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SOCIO-ECONOMIC AND DEMOGRAPHIC FACTORS AFFECTING SCHOOL ENROLMENT IN EGYPT

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Abstract

An attempt is made in this study to analyse variations in school enrolment according to certain socio-economic and demographic characteristics in Egypt using data come from the 1992 Egypt Demographic and Health survey. The study concluded that the net school enrolment in Egypt as a whole is 83 percent. It was quite different among boys and girls. While it is 85.7 percent for boys, it is 75.6 percent for girls. School enrolment in Urbans areas is higher than Rural (89.7 Vs 73.7 percent respectively). It is higher in Urban governorates and Urban Lower Egypt than other regions. The school enrolment is higher for children of educated parents than children of non educated parents.

I INTRODUCTION

The educational system in Egypt has developed over a long period of time. Currently, basic education is compulsory for the first eight years, starting at age six until age 13. Public education at all levels is free although there are private schools where some children are enrolled mainly in urban areas.

Although the economic indicators show that the economy is improving, Egypt is ranked at the lower end of the human development index. However, a number of key human development indicators have improved over time. The primary school enrolment rates have jumped from 75 percent in 1970 to 98 percent in 1990. Female enrolment rates increased from 57 percent in 1970 to 90 percent in 1990. But the results of Egypt Demographic and Health Survey, 1992 present an educational gap that exists between males and females in Egypt. While the literacy rate is 78 percent for males, it is only 59 percent for females.

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Regional variations are observed also where Rural Upper Egypt ranked last, specia for women. The low level of woman's education in Rural Upper Egypt is particular striking because of the social values that maintain girls at home. In the population as whole, boys are more likely than girls to be enrolled in school in all ages.

The school enrolment according to the United Nations refers to enrolment in a regular educational institution, public or private, for systematic instruction at any level education during a well-defined and recent time period. The Gross school enrolment rat is the percentage or fraction obtained by dividing the total of enrolments in a level education by the population of the age group which corresponds to that level . Th corresponding age group, assuming a child who enters at the correct age and passe straight through the school, is 6 to 13 inclusive. The Net school enrolment ratio is th fraction obtained by dividing the enrolment in a specific age group and in a specific leve of education by the population of the same age group which corresponds to that level.

The Net school enrolment ratio is used as an indicator in this research. It is a bette measure of effective enrolment than Gross enrolment ratio since it focuses on particular ages or age groups. It represents the percent of population in typical enrolment ages that is still enrolled in school.

The socio-economic characteristics of the family are the most important factors determining those who have the chance to go to school among siblings.

There is a notable difference in educational attainment between Urban and Rural residents where all conditions such the quality of school, the type of housing, the distance between home and school could not facilitate the schooling of children.

1.1 Objectives of the Study:

The study aims to show the impact of certain socio- economic and demographic characteristics of the family on the school enrolment of children in Egypt in 1992. It attempts to acheive the following objectives:

1) To study the level and differentials of school enrolment ratio in Egypt.

2) To investigate the socio-economic and demographic factors that are accounting for more determinants such as, parents' education, the number of total children ever born in the family and certain housing conditions.

1.2 Review of the Literature:

Education is an integral part of a society or nation. Not only does it contribute, positively or negatively to the welfare of that society but it is also largely influenced by existing social, economic and political factors. The young structure of the population with 50 percent less than 15 years, is increasing the incapacity to cover all the country by efficient schools and help to the poorest class. usually the rural regions in the Arab countries may continue to suffer from lack of education and other services (El-Ghannam, 1971).

Education for all is an important goal because it improves both the lives of children and the economic growth and social welfare of nations. A child who has access to quality primary schooling has better chance with healthy and secure life.

Between 1960 and 1985, the enrolment rates in primary school children in Africa doubled from 33 percent to 66 percent, and in Latin America and Caribbean from 58 percent to nearly 100 percent. Certain distressing failures appeared. One of them is the unbalance between boys and girls. For every three girls born in South Asia or in the Middle East, only one will complete primary education and 75 percent of women in many parts of Africa and Asia are still illiterate.

Education systems fail to reach some children while more children are in school now than 30 years ago. In most low-income countries, there are still many girls and boys who have not been reached.

A child who has daily responsibilities in the household, such as taking care of younger siblings or collecting water and firewood that the family needs, may not finish his work may not go to school always. The parents may also refuse to send their children to school because of the cost of school fees and the loss of children's labor contribution. A son may take over his father's farm and the daughter will marry. Children who live in rural and remote areas or from poor families frequently must forfeit education(ANDERSON,M,B. 1992).

1.3 Theoretical Assumptions:

The reading of several studies permits to put the hypotheses of the present researc paper which focuses on the factors affecting the school enrolment ratio among children i Egypt.
These hypotheses are as follow:

1) The higher the parents' education, the higher the school enrolment of their children

2) The higher the number of children born in the family, the lower the number o children enrolled in school among the siblings.

3) The better the housing conditions , the higher the school participation of children

4) The school enrolment ratio is lower among children living in rural areas and amon girls.

1.4 Data Sources:

The data used in the study come from the Egyptian Demographic and Health Surve conducted in 1992. A national representative sample of 11,304 households was scattered in 21 Governorates. Out of these selected households, the present research took into consideration 16599 children in the age of basic stage of education, between age six and 1 years.

1.5 Methodology:

Variables introduced in the study:

Regarding the school enrolment variable, women have been asked if their children were attending school or not. It constitutes the dependent variable introduced in the regression analysis. other demographic variables designed to be factors affecting school enrolment are considered as independent variables and included in the study. There are mainly age and sex of children and total children ever born within the family.

Some socio-economic characteristics are identified to influence also the school attendance such as mother' education, father's education and housing conditions principally type of dwelling, dwelling owned and electrical connections in the house.

Analytical Procedures:

This research deals with several ratios revealing the status of school enrolment and its differentials in Egypt. Percent distributions of currently enrolled children in schooling age are calculated according to some socio-economic and demographic characteristics of parents and housing conditions. Factors affecting school enrolment are investigated through Logistic Regression Analysis with respect to the effect of measures such as parents' education, total children ever born, residence urban-rural and housing conditions.

II. LEVEL AND DIFFERENTIALS IN SCHOOL ENROLMENT

Region of Residence:

In general, the net school enrollments for both sexes and for all children in the two levels were respectively 93 percent in the all country, 85.7 percent for boys and 75.6 percent for girls, as shown in Table 1 which presents the net school enrolment ratio by region. Among children in primary school, the proportion enrolled was high, about 94 percent for both boys and girls in all urban Governorates.

There were great differences between Upper and Lower Egypt, regarding Urban-Rural areas and for girls in general. In Urban Lower Egypt, about 94 percent of both boys and girls were enrolled in primary school against 87.8 percent in Urban Upper Egypt.

TABLE (1)
NET SCHOOL ENROLMENT RATIO BY SEX AND REGION OF RESIDENCE, EGYPT 1992.

	6-10			11-13			TOTAL		
REGION	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL
URBAN GOVENORATES	94.3	93.4	93.9	85.5	84.9	85.2	91.1	90.2	90.6
URBAN LOWER	94.0	93.8	93.9	90.8	85.4	88.4	92.7	91.0	91.9
RURAL LOWER	90.7	77.0	83.9	79.7	69.2	74.6	86.8	74.3	80.6
URBAN UPPER	88.0	87.6	87.8	81.1	82.1	81.6	85.5	85.7	85.6
RURAL UPPER	81.3	55.2	68.5	74.1	46.0	60.9	78.9	52.2	65.9
TOTAL	88.6	76.0	82.4	80.5	69.0	75.0	85.7	75.6	93.0

Source: Calculated from EGYPT Demographic and Health Survey,1992.

The proportion enrolled in Rural Upper Egypt was lower than in Rural Lower Egypt with respectively 68.5 percent against 83.9 percent. This is due to the low development of Upper Egypt.

In Lower Egypt, the sex differentials in primary school enrolment ratio appeared clearly in rural regions with respectively 90.7 percent for boys and 77 percent for girls. In urban regions, there was no difference between the two sexes attending in school, with a proportion of 94 percent. In Rural Upper Egypt, the gap between boys'school enrolment and girls'school enrolment was big with respectively 81.3 percent against only 55.2 percent currently enrolled in primary school.

This could be explained by the fact that the society still is traditional and conserves the social values that place mainly girls at home.

In preparatory school, the proportions enrolled according to regions and sexes were lower than for primary school. About 75 percent were enrolled in preparatory level against 82.4 percent in primary level. But there were differences that show the same pattern. About 85 percent of both boys and girls were enrolled in Urban Governorates.

The differences between Upper and Lower Egypt were also identical. The Rural regions were those with greater sex differentials.

In Rural Lower Egypt, the gap between boys and girls in preparatory school decreased to 10.5 percent age-points instead of 13.7 percent age-points for primary school. In Rural Upper Egypt, the sex differential was more severe than in primary school, with 28 percent age-points. Rural regions of Egypt were the areas where girls were the most disadvantaged for the current enrolment in preparatory school with 69.2 percent in Lower Egypt and 46 percent in Upper Egypt.

Looking to the place of residence Urban-Rural, Table 2 shows that for both levels, the school enrolment ratio was higher in urban localities than in rural localities with respectively 89.7 percent against 73.7 percent.

TABLE (2)
NET SCHOOL ENROLMENT RATIO BY SEX AND PLACE OF RESIDENCE, EGYPT 1992.

	6-10			11-13			TOTAL		
RESIDENCE	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL
URBAN	92.7	92.0	92.4	85.9	84.3	85.1	90.2	89.2	89.7
RURAL	86.2	66.6	76.5	77.1	58.8	68.3	83.0	64.0	73.7
TOTAL	88.6	76.0	82.4	80.5	68.9	74.9	89.1	73.6	79.8

Source: Calculated from EGYPT Demographic and Health Survey,1992.

Regarding each level, the net school enrolment ratio in primary school was higher in Urban areas than in Rural regions with 92.4 percent against 76.5 percent respectively. The same pattern appeared for preparatory level with 85.1 percent in Urban areas against 68.3 percent in Rural areas respectively.

The sex differential between Urban and Rural areas was the same, about 16 percent age-points for both levels grouped. In primary school, about 86.2 percent of boys from rural areas were enrolled against 66.6 percent of girls. The gap was about 19.6 percent age-points.

In preparatory level, about 77.1 percent of boys from rural areas were currently enrolled against 58.8 percent of girls. The gap was 18 percent age-points, showing that rural areas were places where girls still have low school enrolment in Egypt, especially in higher level than primary school.

Parent's Education:

Considering that school enrolment ratio of children is influenced by the educational level of parents and the total children ever born in the family, Table 3 shows these affecting factors.

1) Mother's Education:

In general for both levels and within the school age 6-13 years, the net school enrolment of children increases with increase of mother's education from 72 percent to 98.6 percent.

But the level of school enrolment ratio of children still was lower in preparatory level than in primary level regarding mother's education until the preparatory school is reached.

The gap between boys and girls regarding the school enrolment ratio and its relation to mother's education, was 18.2 percent-points for illiterate women and decreased to 2.1 percent-points in favor of girls when mothers have reached university level and more.

The difference between primary and preparatory net school enrolment ratio was minimized and became nearly equal(97%) between the two levels in the case of mothers having secondary education and over for both boys and girls.

This determines the important role of high mother's education for the continuation of schooling for both sexes. At this stage, mothers got awareness about the necessity of giving education to both sons and daughters.

TABLE (3)

NET SCHOOL ENROLMENT RATIO BY AGE, SEX, TOTAL CHILDREN EVER BORN AND SOCIO-ECONOMIC CHARACTERISTICS, EGYPT 1992.

	6-10			11-13			TOTAL		
	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL
MOTHER'S EDUCATION									
ILLITERATE	84.6	65.8	75.4	74.4	57.4	66.0	81.0	62.8	72.0
PRIMARY	92.2	84.6	88.5	85.7	81.9	83.9	89.8	83.6	86.8
PREPARATORY	95.0	91.6	93.4	90.7	89.6	90.1	93.6	90.9	92.3
SECONDARY	97.3	96.9	97.1	96.9	96.8	96.8	97.1	96.9	97.0
UNIVERSITY+	97.7	99.8	98.8	95.3	100.0	98.0	97.1	99.9	98.6
HUSBAND'S EDUCATION									
ILLITERATE	81.6	61.0	71.5	71.3	53.6	62.7	77.8	58.3	68.3
PRIMARY	90.6	78.6	84.8	81.2	72.7	77.1	87.4	76.5	82.1
PREPARATORY	95.3	87.1	91.1	88.1	81.9	85.1	92.7	85.3	88.9
SECONDARY	96.8	94.7	95.7	96.5	90.8	90.8	96.7	93.5	95.1
UNIVERSIT+	96.7	97.0	96.8	96.1	98.2	97.1	96.4	97.3	96.9
TOTAL CEB									
0-4	91.2	82.5	87.0	85.8	73.5	80.0	89.5	79.8	84.9
5-8	87.4	72.1	79.7	78.7	69.1	74.2	84.0	71.0	77.5
9+	79.9	60.9	70.4	69.7	54.9	62.1	75.8	58.4	67.0

Source: Calculated from EGYPT Demographic and Health Survey,1992.

In primary school, the increase is slow and starts at higher level for boys, from 84.6 percent for illiterate women to 97.7 percent for women having university level and over. For girls, the increase was very fast from 65.8 percent when mothers were illiterate to 84.6 percent when mothers had primary school level and continued to increase slowly until to reach 99.8 percent for mothers having university level and over. This point out the importance of mother education in the entry and attendance of girls in primary school. In general, they hope to provide more education to their daughters, expecting better future for them.

2) Father's Education:

Father's education is also considered to be determinant in school enrolment of children. The identical pattern is shown in Table 3. The net school enrolment ratio of children within the school age 6-13 years increases with the increase of father's education from 68.3 percent for illiterate fathers to 96.9 percent for fathers having university level and over. The same increase occurred in each of the two levels of schooling under study.

The gap between boys and girls was high for illiterate men, about 19.5 percent points. This difference is reduced with the increase of father's education, being in favor of girls with only 1 percent points when fathers have university level and more.

In primary school, the net school enrolment ratio was higher among boys than girls regarding father's education. For boys, it increases slowly from 81.6 percent when father has no certificate to reach 96.7 percent for fathers having university level and more. The increase of net school enrolment ratio among girls increases more rapidly from 61 percent for illiterate fathers to 78.6 percent for fathers having primary school and reached 97 percent if fathers had university level and over.

The influence of father's education on the net school enrolment ratio for both sexes was more important in primary school, showing an increase from 71.5 percent to 96.8 percent. In preparatory school, the increase was from 62.7 percent to 97.1 percent, determining the acceptance of fathers to enroll their children in school.

Girls were more disadvantaged in comparison to boys but father's education had great influence on the increase of girls'school enrolment, being slightly higher than boys for fathers having university level and over, even if it do not insure the continuation of schooling without drop out.

The above findings permit to say that parents' education is one of the key factors which influence the decision about who should go to school in the family.

Total Children Ever Born:

The total children ever born is one indicator reflecting indirectly the level of fertility and child mortality in the family. The high number of total children ever born determines the low socio-economic level of the family and consequently has an influence on the school enrolment of children between siblings.

Table 3 shows that the higher the number of children ever born, the lower the net school enrolment ratio. For 0-4 children ever born, the school enrolment ratio was 84.9 percent against 67 percent for 9 children and more. The lowering of school enrolment ratio among girls according to Total CEB was more severe, with 8.8 percent points between 0-4 and 5-8 children ever born in the family and 12.6 percent points between 5-8 and 9 children or more in the family. The decreasing of school enrolment ratio among boys was much lower with 5.5 percent points and 8.2 percent points respectively.

The lowering of school enrolment was higher in preparatory level than in primary reaching 62.1 percent against 70.4 percent respectively.

In primary school, the lowering among girls was more important than for boys with 10.4 percent points between 0-4 total children ever born and 5-8 total children ever born against 3.8 percent points in the case of boys.

The difference between families of 5-8 children ever born and 9 children ever born and more was 11.2 percent points against 7.5 percent points respectively for girls and boys. The same pattern exists for preparatory level but the gap between boys and girls from one number of children ever born and another was more severe. In the case of boys, it was 7.1 percent points between families of 0-4 and 5-8 children and 11 percent points between families of 5-8 and 9 children and more.

For girls, the pattern shows that the parents have tendency to sacrifice their daughters with the increase of children ever born in the family. The differences were 4.4 percent points between families of 0-4 and 5-8 children but 14.2 percent points between families of 5-8 and 9 children and more.

Housing Conditions:

The housing conditions are factors determining the housing status and describe the commodities that could affect the net school enrolment ratio. The type of dwelling or the dwelling owned and electric installations were studied to determine those were more significant.

Surprising results appeared in Table 4. The net school enrolment ratio was higher (90.8%) among children living in an apartment rather than among those were living in free standing house(74.2%). The same differences existed in the two stages of education but with lower level in preparatory school. This could be explained by the fact that lower class population or poor people were more motivated to enroll their children in school for the main reason to improve their standard of living.

The sex differentials were more clear for children living in free standing house where the net school enrolment ratio was much lower among girls for both primary and preparatory levels with 68.3 percent and 59.5 percent respectively. The reason was that in high class standing, parents did not see the necessity of giving education to their daughters when richness and wealth already existed. For this category of the society, even boys were following school with lower enrolment ratio than those living in apartment, with 85.9 percent against 94 percent for primary school and 76.9 percent against 84.7 percent for preparatory level respectively. In general, boys are involved in the management of the family's wealth rather than in following high schooling.

The dwelling owned factor shows also the same findings. The net school enrolment ratio increases from 76.5 percent to 98.9 percent with the decrease of dwelling owned. When people did not possess houses which means any property, their motivation to improve the standard of the family is performed through the education of children.

The net school enrolment ratio shows similar pattern but much higher for primary school than for preparatory school, increasing from 79.5 percent to 98.3 percent and from 71.2 percent to 100 percent respectively, when dwelling was not owned.

The sex differential shows the gap between boys and girls but it reached the identical enrolment ratio of 100 percent for both sexes and school levels, when the dwelling owned let place to other kinds of housing which could be mainly the living in parents' house for example, as it is done in traditional society.

TABLE (4)

NET SCHOOL ENROLMENT RATIO BY AGE, SEX AND HOUSING CONDITIONS, EGYPT 1992.

	6-10			11-13			TOTAL		
	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL	BOYS	GIRLS	TOTAL
TYPE OF DWELLING									
APARTMENT	94.0	91.2	92.6	87.4	87.5	87.4	91.6	89.9	90.8
FREE HOUSE	85.9	68.3	77.2	76.9	59.5	68.5	82.7	65.2	74.2
DWELLING OWNED									
OWNED	86.5	72.2	79.5	78.5	63.2	71.2	83.6	69.0	76.5
OWNED JOINTLY	89.9	73.5	81.5	81.4	69.5	75.2	87.3	72.2	79.6
RENTED	94.0	89.6	91.8	86.0	86.3	86.2	91.1	88.5	89.8
OTHER	97.7	100.0	98.3	100.0	100.0	100.0	98.2	100.0	98.9
ELECTRIC CONNECTIONS									
YES	90.1	78.2	84.2	81.9	70.9	76.6	87.2	75.7	81.5
NO	68.0	44.5	56.7	58.7	32.6	47.0	64.9	40.9	53.6

Source: Calculated from EGYPT Demographic and Health Survey,1992.

The electric connections are other factors affecting school enrolment and determine the atmosphere where children are living. About 81.5 percent of children enrolled were living in houses with electric connections against 53.6 percent without electricity. The net school enrolment ratio of children having electricity was higher in primary level than in preparatory level with respectively 84.2 percent against 76.6 percent. There was lower net school enrolment among children of both stages living in houses without electricity with 56.7 percent and 47 percent respectively.

The gap between boys and girls in both school levels was around 11-12 percent points for children living in houses with electric connections. The difference was much higher ,around 23-26 percent points among children living in houses lacking electricity, influencing indirectly the choice of parents regarding the entry to school for their boy or girl.

III. FACTORS AFFECTING SCHOOL ENROLMENT:

To investigate the factors affecting school enrolment, the variables of the study have been introduced in a logistic regression model. This multivariate analysis determines the net effect of each variable on school participation after controlling the effect of all the other variables included in the study. The model used is to predict the binary dependent variable which is current school enrolment from a set of independent variables. The method estimates the probability of the event occurring.

In the logistic regression, the parameters of the model are estimated using the maximum-Likelihood method. That is, the coefficients that make the observed results most likely are selected. With categorical variables, the effect of a particular category is in comparison to some other category. The coefficients represent the effect of each category compared to a reference category.

Table 5 contains the estimated coefficients(under column B) and related statistics from the logistic regression model that predicts school enrolment from a constant and the variables region, mother's education, father's education, sex and age of children , type of dwelling, dwelling owned and the existence of electrical connections in the house.

To understand the interpretation of the logistic coefficients, the logistic model can be written in term of odds of an event occurring. The odds of an event occurring are defined as the ratio of the probability that will occur to the probability that it will not. The logit model in term of the Log odds is:

$$\text{LOG}\left(\frac{\text{Prob Event}}{\text{1- Prob Event}}\right) = B_0 + B_1X_1 + B_2X_2 + \ldots + B_pX_p$$

The logistic coefficient can be interpreted as the change in the log odds associated with one-unit change in the independent variable. The same resounding is done for all other independent variables.

Since it is easier to think of odds rather than log odds, the logistic equation can be written in terms of odds as:

$$\frac{\text{Prob Event}}{1-\text{Prob Event}} = \text{Exp}(B_0).\ \text{Exp}(B_1X_1).....\text{Exp}(B_pX_p)$$

The Exp(B) is the factor by which the odds change when the ith independent variables increases by one unit. If B is positive, Exp(B) will be greater than 1. It means that the odds of school enrolment are increased. If B is negative, Exp(B) will be less than 1, expressing that the odds are decreased.

In the actual study, regarding mother's education, the factor odds of school participation decrease significantly by 0.2572 when the educational level changes from primary level to illiterate. This decrease exists with the move of mother's education from any other higher educational level to the reference category which is illiterate mother. The factor odds of school enrolment of children decreases to 0.6478 when the educational level of mothers decrease from university level to illiteracy. Mothers having high education are more likely to send their children to school.

TABLE (5)
REGRESSION COEFFICIENTS AND ODDS RATION OF SCHOOL ENROLMENT AMONG CHILDREN IN AGE 6-13 YEARS, EGYPT DHS, 1992

VARIABLES	STATISTIC PARAMETERS		
	COEFFICIENTS(B)	ODDS RATIO	PROBABILITY
MOTHER'S EDUCATION			
-PRIMARY	-1.3580** (0.5025)	0.2572	0.2045
-PREPARATORY	-0.8520 (0.5026)	0.4266	0.2990
-SECONDARY	-0.8742 (0.5181)	0.4172	0.2943
-UNIVERSITY	-0.4342 (0.5054)	0.6478	0.3931
FATHER'S EDUCATION			
-PRIMARY	-1.5102** (0.2346)	0.2209	0.1809
-PREPARATORY	-1.0224** (0.2351)	0.3597	0.2645
-SECONDARY	-0.5490* (0.2488)	0.5775	0.3660
-UNIVERSITY	0.0438 (0.2412)	1.0448	0.5109
TOTAL CHILD. EVER BORN			
0-4	0.2709** (0.0683)	1.3111	0.5673
5-8	0.2169** (0.0649)	1.2423	0.5540

TABLE (5):CONT'D.

SEX OF CHILD.			
-MALE	0.9244** (0.0453)	2.5204	0.7159
AGE OF CHILD.			
6-10	0.5313** (0.0454)	1.7011	0.6298
TYPE OF DWELLING			
- APARTMENT	0.3641** (0.0789)	1.4393	0.5900
DWELLING OWNED			
- OWNED	0.1122 (0.0835)	1.1188	0.5280
ELECTRIC. CONNEC.			
- YES, IN ALL	0.8370** (0.0742)	2.3095	0.6978
REGION			
- URBAN GOVERN.	0.9317** (0.0944)	2.5387	0.7174
- URBAN LOW.EGYPT	1.1879** (0.1112)	3.2803	0.7663
- RURAL LOW.EGYPT	0.7483** (0.0513)	2.1135	0.6788
- URBAN UPPER EGYPT	0.6937** (0.0913)	2.0012	0.6667
CONSTANT	1.2144		
-2 Log Likelihood	12854.2**		

SOURCE: CALCULATED FROM EGYPTIAN DHS DATA, 1992.
**: Significant at 0.01
*: Significant at 0.05

The results in the descriptive study had shown that school enrolment of children increases with the improvement of mother's education in comparison to illiterate mothers. The multivariate analysis supports these previous findings. The probability that children will be in school is greater among mother having university level than those having primary level, with 0.3931 and 0.2045 respectively.

Similarly for father's education, the effect is highly significant. The odds of school enrolment decrease by 0.2209 when father's education changes from primary school to illiteracy. The odds decrease by 0.3597 from preparatory level, by 0.5775 from secondary level in comparison to illiterate father. The odds of school participation increase by a factor of 1.0448 among children whose mothers have university level and over, determining the increase of school participation among children.

The probability that children attend school increase from 0.1809 for fathers having primary school to 0.5109 for those having university level and over. This point indicates that father's education has a higher impact in the decision of schooling children in comparison to illiterate fathers and mother's education.

The total children ever born indicator shows that the odds of school participation of children increase by 1.3111 and 1.2423 in comparison to the reference number of 9 children and over. It is noticed a decrease of odds of school enrolment when the number of total children ever born increases. The lower the total number of children ever born is among the family, the higher the school enrolment of children. The probability of school participation decreases when the total number of children ever born increases .

This gives an idea about the low socio-economic state of the family which at the same time, it can not offer education to their all children.

Taking into consideration the sex of children, the odds of school enrolment increase by 2.5204 when boys are considered in comparison to girls, determining a significant preference of parents to educate boys rather than girls.

Looking to table 5, the same resounding could be done regarding the odds of school participation with its relation with all other independent variables introduced in the analysis.

The age of children is highly significant regarding the group involved in school. The odds of school participation increase by 1.7011 when children are in age group 6-10 years in comparison to age group 11-13 years. The children are more likely to be enrolled and mainly in primary school with a probability of 0.6298 than those in age 11-13 years and in preparatory level.

The type of dwelling plays a role and informs indirectly on the class status of the family. The effect on school enrolment of children is highly significant when the dwelling is an apartment.

The odds of school enrolment increase by 1.4393 in comparison to children living in free standing house taken as reference category. The probability that children living in apartment will be currently attending school is 0.5900. This is explained by the hope of parents to improve their standard of living through their children when rich parents do not look to education as an asset.

Taking into consideration the dwelling owned, the descriptive study had shown that children whose parents own jointly the dwelling or rent their house are more likely to be currently in school. The logistic regression model shows that the effect is not significant. The odds of school enrolment increases by 1.1188 in comparison to the category reference which is rented dwelling and the probability that children will be enrolled in school is 0.5280, slightly equivalent to the probability of not to be enrolled.

The possession of electrical housing connections is another determining factor which has a highly significant effect. The odds of school enrolment improve by 2.3095 and the probability of participation is 0.6978, among children with electricity in houses.

For region factor, the effect is highly significant among Urban regions. The odds of school enrolment increase in Urban areas, by respectively 2.5387 in urban governorates, 3.2803 in Urban Lower Egypt and by 2.0012 in Urban Upper Egypt in comparison to Rural Upper Egypt where the development is low as it has been shown above in the descriptive study.

IV. CONCLUSIONS AND RECOMMENDATIONS:

In general, the net school enrolment in the whole Egypt and for both sexes has reached 93 percent. It was quite different among boys and girls with respectively 85.7 and 75.6 percent. The higher enrolled proportion is in primary school with 82.4 percent against 75 percent in preparatory level.

There were important differences between Upper and Lower Egypt, regarding urban and rural areas and sex differentials. In Urban Lower Egypt, 94 percent of both sexes were enrolled in primary school level against 87.8 percent in Urban Upper Egypt.

Rural Upper Egypt is the region with the lowest percentage of 68.5 percent , due to low development. In comparison to Rural Lower Egypt, it is the region where the gap between boys and girls enrolled in primary school is very deep with respectively 81.5 percent against 55.2 percent.

In preparatory level, the proportion enrolled according to region and sexes were lower than for primary school. The differences between Urban and Rural regions were identical in Upper and Lower Egypt. But in Rural Upper Egypt only 46 percent of girls were enrolled in preparatory school.

Taking into consideration the place of residence Urban-Rural, the school participation ratio was higher in urban than in rural localities with respectively 89.7 percent against 73.7 percent. The same gap existed between both sexes in Urban and Rural areas but at lower level in Rural localities. About 66.6 percent of girls were enrolled in primary school and only 58.8 percent in preparatory level.

Parent's education has shown a great influence for children school enrolment. For both levels, the ratio increased with the improvement of mother's education from 72 percent to 98.6 percent for university level and over. But the level of school participation still was lower in preparatory stage until mothers reached preparatory level and over. The impact of mother's education on the sex preference of children attending school is important and the gap is reduced in favor of girls with the improvement of mother's education.

The difference between primary and preparatory net school enrolment was minimized and the ratio became 97 percent when mothers had secondary level and over. This is explained by the awareness and the hope of mothers to provide better education to their child and mainly girls.

Father's education is also an important factor affecting school participation of children. Identical pattern appeared. The net school enrolment ratio of children in age 6-13 years increased with the increase of father's education from 68.3 percent to 96.9 percent. Illiterate fathers were those enrolled their daughter with lower proportion.

The importance of total children ever born in the family is another indicator which determines the school enrolment among siblings. The higher the number of children ever born, the lower is the net school enrolment ratio with 84.9 when the number was only 0-4 against 67 percent when it increased to 9 children and over. The lowering was small among boys and much important in preparatory level than in primary with 62.1 percent against 70.4 percent respectively. In primary school level, the lowering among girls was more important than boys, proving that girls are those usually sacrificed.

The housing conditions factors were included in the study to show their effect on children school participation. Surprising results found that the net school enrolment was higher(90.8%) among children living in an apartment rather than those were living in free house(74.2%). Similar difference existed in the two stages of education. Girls living in free house were less enrolled in both educational levels with 68.3 percent and 59.5 percent respectively.

Among children living in their own houses, the enrolment ratio was only 76.5 percent against 98.9 percent living in rented houses.
The gap between boys and girls did not exist in the case of rented houses, determining the desire of parents to provide better standard of living through children education.

The electrical connections are also affecting school participation and determine the status of housing. About 81.5 percent of children enrolled in school were living in houses with electricity against 53.6 percent without electricity. Low level of
participation was in both stages when houses had not electrical connections. Identical sex differentials existed.

The Logistic regression model has investigated all the factors accounting fo determinants in the net school enrolment of children. Parents' education, Total childre ever born, the preference of boys, the age 6-10 years, housing as apartment, the existenc of electrical connections in houses and regions of origin are the most significant factor affecting school enrolment of children. The multivariate analysis had succeeded to predi correctly about 81.58 percent of children currently enrolled or not in school. About 97.5 percent were correctly classified to attend school.

According to the results of the study, the following recommendations seem to emerge

1) The socio-economic development should be equally distributed among all Egyptian regions. The gap between Lower and Upper Egypt should be minimized through better and complete urbanization of Rural areas, to provide higher quality life and decent housing conditions.

2) The governmental authorities have to encourage illiterate or low educated parents who did not get the chance for better education, by giving them the opportunities to improve their educational level and consequently promote their life and awareness about children education necessity, mainly girls.

3) The Decrease of drop-out rates should be obtained through encouraging parents to enroll and maintain their children in school.

4) The competent institutions should improve the fertility attitude of parents toward few children by providing health quality, reduction of child mortality by adequate child and maternal care, efficient family planning services. All this will contribute to reduce the total number of children ever born.

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