correlation between human capital with community development where education, knowledge, skills and training as a product
of learning and innovation to educate people in a community (Barro, 2001; Black, 1996; Glaeser, 2005; Hoyman & Faricy, 2014; Jovanovic & Rob, 1989; Schultz, 1988; Zucker et al, 1994).

**Wellbeing**

Wellbeing is a multidimensional concept and covers all aspects of human life (McGillivray, 2007). Wellbeing, happiness, utility and quality of life are often seen as one. Those terms have been used interchangeably (Yassin et al., 2012). Stutz (2014) said that the wellbeing basically consisted of three elements: (1) welfare - consists the individual ability to attain the basic needs or the requirements for healthy life, nutrition (food and drink), housing, sanitation, and access to healthcare; (2) contentment - individual level of satisfaction with their lives; and (3) freedom - the nature and extent of the individual rights and freedom guaranteed in different regions and localities and choose his/her own destiny.

It is important to understand wellbeing by three core values which are material conditioning, quality of life, and human solidarity. Material conditions mean the ability and accessibility of people’s command over commodities, which also include income, assets, and consumption. These are considered as the objective economic well-being of the people (OECD, 2013). Meanwhile, quality of life encompasses health status, education, jobs, human contacts, civic engagement, security, governance and free time falling under its category. These are also called as the peoples’ subjective experiences of life (OECD, 2013). Happiness and wellbeing have been used as a proxy for quality of life (Yassin et al., 2012). Lastly, human solidarity is basically sustained unity within the members of a group, community or society. In other words, it means the homogeneity of individuals that feel connected to each other.

In a nutshell, wellbeing basically consists of welfare, contentment, and freedom (the right to live and choose his/her own destiny) (Stutz, 2014). Wellbeing is a state of being, where human needs are met, where one can act meaningfully to pursue one’s goals, and where one enjoys a satisfactory quality of life (Wellbeing in Developing Counteries [WeD], 2007).

**Relationship between Human Capital Investment, Empowerment and Wellbeing**

These three concepts are not new. Many studies have been carried out on them, especially on human capital investment and its impact on employee and firm performance (Bassi & Investments, 2004; Black, 1996; Crook et al., 2011; Madhavan & Landau, 2011; Teixeira, 2002). Investment is all about putting in something and getting something out. The concepts are inter-twinned, where one complement each other. Human capital investment is embodied by training, knowledge, skills, and economic development depending on technology advancement and scientific knowledge (Hansson et al., 2004; Teixeira, 2002). Furthermore, development and
empowerment depend on the accumulation of human capital (Jones & Deutsch, 2010). Human capital investment contributes greatly to economic well-being, economic growth, poverty reduction, and facilitate technological innovation (Hoyman & Faricy, 2014; Rogers, 2003). Labour market significantly increases through knowledge, skills, and training in the individual and improves earning capacity (Son, 2010). Human capital investment is important for economic wellbeing and development as its intrinsic value of its own development goal. It refers to the ability and efficiency of people to transform raw materials and capital into goods and services, and consensus. Thus, these skills can be learned through the educational system (Son, 2010).

Empowerment is the ability of people, organizations, and communities to master their affairs (Rappaport, 1987). In a relative way, Weber and Ahmad (2015) saw empowerment as a perceived control over others or over oneself. It is mainly as subjective perception (economic wellbeing). It is focusing on what people expect with regards to their power and whether they are satisfied with their current status of the power (Conger & Kanungo, 1988). Narayan (2005) defined empowerment as the expansion of assets and capabilities of poor people to participate in negotiation with influence, control and held accountable institutions that affected their lives. In regards, empowerment can only be attained when people participate in any activity, program or scheme that has a potential effect on their lives.

Human capital investment and empowerment are twin strategy. It is aimed to promote sustainable, people-centred development, equal opportunities and social justice (Anantkumar, 2006; Barro, 2001; Black, 1996; Mitra & Singh, 2007; Sharma, 2007). Empowerment and economic wellbeing will not exist, if there is no engagement in human capital investment (Black, 1996; Cornwall et al., 2008; Creswell, 2005). Other than that, previous studies have shown that capacity building at the individual level has a significant impact on the economic empowerment and economic wellbeing (Ibok & Ibanga, 2014; Munjuri & K’Obonyo, 2015).

However, in this paper, the aim of establishing BATCs in Kaduna state is different. The benefits of BATC alumni are economic prosperity through human capital investment. They can find the use of knowledge and skills acquired to increase their individual capacity development. This is an intellectual capital (Nahapiet & Ghoshal, 1998). While Crisp et al., (2014) saw it as the aggregate capital related to the cost of living, education and professional experience. The assumption of the human capital theory is that an educated worker is better at creating, implementing, adopting new technologies and innovation and generating growth (Benhabib & Spiegel, 1994; Jovanovic & Rob, 1989).

The authors view these three concepts from inter-dependent perspectives inform of input/investment (human capital) and output/growth and development (empowerment/economic wellbeing). It is believed that
there is a high relationship between human capital investments, empowerment and economic wellbeing (Figure 1). Thus, this paper postulates that enhancing the human capital of BATCs alumni’s will give effect on their empowerment and economic wellbeing.

![Figure 1. Conceptual framework of the study](image)

**MATERIALS AND METHODS**

The study was approached quantitatively, in which a survey design was employed. Data was collected using a structured developed questionnaire based on literature review and previous studies. The Structural Equation Model (SEM) was used to examine the independent variables and the dependent variables by using AMOS.

The study surveyed a total of 267 out of the entire population of 2,000 alumni’s of the BATCs centers across Kaduna state, Nigeria. The sample size was determined using the Krejcie and Morgan (1970) criteria which showed that in a total population of 2,000 the sample size was estimated at 322 at α = 0.05 significance level and 95% confidence interval. To achieve this, multistage cluster sampling and stratified random sampling technique was employed in order to select the respondents from nine local government areas (LGAs); three respondents from each of the three senatorial districts in Kaduna state (Figure 2). The councils in Kaduna includes; Sabon Gari, Zaria, Lere, Kaduna North, Kaduna South, Chikum, Kachia, Zongo Kataf, and Kagarko.

Data was collected in nine local governments, three each from the three senatorial zones in Kaduna state. The multistage cluster sampling technique was designed to suit large scale sample survey. Hankin (1984) stated that where there were two or more sample selection the multistage cluster sampling was the most appropriate to be used to determine the sample size. The sampling was carried out in stages using smaller and smaller sampling units at each stage. The multistage cluster sampling designed was in the following sequence:

**Stage 1:** At this stage, three local government areas from each of the three senatorial zones in Kaduna state were randomly selected where names of all the local government in each of the senatorial zones were penciled down, put in a container...
and the container shaken in such a way that no particular local government was given an undue advantage over another to eliminate bias. Three local governments were randomly picked from each of the senatorial zones (3 x 3 = 9 BATCs one in each of the local government areas).

**Stage 2:** In this stage, three BATCs, one each from three local government areas of each of the senatorial zones would be randomly selected. The selection process was same as above (1 x 9 = 9 BATCs).

**Stage 3:** For this stage, thirty alumni’s of the BATCs were randomly selected from the nine local government areas of the three senatorial zones (9 x 29 = 261).

Though the determined sample size was 267; implying that six alumni’s were further randomly selected from the nine BATCs of the nine LGAs. This means that six out of the nine selected BATCs had 30, while three of the BATCs had 29 alumni as respondents, which made the total respondents to be 267.

**RESULTS**

In this paper, the structural equation modeling was used to determine the individual and collective contribution of a group of predictors along with the inputs independent variables (human capital investment) in relation to outputs dependent variables (economic wellbeing) (Figure 3). Similarly, exploring structural equation modeling via AMOS illustrates the fitness of the structural model. Therefore, the Goodness-of-Fit indices in Figure 1 below shows the model fits of the data in that $\chi^2 (CMIN) = 1221.527$ ($df = 877$, relative $\chi^2(CMIN/df) = 1.393$, $GFI = 0.833$, $CFI = 0.958$, $IFI = 0.958$, and $RMSEA = 0.038$. Therefore, relative $\chi^2$
Figure 3. Structural model to explain the relationship between human capital investment variables and economic wellbeing variables

(CMIN) is conventionally < 5, while GFI, CFI, and IFI is expectedly > 0.9 as asserted by (Bentler, 1992; Bryne, 2010; Ho, 2006), while, RMSEA is expectedly < 0.8 (Browne & Cudeck; Bryne as cited in Bashir, 2014). Going by Hair et al. (2009) that, where any 3 – 4 of the Goodness-of-Fit indices, are within the threshold margin, then the assertion drew is that the model is fit. As a result, the researcher concluded that the structural model for this study fitted the data.

Hence, the path diagram of the structural equation model of this study is illustrated in Figure 1. It is a two-part, with the individual paths in the structural model. The first part of the analysis showed the relationship between the individual level of capacity building and the two dimensions of economic wellbeing (objective economic wellbeing, and the subjective economic well-being). While the second part showed the relationship between the dimensions of human capital investment (training and knowledge and skills) and dimensions of economic wellbeing. Therefore, in view of the above, the capacity building construct of the individual capacity building was considered as the predictor to wellbeing in the first part, while the selected construct of human capital investment construct of training and knowledge and skills were considered as predictors to wellbeing in the second part. However, the emphasis of the researcher in this paper is solely on the second path which shows the relationship between human capital investment and economic wellbeing.

The analysis of the structural equation model in Table 1 showed that the coefficients of the standardized path were inconsonant with the hypothesis indicating that human capital investment has contributed
significantly to economic wellbeing ($\beta = 0.454, CR = 4.179, P = 0.000$). This is in line with Ibok and Ibanga (2014) study on the impact of human capital investment and economic empowerment. In their findings, the researchers showed that human capital investment served as a means through which knowledge and skills productivity of people were enhanced. Therefore, the result of human capital investment with $r = .45$ and $p = .05$ is statistically significant. This implies that there is a significant effect of human capital investment in economic well-being of the BATCs alumni. Hence, the interpretation is that, for every one-unit increase in human capital investment, its effect on economic well-being is 0.45.

Relatedly, in analyzing the path model in this study, the researcher examined the relationship between the dimensions of human capital investment (training, and knowledge and skills) and dimensions of economic wellbeing. Hence, the structural model shows that there is a significant relationship between dimensions of human capital investment and dimensions of economic wellbeing. Hence, human capital investment has contributed significantly to economic wellbeing ($\beta = 0.454, CR = 4.179, p = 0.000$). Similarly, training, knowledge, and skills have significantly contributed to economic wellbeing, in that the path loading for training is $=0 0.79$ and the path loading for knowledge and skills is $= 0.81$, while the loadings for economic wellbeing (Ewb); life evaluation (Ev) $=0.55$, income (Incm) $= 0.69$, and life satisfaction (Ls) $= 0.69$ (Figure 3). Therefore, in as much as the values of each of the path loadings are more than 0.5, it goes to assert that the predictors of the human capital investment (training and knowledge and skills) significantly contributes to the economic wellbeing. As a result, to further justify the significant contribution of human capital investment, the squared multiple correlations of economic wellbeing EWB stood at $= 0.524$.

**DISCUSSION**

The finding shows that there is a significant relationship between dimensions of human capital investment (training, and knowledge and skills) and the dimensions of economic wellbeing OWB (income) and SWB (life satisfaction and life evaluation). The relationship is relative strong which indicate that for any one-unit increase in the level of human capital investment, there is a corresponding increase in the level of economic wellbeing by 0.45. Since jobs cannot be readily available to all by both government and private sectors, hence, the

<table>
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<tr>
<th>Hypothesized relationship</th>
<th>Unstandardized regression weight estimate (B)</th>
<th>S.E</th>
<th>Standardized regression weight estimate (β)</th>
<th>CR</th>
<th>P</th>
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<tbody>
<tr>
<td>EWB $\leftarrow$ HCI</td>
<td>0.597</td>
<td>0.143</td>
<td>0.454</td>
<td>4.179</td>
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Note. Ewb: - Economic wellbeing, Hci: - Human capital investment
need for skills acquisition via vocational training schemes like the BATCs in Kaduna state. It has the potential role as a tool to minimize the incidence rate of poverty by equipping the youths with a relevant skill for them. Thus, human capital investment among youth has become inevitable aimed at empowering them economically. Further, the contribution of human capital investment to economic wellbeing (OWB and SWB) is significant. This is because people with vocational training, knowledge and skills have the opportunity to be self-employed, gain employment into private sectors or public organizations in Kaduna state. As a result, the BATCs alumni have attained and acquired the required training, knowledge and skills which have contributed significantly to the alumni’s economic wellbeing with the resultant effect of economic gain and benefits. Conclusively, the findings of this study go to affirm the theoretical position held by the theorists of social change and empowerment. Parson (1961) said that approaches to change could only occur in a given society through either endogenously or exogenously. BATCs schemes is an exogenous approach by adopting Grameen model by Midgley (2006) where the government is bestowed with the responsibility to put in place programs aimed at improving the living conditions of the people.

CONCLUSION
The BATCs alumni’s had experienced economic wellbeing after participating in the human capital investment program. There is a significant positive relationship between the dimensions of human capital investment (training, knowledge, and skills) and dimensions of economic wellbeing OWB (income) and SWB (life satisfaction and life evaluation) among the alumni. The positive impact of the relationship is indicative of the increase in the level of economic wellbeing of the alumni occasioned by the human capital investment as input and economic wellbeing as output. It has been able to reduce the poverty rate, makes the youths independent with relevant skills, thereby enabling them to make and take decisions on their own to any challenge at any given period of time. It creates opportunities for the youths to be self-employed, self-sustaining and gain employment wherever necessary. The researchers suggest that the government should maintain the present tempo of human capital investment or improvised the standard. The government should do a partnership with private organizations and NGOs. It can improve and streamline policies towards providing incentives for attract the youths to enroll in the BATCs scheme. Other than that, the Bank of Industry (BOI) can collaborate with the Central Bank of Nigeria (CBN) to provide a collateral free revolving starting capital loan to BATCs alumni. It will help them to obtain workshops and equipped with proper equipment in becoming entrepreneurs. Eventually, the loan will drive to earn income and improve their economic wellbeing.
ACKNOWLEDGEMENT
We would like to express our gratitude to the staff of Business Apprenticeship Training Centers (BATCs), Kaduna, Nigeria for their cooperation during the data collection phase.

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