Determinants of Female Primary School Enrolment in Rural Imo and Enugu States of Nigeria

Nnennaya Ibiam (Ph.D.)
Department of Agricultural Education, Michael Okpara University of Agriculture, Umudike

Abstract

This study investigated the determinants of female children primary school enrolment in rural Imo and Enugu States of Nigeria. The study is a descriptive survey. The research provided information on the factors which hamper primary education of children in rural Nigeria, and which increased their enrolment and the influence of gender on enrolment. Based on the findings, recommendations were proffered on how to increase female children's participation in primary schools.

Introduction

Education can be seen as an important channel through which development can be attained. In the educational system, increase in primary school enrolment is very important. This is to ensure that young females in the rural areas attend primary schools. Anyanwu (1998) stated that females' unequal access to and participation in education is a global phenomenon; but it is more prevalent in developing nations. Despite the progress in raising educational enrolment rates for both males and females across regions in the past thirty years, growth in educational opportunities at all levels for females lags behind that for males (World Bank ,1995). Bythe year 2000, the World Bank projected that 85 million girls will not be in primary schools. The gender gap in expected years of schooling is widest in some countries of South Asia, the Middle East and Sub-Saharan Africa.

Indeed, Sub-Saharan Africa recorded the least female-male primary school enrolment ratios in the developing world in 1990, with the gross ratio of girls to boys falling on average to 61.2 percent from 67.3 percent in 1980.

However, as the World Bank (1995p. 40) indicated, that "clear evidence is lacking on the reasons for falling (primary school) enrolments in many African countries." High opportunity costs of child time or the need for children's help with household work, poor employment prospects, cultural factors, poor nutrition, low income and inadequate schools are often cited as the major constraints on low enrolment, particularly for girls in developing nations.

This study examined this phenomenon in the context of rural female Nigerian children since it has received virtually no attention (except for Bigman, 1995 and World Bank, 1996 for children aged 10 through 13 years). Understanding why many rural female children are not enrolled in primary

schools can shed light on the barriers to education faced by families in Nigeria and other developing countries. Moreover, given the estimated high returns to female education (Herz, 1991), the causes of low female primary school enrolment rate in relation to males need to be found.

Problem of Study

One of the most important components of female children's time use is school attendance. The extent to which female children in developing countries are being educated has profound implications for the long-run welfare of children and their own families as well as for economic development through human capital information. The questions of the determinant of female children's school enrolment and the implied issue of how their time is allocated between schooling and other activities are, therefore, of great relevance. Although the issue of time allocation of women has received some attention abroad (Quizon, 1988; Rosenzweig and Evenson, 1988; King and Evenson, 1993; Fabella, 1994; Gomes, 1994; Levison, 2001; Degraff, Bilsborrow and Herrin, 2003; Basu, 2003; Sathar, 2003), analyses of the determinants of female children's school enrolment/attendance in Nigeria have received little attention. The rural-urban distribution of primary school enrollment is particularly disturbing given that the population of Nigeria is 18.9 percent urban and 81.1 percent rural (Yoloye, 1994).

Table 1: Primary school enrolments in Nigeria, Imo and Enugu States 1989/90 – 2003/2004.

Year	Nigeria–Enrolment (000)				Nigeria-Enrolment Ratio (%)				Enrolments in Imo and Enugu States (000)			
	M	F	MF	%F	M	F	MF	Gender Ratio	M	F	MF	%F
1989/90	7,825	6,395	14,220	43.5	120	100	110	.78	409	385	794	48.0
1990/91	8,100	7,000	15,100	43.6	100	86	93	.87	442	434	876	49.0
1991/92	8,160	6,150	14,312	43.0	101	83	92	.84	408	424	832	49.4
1992/93	8,450	6,300	14,750	43.1	105	82	93	.76	428	426	854	49.9
1993/94	8,055	6,331	14,386	44.0	96	74	85	.80	477	447	924	49.0
1994/95	7,356	5,860	13,216	44.3	85	70	77	.81	336	320	656	49.1
1995/96	7,281	5,631	12,912	44.2	82	68	75	.81	396	374	770	49.2
1996/97	6,000	5,010	11,010	44.1	72	58	65	.78	410	392	802	49.1
1997/98	7,500	5,800	13,300	42.2	78	60	69	.74	454	436	890	49.0
1998/99	6,900	5,784	12,684	45.0	70	60	65	.85	468	480	948	50.0
1999/2000	7,710	5,780	13,490	42.5	78	60	69	.77	498	464	962	48.5
2000/2001	7,712	6,045	13,757	43.4	84	70	77	.80	500	468	968	49.0
2001/2002	8,525	6,000	14,525	44.0	90	72	81	.80	509	500	1,009	50.0
2002/2003	8,834	6,840	15,674	43.5	92	74	83	.80	600	584	1,184	51.1
2003/2004	9,085	7,565	16,550	44.2	96	64	80	.94	608	591	1,199	51.2

Table 1 shows, in primary school enrolment, the shares of female enrolment in Nigeria from 1989/90 to 2003/2004 which remained consistently below 45 percent. Table 1 also shows the gender gap (calculated by dividing the female enrolment ratio) for the period. The enrolment rates for girls fell between 1989/90 and 1999/2000, rising thereafter till 2002/2003 but dropping sharply in 2003/2004 year to even below their 1990/91 levels. Thus, in spite of the 3 years rise between 2000/2001 and 2002/2003 in the enrolment rates for girls, that expansion has not removed the gender gap.

Objectives of the Study

The specific objectives of this research are to:

1. Identify and analyze the pattern and variation of female children's school enrolment vis-à-vis time allocation to market work and home production in rural Nigeria.

2. Present and analyze the socio-economic factors determining female children's school enrolment in rural Nigeria.

Data Requirement and Sampling Procedure

Some of the most important economic and socio-economic factors influencing the school enrolment (education) of rural Nigerian female children were investigated and estimated. The data were drawn from a survey of primary school pupils consisting of 285 rural female children and 126 rural male children (a control group) aged 6 to 11 years who had never been married and who still lived at home – being also children of household head and/or or spouse. This stratified randomly selected sample was made up of 208 from Imo and 203 from Enugu States of Nigeria. Questions asked include those meant to elicit personal, family, time use, and social community, etc. The analysis was conducted using endogenous approach to really determine the rural female's school enrolment.

Method of Data Analysis

The study applied descriptive analysis. Based on the theoretical framework and other recent empirical studies, the variables considered to have predictable effects on rural female children's school enrolment are respondent's hours spent on farm work (farm), home (domestic) production activities (domestic) measured in hours (including shopping for or preparing food, general household chores, care of children, gathering water or fuel wood, home repairs and improvements, and home gardening), the respondent's hour spent on trading

activities (market work) trading; other work (e.g. rubber tapping, boating business, climbing and cutting of palm fruits) (other work) (Dagsvik and Aaberge, 1991), Household characteristics such as mother's/father's education (ranging from no education to post-secondary education (see table 2) were also considered. Following the patterns used by King and Bellew (1990, 1991; Gill, 1991) and Appleton et al. (1990), this study used parent's occupation (farming, trading and civil service) as proxies for income. This is not only due to the unreliability of recalled income data in a rural setting but also because current measures of parents' incomes do not reflect true cross-sectional differences at the time of schooling.

Results of Data Analysis

Descriptive statistics

Table 2 presents the descriptive statistics (number, percentages, means and standard deviations) and key variables in the analysis for rural children. The results show that out of the 411 children sampled, 237 (or 57.95 percent) were enrolled in primary schools in rural Imo and Enugu States. This was made up 157 rural girls (55.28 percent) and 80 rural boys (64 percent).

This gives a gender ratio of 86.38 percent. Also, out of the 207 children sampled in Imo state, 176 (or 85.02 percent) were enrolled in school while only 61 (or 16.14) of them being ill the week before the survey. Children's participation in work is as follows: farm work (226 or 55.26 percent), domestic work (39 or 87.78 percent), trading (167 or 40.83 percent) and other work (114 or 27.07 percent).

When viewed in terms of number of hours given to each of the activities per week, the distribution is as follows: farm work (7.55 hours), domestic work (9.50 hours), trading (5.79 hours), and other work (2.25 hours). Only 75 (or 18.34 percent) of the children earned some money from participating in these activities. 120 (or 35.93 percent) of the children indicated that participation in production work affected them. The effects differed as shown in table 2.

Endogenous analysis shows that out of 80 children that indicated the reasons for their non-enrollment, lack of funds ranked the highest (31.38 percent) followed by "other reasons" (30.38) percent such as recent transfer to a new location, parents preferring to educate the boys, temporary child care, too many children in the household, and teachers not teaching the pupils.

Table 2.Descriptive Statistics of sample of Rural Children, N = 411

Variable	N (%)	Mean	Std. Dev.
Dependent variable			
Enrolled in school	238 (57.95)	0.58	0.49
Females	156 (55.28)	0.55	0.50
Males	80 (64)	0.64	0.48
Imo	176 (85.02)	0.85	0.36
Enugu	61 (30.20)	0.3	0.46
Independent variables			
a. Characteristics of child			
Age		8.96	1.72
III	66 (16.14)	0.16	0.37
Participation in work			
Farm work	226 (55.26)	0.55	0.50
Domestic work	359 (87.78)	0.88	0.33
Trading	167 (40.83)	0.41	0.49
Other work	114 (27.07)	0.28	0.45
Hours of work for past week in:			
Farm work		7.55	14.31
Domestic		9.50	9.96
Trading		5.79	12.52
Other work		2.25	5.98
Earn	75 (18.34)	0.18	0.39
Work affects child	120 (35.93)	0.36	0.48
Lateness	74 (30.58)	0.31	0.46
Absence	58 (25.33)	0.25	0.44
Lack of study	34 (22.35)	0.20	0.40
Can't do homework	40 (22.35)	0.20	0.40
Can enrol in school	14 (10.22)	0.10	0.30
Tiredness	70 (36.08)	0.36	0.48

Table 2 Cont'd			
a. Household Characteristics			
Father's age		47.98	10.88
Father's Education			
No Education	65 (16.54)	0.16	0.37
Primary	150 (38.17)	0.39	0.49
Secondary	117 (29.77)	0.30	0.46
Post-secondary	61 (15.52)	0.16	0.37
Father's Occupation			
Farming	193 (59.23)	0.49	0.50
Trading	40 (10.20)	0.10	0.29
Civil Service	67 (19.09)	0.17	0.38
Retired	19 (4.85)	0.05	0.22
Artisan	18 (4.59)	0.05	0.21
Unskilled	39 (9.95)	0.10	0.31
Unemployed	14 (3.57)	0.04	0.19
Pastor	1 (0.26)	0.003	0.05
Traditional Healer	1 90.26)	0.003	0.05
Mother's Age		35.54	7.28
Mother's Education			
No Education	137 (33.74)	0.34	0.47
Primary	160 (39.41)	0.40	0.49
Secondary	90 (39.41)	0.22	0.42
Post-secondary	19 (4.68)	0.05	0.21
Mother's Occupation			
Farming	184 (45.66)	0.46	0.50
Trading	172 (42.68)	0.43	0.50
Civil Service	20 (4.96)	0.05	0.22
Retired	1 (0.25)	0.003	0.05
Artisan	1 (0.25)	0.003	0.05
Unskilled	6 (1.49)	0.02	0.12
Unemployed	19 (4.71)	0.05	0.21

Number of father's children		8.79	5.93
Wealth		3.34	2.11
Radio	306 (74.82)	0.75	0.44
Television	170 (41.56)	0.42	0.49
Refrigerator	109 (26.65)	0.27	0.44
Video	53 (12.66)	0.13	0.34
Car	44 (10.76)	0.11	0.31
Motorcycle	119 (29.10)	0.29	0.46
Bicycle	178 (43.52)	0.44	0.50
Cooker	35 (8.56)	0.09	0.28
Blender	51 (12.47)	0.13	0.33
Stove	287 (70.17)	0.70	0.46
a. Community characteristics			
Residence/State			
Imo	207 (50.610	0.51	0.50
Enugu	202 (49.39)	0.49	0.50
Religion			
Orthodox Christian	138 (33.74)	0.34	0.47
Pentecostal	110 (26.89)	0.27	0.44
Syncretic Christian	43 (10.51)	0.11	0.31
Islam	12 (2.93)	0.03	0.17
Traditional religion	66 (16.14)	0.16	0.37
No religion	50 (9.78)	0.10	0.30
School available in village	378 (92.42)	0.92	0.27
Distance to school (km)		0.87	0.60
Female	284 (69.44)	0.69	0.46
Male	125 (30.56)	0.31	0.46
Why did not enrol	79		
- No money	25 (31.64)		
- Child refused	12 (16.46)		
- Farm work	2 (2.53)		
- Trading	1 (1.27)		

- Transport business	2 (2.53)		
- Domestic work	5 (6.33)		
- Father thinks she will prostitute	2 (6.33)		
- Poor school facilities	5 (6.33)		
- Other reasons	24 (30.38)		
States' Enrolment by Gender			
Imo:			
Female	114 (86.82)		
Male	64 (82.05)		
Enugu:			
Female	45 (29.03)		
Male	16 (34.04)		

Other reasons given for non-enrolment by the children include deliberate refusal by some of them since they made more money hawking, rubber tapping or climbing palm trees and harvesting palm fruits; poor school facilities and inadequate teaching; engagement in farm, trading, domestic work; and fathers thinking that female children's "eyes will be opened in school" to take to take to prostitution. Education is perceived by some as corrupting the traditional simple mind attitudes of females and causing them to be less willing to do physical labour and become less desirable as housewives.

Analysis of enrolments by state show that in Imo State 112 (or 86.82 percent) of the girls enrolled while 64 (percent) of the boys enrolled. Enrolments in Enugu State were for lower for both girls and boys; while 45 (or 29.03 percent) of the girls enrolled, 16 (or 34.04 percent) and boys enrolled.

Table 3 presents the description of primary school enrolment by selected independent variables in percentages and by gender. Enrolments ranged from 63.64 percent of six-year-old girls to 52.27 percent of the eleven-year-old-girls. In the same vein, for boys enrolments ranged from 30.77 percent of the six-year-olds to 59.09 percent of the eleven-year-olds.

Table 3 also shows that boys who participated in all the production activities and who enrolled in school exceeded girls. The same is true for those who earned some pay for participation in those activities.

Analysis of children's enrolment by parents' education and occupation is illuminating. For both girls and boys, enrolment is highest when parents had post—secondary education. Girls whose fathers are either pastors or traditional healers have the highest enrolment in terms of occupation, while for boys it is

those whose fathers are artisans or unemployed. While unemployed fathers had only 41.6 percent (the least) of their daughters enrolled, they had all their sons enrolled. Girls whose mothers had some skills or were artisans (such as seamstresses) had the highest enrolment while those whose mothers had no job had the least enrolment (25 percent). Retired mothers had the highest number of their sons enrolled in primary school.

Table 3. Description of enrolment by Selected Independent Variable (%)

Variable	Percentage		
	Female	Male	Total (Female + male)
Age of Child	63.64	30.77	54.35
6 years old	55.26	60.00	56.90
7 years old	58.70	54.55	57.89
8 years old	55.56	72.22	60.32
9 years old	52.94	69.23	58.44
10 years old	50.94	72.97	58.33
11 years old	52.27	59.09	54.55
III			
Participation in Work:			
Farm Work	57.05	67.53	60.62
Domestic Work	58.59	69.90	61.84
Trading	60.34	68.63	62.84
Other Work	52.13	60.00	53.51
Earn	56.36	60.00	57.33
Father's Education			
No Education	42.55	61.11	47.69
Primary	54.13	51.22	53.33
Secondary	58.90	68.18	62.39
Post-secondary	73.81	94.74	80.33
Father's Occupation			
Farming	47.79	61.40	51.81
Trader	43.75	62.50	47.50
Civil Service	84.78	85.71	85.07
Retired	45.45	87.50	63.16
Artisan	75.00	100.00	83.33
Unskilled	75.00	36.84	16.41
Unemployed	41.67	100.00	50.00
Pastor	100.00		100.00
TraditionalHealer	100.00		0.00

Mother's Education			
No Education	48.45	50.00	48.91
Primary	46.90	70.21	53.75
Secondary	73.68	66.67	71.11
Post-secondary	92.86	100.00	94.74
Mother's Occupation			
Farming	51.11	55.10	52.17
Trader	60.18	74.58	65.12
Civil Service	75.00	75.00	75.00
Retired	-	100.00	0.00
Artisan	100.00	-	100.00
Unskilled	66.67	66.67	66.67
Unemployed	25.00	42.86	31.58
Residence/State			
Imo	86.82	82.05	85.02
Enugu	29.03	34.04	30.20
Religion	77.17	76.09	76,81
Orthodox	69.01	76.92	71.82
Pentecostal	19.44	28.57	20.93
Syncretic Christian	88.89	66.67	83.33
Islam	32.61	35.00	33.33
Traditional Religion	23.23	40.00	27.50
No Religion	61.42	63.71	62.17
School Availability			
Wealth Item Ownership			
Radio	55.45	76.74	61.44
Television	59.17	76.00	64.12
Refrigerator	68.00	82.35	72.48
Video	42.86	77.78	54.72
Car	79.31	93.33	84.09
Motorcycle	60.71	85.71	68.07

Bicycle	55.28	69.09	59.55`
Cooker	53.85	88.89	62.86
Blender	63.16	100.00	72.55
Stove	59.20	77.91	64.81

Conclusion

(a) Summary of Major Findings

This study investigated the determinants of female children's primary school enrolment in rural Nigeria, using some male children as a control group. The major findings are summarized as follows:

- Engaging in marketing work (trading jeopardizes the primary education of both female and male children in rural Nigeria.
- Engaging in home (domestic) production does not jeopardize the primary education of both female and male children in rural Nigeria.
- Participation in farm work reduces the probability of female children's primary school enrolment in rural Nigeria while it does not affect that of the male children.
- The primary education of Nigeria rural female and male children is negatively affected by high fertility.
- Household wealth of rural Nigerians raises the probability of male children (and the overall sample) being enrolled in primary school.
- Having civil servant fathers enhances female children's (and overall samples') school enrolments.
- Having farmer, trader or civil servant mother highly increases the probability of both female and male children's school enrolment.
- Professing any religion increases the probability of both female and male children's school enrolments (more so for orthodox and Pentecostal Christians).
- The education of both fathers and mothers is positively associated with their female and male children's primary school enrolment.
- Distance to school reduces the probability of male and female enrolment.
- The availability of primary school in rural community increases the probability of female children's school enrolment.

(b)   Recommendations

It may be necessary to lower the opportunity cost of schooling to increase female children's participation. There are at least four ways to lower this cost. First, compulsory free universal primary education (with free uniforms and books, especially for girls) and primary school scholarships can ease the barrier that high opportunity costs create by offering monetary compensation to parents for the loss of their daughter's time. Second, introducing simple farm technologies can lower the amount of time girls spend on farm work. Third, alternative or "safety net" can provides schooling opportunities at times during the day that female children can attend. Fourth, the formal school schedule and instructional time can be made more flexible and consistent with female children's work schedules (especially in farming communities of rural Enugu State) (see also Bellew and King, 1991).

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