

Low Education Attainment and the Incidence of Poverty in Ilorin Metropolis, Nigeria

Gafar .T. Ijaiya

(Corresponding author)

Department of Economics,
University of Ilorin, Ilorin, Nigeria.
ZIP Code: 24003
e-mail: gtijaiya@yahoo.com

Muslimat .A. Nuhu

Department of Arts and Social Sciences Education,
University of Ilorin, Ilorin, Nigeria.
ZIP Code: 24003
e-mail:nuhu.ma@unilorin.edu.ng

(Received: 4-8-11/ Accepted: 6-9-11)

Abstract

This paper examines the influence of low education attainment on the incidence of poverty in Ilorin metropolis, Nigeria. The study carried out using a structured questionnaire to 440 heads of households (randomly selected from different social background) reported that 240 of them are poor. Based on this sample, a linear regression analysis was used in determining the influence of low education attainment on the incidence of poverty in the metropolis. The results obtained indicate that low education attainment has a significant influence on the level of poverty in Ilorin metropolis, thus fulfilling our a-priori expectation. The paper further suggests measures that can be use to improve the level of education, which in turn would help reduce poverty in the metropolis. Some of the measures are heavy investment in formal and non-formal education (vocational training), good governance in the delivery of education incentives and the involvement of the people at the local levels in education development decisions.

Key words: Ilorin, Education, Attainment, Poverty.

1. Introduction

In the last three decades the level of poverty in Nigeria has been on the increase, rising from 28.1 percent in 1980 to about 64.4 percent in 2004 (FOS 1999; ADB 2010). This increase as observed by a number of studies is caused by a number of factors which include among others; limited access to resources, lack of skills, location disadvantage, social exclusion,

introduction of structural adjustment reforms and changes in domestic economic policies that have resulted in price and exchange rate instability and increase in unemployment. Other factors are natural disasters/calamities such as drought and man-made disasters like wars and environmental degradation (Yahie 1993; De Haans 2000; Sindingre 2000; Sengupta 2003; Bradshaw 2006; Nurruzzaman undated).

Obadan (1997) also reiterates that inadequate access to employment opportunities; inadequate physical assets such as land, capital and minimal access by the poor to credit even on a small scale; inadequate access to the means of supporting rural development in poor regions; inadequate access to markets where the poor can sell their goods and services; destruction of natural resources leading to environmental degradation and reduced productivity; inadequate access to assistance for those living at the margin and those victimized by transitory poverty; lack of participation of the poor in the design of development programmes that affect their lives; and low endowment of human capital are among the factors that causes poverty in Nigeria.

Low endowment of human capital can be linked to low education attainment¹. It is important to note that the type of education referred to in this study is western education and to attain/have this type of education depends on a number of factors:

- (i) the need for enhanced income through future modern sector employment;
- (ii) the direct and indirect costs of education, which the individual must bear (which in turn are determined by the combined influence of the following variables: the wage and/or income differential between jobs in the modern sector and those in the traditional sector; the probability of success in finding modern sector employment; the direct private cost of education such as school fees, cost of books, cost of clothing; and the indirect cost, e.g. opportunity cost of education, which is the earnings foregone or the loss of a student's productive work while in full time education);
- (iii) the wealth of the household, such that the poorer a household is, the lower the level of education attainment, since in such household the rate of enrolment is usually low and the rate of drop-out high; and
- (iv) non-economic factors that include religious and socio-cultural norms, such as early marriage, early childbearing and rearing, and the unwillingness to allow girls to go to school, social status of parents, education of parents, occupation of parents, size of the family, geographic location and proximity to school, ethnic group, kinship pattern and language (Todaro 1977; Psacharopoulos and Woodhall 1995; Filmer and Pritchett 1998; Ijaiya 1998).

Given the above mentioned factors, the theoretical consequences of the lack of education are the inability of people to understand themselves and the world; the inability of the people to acquire and use information; the inability of the people to enrich their minds by broadening their experience and improve the choice they make as consumers, producers and citizen; the inability of the people to meet their wants and those of their family and the inability of the people to increase their productivity and their potential in order to achieve a higher standard of living and find their way out of poverty (Lau, et al 1991; World Bank 1991). In Nigeria, the limited or lack of access to education has no doubt affected the development of human resources needed for economic development and for poverty reduction. This situation is evidence on the rate of primary school completion and the gross enrolment ratio, especially when compared with countries like Mauritius. For instance, in 2006, the primary school completion rate in Nigeria was 76 percent, compared to 92 percent in Mauritius. The gross

¹ Unlike the demand for goods and services, education attainment is a derived demand because it is not based on immediate consumption satisfaction. Instead it is based on the desired for a long-term accumulation or improvement in what is sometimes called human capital. In other words, it is directed towards the objective of greater satisfaction in the future (Sampson and Calms 1974).

enrolment ratio in the same year was 96 percent in Nigeria and 102 percent in Mauritius (World Bank 2008). This was probably one of the reasons why the rate of poverty in Mauritius was about 14.3 percent in 2006/07 which was lower than the rate in Nigeria (RMCSO 2011).

It is against this backdrop that this paper examines the impact of low education attainment on the incidence of poverty in Ilorin metropolis, using a set of household data, the P-alpha class measures of poverty, a linear regression analysis and participatory poverty assessment method in seeking the perception of the people living in the metropolis on the influence of low education attainment on the incidence of poverty.

The section that follows provides a brief description of the study area, the materials and methods used for the research. Section three presents and discusses the results. Conclusion and recommendations are contained in the last section.

2. Study Area, Materials and Methods

a. Study Area

Ilorin is located some 300 kilometers from Lagos and 500 kilometers from Abuja the Federal Capital of Nigeria and on Latitude North $8^{\circ}30'$ and Longitude East $4^{\circ}35'$ of the Equator. The city is situated in the transition zone between the forest and savanna regions of Nigeria. Presently the city is the capital of Kwara State of Nigeria and has an estimated population of about 847,582 people in 2007 (Wikipedia 2010).

b. Materials

The variables considered for this study are the poverty status of each head of household (poor and non-poor), low educational attainment proxied by the number of years spent schooling by individual head of household and the vector of household characteristics such as household size, occupational status of heads of household, gender of each head of household, etc. In the course of evaluating the impact of low education attainment on the incidence of poverty a set of cross-sectional data drawn from 440 households in Ilorin metropolis from September to November 2010 were obtained through the distribution of copies of questionnaire and participatory poverty assessment method. The questionnaire was based on the World Bank Living Standards Measurement Study (LSMS) and the Federal Office of Statistics' National Integrated Survey of Households (NISH) methods, which among other things produced a comprehensive monetary measure of welfare and its distribution; and the description of the patterns of access to and use of social services e.g. education and health. The participatory poverty assessment method was used to obtain information from key informants who are heads of households on their perception of the influence of low education attainment on poverty. (Grootaert 1986; Demery and Grootaert 1993; Valdez and Bamberger 1994).

a. Methods: Sampling Selection Techniques, Model for Poverty Analysis and Model for Regression Analysis

1. Sampling Selection Techniques

A stratified sample method² was used in the selection of the respondents. To have an unbiased selection of samples the study area was divided into 11 sample units³ based on proximity,

² This is when the population is divided into strata or sub-group after which the samples are selected randomly, but independently from each other (Oyeniyi 1997).

ecological, socio-cultural and economics variations. In accordance to these sample units, a structured questionnaire was distributed to about 500 heads of households (out of which only 440 responded). The issues raised in the questionnaire include the background of the respondents (i.e. marital status, type of gender, educational status, employment status and household size), income and total consumption-expenditure.

2. Model for Poverty Analysis

In line with most recent works on poverty, the poverty analysis in this study was based on money–metric measure of utility and welfare. For measure of utility and welfare, the heads of households' total consumption-expenditure was used as a measure of their welfare and for determining the poverty line. The analysis also took into consideration differences in needs due to the difference in their household size and composition, and therefore used household expenditure per adult equivalent as the welfare measure. There are wide choices of adult equivalent scales and different scales used in different countries. The most commonly used is that of the Organization for Economic Co-operation and Development (OECD) because of its simplicity of use and wide familiarity. This scale is expressed as follow:

$$\text{EXPeq} = \text{EXP} / n^{(0.7)} \quad (1)$$

Where:

EXP = total household expenditure

n = household size

0.7 = exponential formation representing other adults in a particular household (Glewwe 1990; Grootaert and Braithwaite 1998).

A cut–off point was selected to serve as poverty line across the distribution of real household expenditure per adult equivalent. An absolute line such as \$1 a day (Purchasing Power Parity (PPP\$)) was therefore used in identifying the poor (World Bank 2001).

The next stage in the analysis of poverty in Ilorin metropolis is the use of the popular P–alpha class of poverty measures introduced by Foster, Greer and Thorbecke in 1984. The index is defined as:

$$P_{\infty} = 1/n \sum_{i=1}^q (z-y_i/z)^{\infty} \quad (2)$$

Where:

n = number of households

q = number of poor households

z = poverty line

y_i = total consumption – expenditure of individual head of household

∞ = poverty aversion parameter.

The poverty aversion parameter (∞) can take any positive value or zero. The higher the value, the more the index weights the situation of the poor households i.e. households that are farthest below the poverty line. Of specific interest are the cases where $\infty = 0, 1$ and 2 . If $\infty = 0$ the index becomes:

³ The 11 sample units include among others: Oja oba, Gambari, Pakata, Oloje, Okelele, Okesuna, Oko Erin, Balogun Fulani, Gaa Akanbi, Baboko and Taiwo.

$$P_0 = q/n \quad (3)$$

which is the simple head count poverty rate, i.e. the number of poor households in Ilorin metropolis as a percentage of the total population. Although as a useful first indicator it fails to pay attention to the depth (or gap) and severity of poverty in the metropolis.

To arrive at the depth of poverty and severity of poverty one need to look at the extent to which the expenditure of the poor households in the metropolis falls below the poverty line. This is customarily expressed as the “income gap ratio” or “expenditure gap ratio” which expresses the average shortfalls as a fraction of the poverty line itself, i.e.:

$$z - y_i/z \quad (4)$$

Where:

y_i is the average income or expenditure of the poor households in the metropolis.

A useful index is therefore obtained when the head count poverty ratio is multiplied by the income or expenditure gap ratio. Thus corresponding to:

$$P_1 = q/n \quad (z - y_i/z) \quad (5)$$

which reflects both the incidence and depth of poverty. These measures have particularly useful interpretation because they indicate what fraction of the poverty line would have to be contributed by every individual household in the metropolis to eradicate poverty through transfer under the assumption of perfect targeting.

The severity of poverty index is the mean of the squared proportion of the poverty gap expressed as:

$$P_2 = q / n(z - y_i/z)^2 \quad (6)$$

This index allows for concern about the poverty of the poor households by attaching greater weight to the poverty of the poorest ones among them than to those just below the line.

i. Model for the Regression Analysis

In specifying the model, emphasis was placed on whether low education attainment has any significant impact on the incidence of poverty in Ilorin metropolis. Education attainment was determined by the number of years an individual heads of households spent schooling, while Appleton's (2001) method of estimating the values of consumption-expenditure per adult equivalent that is based on the internationally defined poverty line of one dollar a day was also used to determine the poverty status of each household. The poverty status was defined as dummy 1 for non-poor and dummy 0 for poor households, thus providing us with a logit estimate of the impact of low education attainment on the incidence of poverty in Ilorin metropolis.

The model is therefore specified as: $POV_i = f (LE_i, HHc_i)$ (7)

Where LE_i stands for low education attainment and HHc_i stands for the vector of household characteristics.

$$\text{With } HHc_i = f (Hhs_i, Occ_i, TG_i) \quad (8)$$

When equations (8) is substituted into equation (7)

$$POV_i = f (LE_i, Hhs_i, Occ_i, TG_i) \quad (9)$$

With a multiple linear relationship such as:

$$POV_i = \beta_0 + \beta_1 LE_i + \beta_2 Hhs_i + \beta_3 Occ_i + \beta_4 TG_i + U \quad (10)$$

POV_i = the poverty status of each household. Dummy 1 for non-poor and dummy 0 for poor household

LE_i = low educational attainment proxied by the number of years spend schooling by individual head of household

Hhs_i = household size proxied by the number of people in a household

Occ_i = occupational status of an individual head of household

TG_i = type of gender of an individual head of household

β_0 = the intercept

β_1 β_4 = estimation parameters

U = disturbance term.

To estimate the model, a linear regression analysis was used in order to reflect the explanatory nature of the variables. To verify the validity of the model, two major evaluation criteria were used: (i) the a-priori expectation criteria which is based on the signs and magnitude of the coefficient of the variables under investigation; and (ii) statistical criteria which is based on statistical theory, which in other words is referred to as the First Order Least Square Test consisting of R-square (R^2), F- statistic and t- test. The R-square (R^2) is concerned with the overall explanatory power of the regression analysis, the F- statistic is used to test the overall significance of the regression analysis and the t- test is used to test the significant contribution of each of the independent variables on the dependent variable (Oyeniyi 1997; Greene 2003).

Drawing from the model, our a-prior expectations or the expected pattern of behaviour of the independent variables (low education attainment) on the dependent variable (the incidence of poverty) are: $\beta_1 > 0$; $\beta_2 > 0$; $\beta_3 < 0$; $\beta_4 < 0$. Indicating that, the more the number of people with low education attainment the more the incidence of poverty in Ilorin metropolis and changes in the vector of the household characteristics is also expected to have either a positive or negative effect on the incidence of poverty in the metropolis. But since the vectors of the household characteristics are interaction variables between low education attainment and the incidence of poverty they were assumed to be constant.

3. Results and Discussion

a. Incidence of Poverty in Ilorin Metropolis

In estimating the poverty indices, this study measured the well-being of the households in the metropolis by their total consumption-expenditure and by their household size using the adult equivalent scale. Having established the households' consumption-expenditure, a cut off point that serve as the poverty line using one dollar a day as consumption-expenditure of the whole population under study was established at ₦3,399.00 per month per adult equivalent. From this, the popular P-alpha class of poverty measures was used in determining the incidence, the depth and the severity of poverty among the households in Ilorin metropolis.

As indicated in Table 1, the head count poverty index (0.54) represents 54 percent of the households with consumption-expenditure level below the poverty line. Thus 54 percent of the households in Ilorin metropolis are poor since their adult equivalent consumption-expenditure falls below the poverty line (₦2,399.00 per month).

Table 1: Poverty Incidence, Depth and Severity in Ilorin Metropolis (in Percentage%)

Total Sample FGT P ₂ Index	No. of Poor Households Based on ₦2,399.00 Poverty line	Poverty Head Count Index P ₀ (in %)	Poverty Gap Index P ₁ (in %)	(in %)
440	240	54	32	10

Authors' computation, 2010

Within the same period the poverty gap index was 0.32 (representing 32 percent of those whose average consumption–expenditure falls below the poverty line). This gap is referred to as the poor's degree of misery, thus representing the percentage of expenditure required to bring each household that is poor below the poverty line up to the poverty line. The severity of poverty index was 0.10 which represents 10 percent of the poorest of the poor household in Ilorin metropolis, whom policy makers must pay attention to in the town in the distribution of social services (such as, education, health care services, clean water and sanitation facilities) food and income generating activities that will improve their standard of living.

b. Results of the Regression Analysis between Low Education Attainment and the Incidence of Poverty in Ilorin Metropolis

The results of the regression analysis conducted at 5 percent level of significance are also presented in Table 2.

Table 2: Regression Results of Low Education Attainment and the Incidence of Poverty in Ilorin Metropolis

Explanatory Variables	Coefficient Estimates and t-values
Intercept (t)	7.23(1.24)
LEi (t)	3.02 (7.65)*
Hhsi (t)	2.56 (1.76)**
Occi (t)	4.68 (0.74)
TGi (t)	2.10 (0.61)
R ²	0.65
Adjusted R ²	0.64
F	36.3*

t- values in parentheses

* Statistically significant at 5 percent

** Statistically significant at 10 percent

A look at the model shows that it has an R-square of 0.65, which shows that 65 percent variation in the dependent variable (incidence of poverty) is explained by the explanatory

variables (low education attainment) and the vector of household characteristics, while the error term takes care of the remaining 35 percent that are variables in the study that cannot be included in the model because of their qualitative features. At 5 percent level of significance, the F-statistic shows that the model is useful in determining if any relationship exists between low education attainment and the incidence of poverty in Ilorin metropolis, as the computed F-statistic which is 36.3 is greater than the tabulated F-statistic valued at 3.78.

Holding the vector of the household characteristics constant, the co-efficient estimate and the associated t-value of low education attainment has the expected signs, thus fulfilling our a-priori expectation. When statistically viewed, low education attainment is significant at 5 percent level. The result of the a-priori expectation is an indication that the more the number of people with low education attainment the more the incidence of poverty in Ilorin metropolis, which is in accordance with Todaro (1977), who found that the high level of poverty in less developed countries has made it difficult for most individuals to either attend, complete or even further their education to a higher level because of the direct cost involved (which include the school fees, the cost of books and the cost of clothing), and the dwindling income and wages of the people thus affecting their desire for education attainment.

The qualitative results obtained from some of the heads of households also revealed that on the ground of some socio-cultural and religions norms, such as, the need for early age marriage, early child bearing and rearing and the unwillingness to allow girls to go to school has contributed to low education attainment in Ilorin metropolis. Similarly, the preference to send their children to Arabic/Islamic schools (being a Muslim dominated society); and the preference to send their children to learn some trade in the informal sector or to the street to hawk goods in order to supplement family income also contributed to low education attainment. The long run effect of this is that the household members would find it difficult to escape from poverty since their children would not be able to secure modern sector employment where income and wages are relatively high.

4. Conclusion and Recommendations

In this paper we have seen the arguments of some writers as to what factors determine the attainment of western education and the consequences of low attainment of this type of education on the incidence of poverty. Using a household data set, the P-alpha class measure of poverty, a linear regression analysis and participatory poverty assessment method we were able to determine the rate of poverty in Ilorin metropolis and also determine the extent to which low education attainment has impacted on the incidence of poverty in the metropolis. Our findings revealed that 54 percent of the households in the metropolis are poor and that the low level of education attained by the people in the metropolis is directed related to incidence of poverty.

To therefore improve the level of education attainment so that in order for poverty to reduce in the metropolis, it becomes imperative for the government, the local communities within the metropolis and to some extent wealthy individuals in the communities to invest heavily in education. Investing in education could take different forms, such as massive expansion of education facilities, vocationalization of education, and investing in non-formal (adult) education in the metropolis. Massive expansion of educational facilities would help eliminate education disparity between different individuals (male and female, poor and rich, traditional and modern settlement dwellers). More so, it will lead to massive expansion on the socio-economic ladder; and make most of the people in the metropolis get out the poverty.

Investing in vocational training would go a long way in reducing poverty in that most children from poor homes prefer functional education which would provide them skills for earning their livelihood. On the other hand, investing on non-formal (adult) education with the use of mother tongues or regional languages as medium of instruction should be such that would

allow people to learn at their own pace during a period which is convenient for them. The courses that would be taught should be of interest to them and methods of teaching should also be effective.

The introduction of some courses at the tertiary level whereby skilled workers such as mechanics, carpenters, electricians, plumbers, etc can have formal education that are related to their professions will also go a long way in exposing them to new techniques and the use of advanced technology in their various professions. This knowledge will also expose them to the theoretical knowledge of what they have been exposed to in their various informal practical workshops and training.

Bad governance and corruption at the local level should be tackled with vigour. With good governance local authorities within the metropolis will be able to involve their citizens in the development decision that affect their lives. The local authorities should also ensure accountability, openness and transparency in the distribution of education resources that would have maximum impact in benefiting the poor. The fight against corruption should be total in order to make it possible for the poor to receive more social services (e.g. education). Mechanism that would guide against the diversion of education funds and materials (that are meant for the poor and the communities) to personal use should be put in place by the local authorities.

References

- [1] African Development Bank (ADB) *Gender, Poverty and Environmental Indicators on African Countries*, (2010), Abidjan: ADB.
- [2] S. Appleton, *Poverty in Uganda 1999/2000: Preliminary Estimates from the UNHS*, Nottingham, (2001), U.K.: University of Nottingham.
- [3] T.K. Bradshaw, Theories of Poverty and Anti-Poverty Programs in Community Development, *Rural Poverty Research Centre Working Paper Series No. 06-05*, (2006).
- [4] A. De Haan, Social Exclusion: Towards a Holistic Understanding of Deprivation, In Kochendorfer-Lucius, G and Pleskovic, B(eds.) *Inclusion, Justice and Poverty Reduction, Villa Borsing Workshop Series 1999, German Foundation for International Development, Berlin*, (2000).
- [5] L. Demery and C. Grootaert, Correcting for Sampling Bias in the Measuring of Welfare and Poverty in the Cote d' Ivoire Living Standards Survey. *The World Bank Economic Review*, 7(3) (1993), 263-292.
- [6] Federal Office of Statistics (FOS), *Poverty Profile for Nigeria, 1980 – 1996*, (1999), Lagos: FOS.
- [7] D. Filmer and L. Pritchett, The Effect of Household Wealth on Educational Attainment: Demographic and Health Survey Evidence, *World Bank Policy Research Working Paper No. 1980*, (1998).
- [8] J. Foster, J. Greer and E. Thorbecke, A Case of Decomposable Poverty Measures *Econometirca*, 52 (1984), 761-765
- [9] P. Glewwe, Improving Data on Poverty in The Third World, *World Bank Living Standards Measurement Study Working Paper No. 416*, (1990).
- [10] W.H. Greene, *Econometric Analysis*, Delhi: Dorling Kindersley, (2003).
- [11] C. Grootaert, Measuring and Analysing Levels of Living in Developing Countries: An Annotated Questionnaire, *World Bank Living Standards Measurement Study Working Paper No. 24*, (1986).
- [12] C. Grootaert and J. Braithwaite, Poverty Correlates and Indicator-Based Targeting in Eastern Europe and Former Soviet Union, *World Bank Policy Research Working Paper No. 1942*, (1998).

- [13] G.T. Ijaiya, Alleviating Poverty in Nigeria: Investing in Education as a Necessary Recipe, *Ilorin Journal of Education*, 18 (1998), 125-131.
- [14] L. Lau, D. T. Jamison and F.F. Lonat, Education and Productivity in Developing Countries: An Aggregate Production Function Approach, *World Bank Policy Research Working Paper No. 612*, (1991).
- [15] M. Nuruzzaman, *Economic Globalization and the Production of Poverty in the South: A Structural Explanation*, www.devnet.org.nz, (undated).
- [16] M. Obadan, Analytical Framework for Poverty Reduction: Issues for Economic Growth Versus other Strategies, *In Proceedings of the Nigerian Economic Society Annual Conference on Poverty Alleviation in Nigeria 1997, Ibadan: NES: 121-140*,(1997).
- [17] T.A. Oyeniyi, *Fundamental Principles of Econometrics*, (1997), Lagos: Cader Publication Ltd.
- [18] G. Psacharopoulos and M. Woodhall, *Education for Development: An Analysis of Investment Choices*, (1985), New York: Oxford University Press.
- [19] Republic of Mauritius Central Statistic Office (RMCSO), *Poverty Statistics*, www.gov.mu, (2011).
- [20] R.J. Sampson and T.W. Calms, *Economics: Concepts, Applications and Analysis*, (1974), Boston: Houghton Mifflin Company.
- [21] A. Sengupta, Poverty Eradication and Human Rights, *In Posse T. (ed.) Severe Poverty as a Human Rights Violation*, (2003), New York: UNESCO.
- [22] A. Sindizngre, Exclusion and Poverty in Developing Countries, *In Kochendorfer-Lucius, G and Pleskovic, B(eds.) Inclusion, Justice and Poverty Reduction, Villa Borsing Workshop Series 1999, German Foundation for International Development, Berlin*, (2000).
- [23] M.P. Todaro, *Economics for a Developing World: An Introduction to Principles, Problems and Policies for Development*, (1977), London: Longman Press.
- [24] J. Valdez and M. Bamberger, Monitoring and Evaluating Social Programme in Developing Countries: A Handbook for Policy Makers, Managers and Researchers, *World Bank EDI Development Studies*, (1994), Washington D.C: The World Bank.
- [25] M. Von Hauff and B. Kruse, Conceptual Bases for a Consistent Poverty- Oriented Policy, *Economics*, 49/50 (1994), 41-55.
- [26] Wikipedia, Ilorin, www.wikipedia.org, (2010).
- [27] World Bank Challenges of Development, *World Development Report 1991*, (1991), New York, Oxford University Press.
- [28] World Bank, Attacking Poverty, *World Development Report 2000/2001*,(2000/2001), NewYork Oxford University Press.
- [29] World Bank, *World Development Indicators*, (2008), New York Oxford University Press.
- [30] A.M. Yahie, The Design and Management of Poverty Alleviation Projects in Africa: Evolving Guidelines Based on Experience, *World Bank EDI Human Resource Division*, (1993).