# IMPACT OF EDUCATION ON SOCIO-ECONOMIC STATUS OF VILLAGERS LIFE: A CASE STUDY OF SHRIEN WALA VILLAGE OF FAISALABAD DISTRICT

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**Abstract**. This research paper investigates impact of education on socio-economic status of rural life in Faisalabad district. Empirical results show that economic growth of any economy not only depends on physical capital but also on the human capital. Education is most the important and valuable factor on overall environment of society, but primary education has fewer effects on the behavior of rural residents in a selected village of Punjab.

## I.  INTRODUCTION

Economic growth of any country is not only dependent on the physical capital but also on the human capital. Developed human capital has a positive effect on the economic growth, political stability and social environment. Education is the most important variable, which plays an important role in the development of human capitals. A number of empirical studies have shown it that the pace of economic growth of the developed countries could not be achieved without the stock of human capital.

Among all stages of education, primary education has a central place. Notwithstanding, primary schooling provides basic principle to society. It may also improve living standard, develop industrial projects, which gives high financial rates of return. By taking measures to extend and improve primary schooling and expenditures on the poorest population groups,

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wherein these expenditures subsequently increase the productivity of such people and tackling the poverty problems directly. It represents not only a more attractive in many countries but also a less risky means of increasing the income of poorest people (Coldwell *et al.*, 1979).

In recent years, the government of Pakistan has started nation-wide survey; Pakistan integrated household survey (PIHS), to address the imbalances in the social sector. This survey provides rich information on the above-mentioned variables that were missing in the earlier household surveys. This study uses the date of PIHS to examine the returns to education by using Mincerian-earning function and thus aims to fill the vacuum that, due to the lack of appropriate data exists in the literature in the Pakistan. We will first estimate the earning function with continuous school years with the assumption of uniform rate of returns for all school years. It is argued that different school years impart different skills, therefore, we extend our analysis to level of education, *i.e.* How much increase in earnings takes place with an extra year of schooling at different levels, such as, primary, middle, matric, intermediate, bachelors and masters.

The overall literacy rate in 1997-98 was estimated at 40%; 51% for males and 28% for females; 60% in urban areas and 30% in rural areas. These rates are still among the lowest in the world due to various measures taken by the government in recent years, the enrolment rates have increased considerably (Economic Survey, 1998).

Due to low levels of educational attainment and lack of technical and vocational education, Pakistan's labor market is dominated by less educated and unskilled labor. A considerable rise in the number of educational institutions and enrolment after 1980s is not yet reflected in Pakistan's labor market. This might be because most of the bachelor's and master's degree programs emphasize only on academic education without developing specific skill. The sluggish demand for the graduates of these programs in the job markets leads to unemployment among the educated and the job market remains dominated by the less educated. In this scenario, it becomes important to explore the role of education for the economic benefit of the individuals.

The remaining layout of this paper is as follows: After this introductory section, Section II shows framework of literature review, Section III presents methods, procedures and the impact of education on socio-economic status, Section IV provides results and discussion, and, finally, Section V concludes the paper.

## II.  REVIEW OF LITERATURE

Goodwin *et al.* (1984) viewed the primary factors affecting settlement patterns in rural areas of the United States using factor analysis of survey responses from 1,156 households in Oklahoma. Their results indicate that quality of services, age of home and availability of services; rural atmosphere and job and family considerations impact are most important factors.

Von *et al.* (1992) studied that gender differences in education in Muslim developing countries are related to the prevalence of Islam, but this decomposition model says otherwise.

Bhuyan *et al.* (1996) examined that the differential fertility in 16 contiguous villages of both Savar and Dhamrai Upazila in Dhaka district, Bangladesh and find fertility between working and nonworking women did not differ significantly. Deccache *et al.* (1997) reported health promotion and health education have limited to evaluation of the effectiveness of actions and programmes. Wirakartakusumah *et al.* (1998) examined the effects of public health, family planning, education, electrification, and water supply programs on fertility, child mortality, and school enrollment decisions of rural households positively in East Java, Indonesia. Rath *et al.* (1998) reported that the impact of educational status, income, indicate that a combination of these factors are associated with reduced fertility, longer birth intervals, and lower levels of infant mortality.

Dubois *et al.* (2003) described the source and the scope of social inequalities in infant feeding practices. They examine the extent to which different recommendations are followed in different social groups and highlight the main factors influencing the total adherence to these recommendations at the population level. The study follows a representative sample ($n = 2103$) of the children born in 1998 in the province of Quebec (Canada). Detailed information on breast-feeding and complementary feeding was collected at 5 and 17 months by face-to-face interviews with the mother. The independent variables were mother's age, mother's education level, poverty level, family type, socio-economic status (SES) and living area. Odds ratios (adjusted for baby's rank in the family, birth weight and premature birth) are presented for breast-feeding, and for formula and cows' milk consumption, at different ages.

Ansari *et al.* (2003) reported that Ambulatory Care Sensitive Conditions (ACSCs) are those for which hospitalization is thought to be avoidable with the application of preventive care and early disease management, usually delivered in the ambulatory setting. This study presents detailed analyses of

ACSCs as a measure of health outcome that might vary with access to primary health care in rural and urban regions of Victoria.

## III. THEORETICAL MODEL AND ESTIMATION METHODOLOGY

Human capital model developed by Becker (1964) and Mincer (1974) is hereby used to find the relationship between social economic status of people of Shrien Wala village at different level of schooling. In version of mathematical, the equation can be expressed as:

$$\ln SES_t = \beta_0 + \beta_1 Edu_t + \epsilon_t \tag{1}$$

ln *SES* represents socio economic status. The nomenclature of *SES* is given under:

$S_F$ = Size of family,

$I_F$ = Family income,

$S_H$ = Structure of the house (1 for paka and 0 for otherwise),

$N_R$ = Number of rooms,

$W_E$ = Women education (1 if they like it, 0 otherwise),

$W_H$ = Women health facility (1 if they visit the doctor, 0 otherwise),

$F_P$ = Family planning (1 if they use contraceptives, 0 otherwise),

$V$ = Vaccination (1 if yes, 0 otherwise),

$P_A$ = Production per acre,

$N_D$ = Diet (1 if they take egg, meat or milk daily, 0 otherwise), and

$Edu$ = represents level of education like primary, middle, matric, intermediate and above and $\epsilon_t$ is the error term.

In order to find the returns to education at different level of education, we estimate the following equation:

$$\ln SES_t = \beta_0 + \beta_1 E_1 + \beta_2 E_2 + \beta_3 E_3 + \beta_4 E_4 + E_5 \beta_5 + \epsilon_t \tag{2}$$

Where $E_1$ = Primary education, where $\beta_1 = 1$ if $0 < Edu \le 5$

$E_2$ = Primary education, where $\beta_2 = 1$ if $5 < Edu \le 8$

$E_3$ = Primary education, where $\beta_3 = 1$ if $8 < Edu \le 10$

$E_4$ = Primary education, where $\beta_4 = 1$ if $10 < Edu \le 12$

$E_5$ = Primary education, where $\beta_5 = 1$ if $12 < Edu \le$ higher education

The coefficients associated with $E_1$, $E_2$, $E_3$, $E_4$ and $E_5$ in equation (2) show an increase in socio-economic status of people of Shrien Wala village with one year increase in education at respective levels.

The returns to education can be computed at each level as:

Return to Primary $= 5\beta_1\ E_1 + \beta_2\ E_2 + \beta_3\ E_3 + \beta4\ E_4 + E_5\ \beta_5$

Returns to Middle $= 5\beta_1 + 3\beta_2$

Returns to Matric $= 5\beta_1 + 3\beta_2 + 2\beta_3$

Returns to Intermediate $= 5\beta_1 + 3\beta_2 + 2\beta_3 + 2\beta_4$

Returns to higher education $= 5\beta_1 + 3\beta_2 + 2\ \beta_3 + 2\beta_4 + 2\beta_5$

The data used in this study are collected from the Shrien Wala village of District Faisalabad. The collection of data in this study was a field survey. To do so, an open-ended and close-ended questions questionnaire was designed. In this study, roundabout 100 households were interviewed. To measure differences, a dummy variable is used that takes the value 1 for yes and zero otherwise.

The main source of collecting information about change in life style and performance of respondents with education level is one to one interview, for which approximately 30 brief questions were set in questionnaire. In each sample household, the interview was started after formal discussion about his/her name, caste and address of house. Further, after asking respondent's educational level, family size, family income, structure of house and number of rooms, source of income, types of sanitation, and method of solid waste were asked in order to get some information about his/her life style.

In second section, the respondents engaged in agriculture sector were asked about their landholdings, method of cultivation, credit facilities and use of fertilizers and seeds. These two sections were based on the quantities measurements. In the third and last section, some behavioral questions were asked for qualitative measurements of different educational level, which contains 10 different questions like decision power, types of communication, assessment of women education, family planning and most important child caring activities like their diet, vaccination and medicines in case of their illness.

Out of 13 families living in the kacha houses, 9 live in one room houses. They have no toilet, kitchen, store and cattle-shed for themselves and livestock. About 30% of population of village live in one room house, 33% live in two-room houses and 22% live in three room houses. The source of

drinking water is hand pumps. A typical two room dwelling in the rural areas has 16 ft × 10 ft and 10 ft × 12 ft rooms having a veranda. They have water pumps and small bathrooms. The size of smaller room is 10 ft × 12 ft.

## IV. RESULTS AND DISCUSSIONS

There are two types of results such as Quantitative Results and Qualitative Results. Out of total 100 respondents, there were 64 males and 36 females. Among them 85 were married and 15 were single. 88 respondents were engaged with informal sector, 9 with formal sector and 3 were doing no job.

TABLE 1

List of Different Age Group Respondents

| Age Group (Years) | Number |
|---|---|
| 18 - 30 | 31 |
| 31 - 40 | 24 |
| 41 - 50 | 15 |
| 51 - 60 | 23 |
| 61 - 70 | 06 |
| 71 - 80 | 01 |

Source:   Computed by the author on the basis of the results obtained in the survey.

Table 1 shows that 31 respondents have age between 18-30 years, 24 having age 31-40, 15 falling between 41-50 years, 23 respondents have the age between 50-60 while only 7 are 60 years of age

TABLE 2

Percentage of Respondents by Their Education Level

| Education Level | Percentage |
|---|---|
| No Schooling | 53 |
| Primary | 18 |
| Middle | 11 |
| Matric | 5 |
| Above | 13 |

Source:   Computed by the author on the basis of the results obtained in the survey.

Table 2 shows that out of 100 interviewed respondents, 53 were uneducated and 47 were educated. Within 47 educated respondents, there were 18 primary educated, 11 middle, 5 matriculate, 11 having college education while 2 were university educated respondents.

TABLE 3

Distribution of Income

| Education Level | Average Respondent's Monthly Income (Rs.) | Average Family Monthly Income (Rs.) | Per Capita Income (Rs.) |
|---|---|---|---|
| No Schooling | 2945.00 | 7765.60 | 2021 |
| Primary | 3323.50 | 8694.00 | 2343 |
| Middle | 4495.50 | 10541.00 | 2253 |
| Matric | 3300.00 | 10320.00 | 2943 |
| Above | 8254.00 | 11923.00 | 2428 |

Table 3 describes the relation of education level and the monthly income. In the $2^{nd}$ column, average respondent income is calculated. There is positive relationship between education level and average income of respondents. The average income increases as the educational level increases except in the case of matriculated people. In the $3^{rd}$ column the average family income is calculated. This shows a relationship that the average family income increases with the increase in the education level. Per capita income, calculated in the $4^{th}$ column also shows a positive relationship with the education level.

TABLE 4

Use of Source of Communication by Different Educational Levels

| Education Level | VCR | Phone | Radio | Satellite | News Papers |
|---|---|---|---|---|---|
| No Schooling | 75 | 14 | 43 | 7 | 4 |
| Primary | 92 | 15 | 38 | 8 | 23 |
| Middle | 100 | 50 | 62 | 0 | 25 |
| Matric | 80 | 40 | 40 | 0 | 20 |
| Above | 92 | 70 | 62 | 0 | 62 |

Table 4 shows the relationship between education level and the use of different type of communication devices. In $2^{nd}$ column the relationship between the education level and the use of Television is discussed. Interestingly, there is a positive relationship between the two variables, *i.e.* with the increase in the education level the demand for TV sets also increase. The main cause of this increase is the awareness regarding the world issues, the national problems and favorite programs. Similar is the case with the use of telephone. The use of telephone increases with the increase in the education level. The only exception in the case of use of telephone is in the matriculated group, this may be due to the sample error because only 5 matriculated respondents were interviewed among the sample of 100. In the fourth column the relationship between the use of Radio and education level is presented. There is a positive relationship between the use of Satellite Dish Antenna and the education level. Surprisingly, there is no clear relationship observed between the use of Dish and the education level. Among the set of respondents only a small percentage of people belonging to no education and primary education use dish antenna while respondents from all other groups do not use the device. While the last column shows the relationship between the education level and the reading of newspaper. There exists a positive relationship between the education level and the reading of newspaper.

TABLE  6

Attitude of Respondents Having Different Education Groups

| Education Level | Self | Mutual Opinion |
|---|---|---|
| No Schooling | 58 | 42 |
| Primary | 33 | 67 |
| Middle | 45 | 55 |
| Matric | 40 | 60 |
| Above | 23 | 77 |

Table 6 describes the behavior of respondents about the decision making with different education level. It is observed that involvement in decision-making increases with the increase in the education level. One reason for this behavioral change is the fact that the educated man is relatively more liberal and open-minded. People think that the involvement of their family will make decision that is more positive and will be better for all. That is why; they accept the importance of their family members, *e.g.* wives, children and parent. From the table it is clear that 58% of uneducated people don't involve

their families in decision-making, probably, they feel insult to take any type of opinion from their families. 33% of primary, 45% of middle, 40% of matric and 23% of higher educated people do not involve their families in decision-making activity. The most involved family in the decision-making activity. The most involved family in the decision-making is the family with the highest educated respondents of College and University, *i.e.* 77%. From the above discussion, it can be concluded that the involvement of family members in decision-making increases as the education level of respondents increases.

TABLE 7

Use of Family Planning, and Health Care Activities

| Education Level | Liking of Women Education (%) | Women's Health Facility (%) | Family Planning (%) | Vaccination (%) |
|---|---|---|---|---|
| No Schooling | 52 | 82.60 | 51 | 27 |
| Primary | 88 | 88 | 82 | 50 |
| Middle | 91 | 91 | 82 | 57 |
| Matric | 100 | 100 | 75 | 75 |
| Above | 92 | 100 | 67 | 90 |

Table 7 shows the relationship of level of education with the liking of women's education, women's health facilities, role of family planning and vaccination. 2nd column shows the percentage of liking for female education, *i.e.* how many people like to educate their daughters. The attitude is very much visible from the table, *i.e.* as the respondents climbs the educational ladder, the more liberal behaviour towards female education they have. Sophistication, liberal attitude, broader vision can be among the reasons for such an attitude.

The 3rd column gives the availability of the female health facilities. The relationship is once again positive, *i.e.* the awareness about the female health increases with the increase in the education level. The 4th column shows the relationship between the education level and the use of contraceptives. The column depicts a positive relationship between the education level and the role of family planning. Only 51% uneducated respondents like the use of contraceptives, while 75% of higher and 67% of lower educated people like it. Here is a very interesting situation with the primary and middle education group. The 82% people form these age groups recognize the importance of

family planning. So, it is clear that 5 to 8 years of schooling have more positive effect on the use of contraceptive activities. The last column discusses the relation between the courses of vaccination with the different education levels. With the acquisition of more education, persons are more aware of the importance of vaccination.

TABLE 8

Daily Diet Taken by Different Educational Group

| Education Level | Milk | Eggs | Fruit | Meet | Rice | Wheat |
|---|---|---|---|---|---|---|
| No Schooling | 45 | 28 | 26 | 30 | 97 | 100 |
| Primary | 75 | 33 | 33 | 58 | 100 | 100 |
| Middle | 62 | 50 | 37 | 75 | 100 | 100 |
| Matric | 75 | 75 | 50 | 75 | 100 | 100 |
| Above | 90 | 80 | 40 | 90 | 100 | 100 |

Table 8 shows the daily diet of respondent's children. Usually small children need milk, eggs, fruit, beef, wheat and rice in their daily diet. More educated people are more aware of this daily diet chart. In the entire table it is clearly visible that with the increase in the education levels the use of milk, eggs, fruit, meet, rice and wheat increases. The most important fact is that wheat and rice are being used by almost all the members of all education groups. The reason may be that these two constitute a major portion of diets of people of Pakistan due to social, economic and geographic reasons.

TABLE 9

Use of Different Types of Sanitation Facilities

| Educational Level | Govt. Provisions (%) | Village Community (%) | Own (%) | Any Other (%) |
|---|---|---|---|---|
| No Schooling | 70.50 | 19.60 | 7.80 | 1.9 |
| Primary | 81.25 | 18.75 | 0 | 0 |
| Middle | 70.00 | 30.00 | 0 | 0 |
| Matric | 80.00 | 20.00 | 0 | 0 |
| Above | 92.30 | 76.00 | 0 | 0 |

Table 9 describes the different types of sanitation used by the respondents belonging to different education levels. 70.5% of uneducated

respondents get government service and it is almost same for the middle education persons. The condition is better for the primary and the high education group, *i.e.* 81.25% and 80% respectively, and it increases with the College and University achievers, *i.e.* 92.3%. All other respondents who do not get government professionals use source generated by their village community but about 10% of uneducated persons use other sources generated by their own or from any other source. It is clear from the table that as the education level increases there is less dependency on the village community and they rely on government services.

TABLE  10

Estimation of Child Care Facilities

| Education Level | Doctor (%) | Hakims (%) | Dispen-sary | Taweez | House Tips |
|---|---|---|---|---|---|
| No Schooling | 29.00 | 12.50 | 60.40 | 16.60 | 25.00 |
| Primary | 92.80 | 0 | 21.42 | 7.10 | 7.14 |
| Middle | 75.00 | 12.50 | 75.00 | 0 | 0 |
| Matric | 75.00 | 0 | 25.00 | 0 | 0 |
| Above | 90.00 | 10.00 | 20.00 | 0 | 0 |

Table 10 describes the relationship between the education level and the childcare activities. In 2nd column it is discussed that how many people of different education levels consult doctor during the illness of their children. Only 29% of uneducated people consult doctors and this ratio increases with the increase in the education level and it is highest in the primary education group where the ratio is 92.80%. In 3rd column the role of Hakim is discussed, 12.50% of uneducated and middle pass respondents consult Hakims during illness. 4th column shows that 60% of uneducated people get medicine from dispensary with out complete check up of their child. This tendency is being decreased with the increase of education level and there is quite an interesting situation in column 5, which shows that 16.60% of uneducated people and 7.10% of primary pass people believe in Taweez instead of doctor and similarly in column 6, it is clear that only uneducated and primary pass people rely on house tips. No other class is interested in Taweez and house tips. Therefore, it is clear that, with the spread of education people depend on doctors and medicine facilities rather on Hakims and house tips.

TABLE 11

Regression and Logit Model's Results

| Independent Variables | OLS | | | | | | Logit | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Intercept | $E_1$ | $E_2$ | $E_3$ | $E_4$ | $E_5$ | $E_1$ | $E_2$ | $E_3$ | $E_4$ | $E_5$ | $R_2$ | $R_1$ |
| SF | 2.37* (2.98) | 0.23 (0.98) | 0.44 (0.93) | 0.33 (0.25) | 0.42 (0.35) | 0.39 (1.03) | – | – | – | – | – | 92% | – |
| IF | 2.42* (3.09) | 0.42 (0.97) | 0.59 (0.32) | 0.63 (1.29) | 0.72* (2.82) | 0.88* (2.73) | – | – | – | – | – | 93% | – |
| SH | 2.49* (3.82) | – | – | – | – | – | 0.74 (1.03) | 0.88 (1.23) | 0.90 (1.39) | 1.02* (2.93) | 1.05* (2.99) | – | 78% |
| NB | 4.79* (4.02) | 1.02 (0.78) | 2.05 (1.73) | 3.56* (2.92) | 4.42 (2.97) | 3.79* (2.78) | – | – | – | – | – | 90% | – |
| WE | 2.82* (2.22) | – | – | – | – | – | 0.92 (1.39) | 0.79 (1.22) | 0.88 (1.31) | 1.03* (2.92) | 1.09* (2.99) | – | 72% |
| WH | 2.95* (3.07) | – | – | – | – | – | 0.02 (0.98) | 0.17 (1.32) | 1.39* (2.76) | 1.38* (2.97) | 1.44* (2.78) | – | 69% |
| FP | 2.82* (3.09) | – | – | – | – | – | 0.83 (1.09) | 0.32 (1.39) | 0.88 (1.45) | 1.39* (2.98) | 1.82* (3.34) | – | 71% |
| PA | 2.07* (4.23) | 2.39* (2.38) | 1.32* (2.75) | 1.22 1.30 | 1.82* (2.92) | 1.89* (2.79) | – | – | – | – | – | 89% | – |
| ND | 2.09* (4.56) | – | – | – | – | – | 0.89** (2.32) | 0.41* (2.24) | 0.73* (2.95) | 0.69* (2.77) | 0.67* (2.87) | – | 88% |

Present study shows that village traditions look dominated in the decision of family size. All coefficients in this regard are insignificant. First three levels of education have insignificant effect whereas the other two levels have a significant effect on the per capita of income of the family. Nevertheless, all coefficients have positive signs. For the equation of structure house, Logit model is used. First three levels of education have insignificant effect on the structure of house, while last two equations have positive and significant impact. Because, more educated people generate more income. The relationship between number of living rooms and education is measured by Least square regression. The results show that only higher level of education have positive and significant impact on number of livings rooms. In the equations of women education, women health and family planning, the results indicate that higher education level has positive and significant impact on the education, health and family planning instead of low level of education. As the education level of the head of the family increases, the education standard of other family members also increases. The use of new technology, new crop varieties or access to sophisticated equipment are outcomes of education. Diet equation shows significant and positive results at all level of education. This may be due to cultural, social environment and pure foods of village.

## V. CONCLUSIONS

This study suggests that role of primary education on rural's life is insignificant. This is so because educational system in Pakistan, especially in the rural areas, is insufficient to achieve its targets. However, partially it has some importance in the agricultural sector. It implies that primary schooling increases the income of the farmer and is a cause of reduction in the poverty. Similarly, primary education creates the good sense of diet. However, an important conclusion drawn in this study is that only 10 years of schooling has positive and significant impact on the all variables, so it may be concluded that in Pakistan, the minimum level of education that gives the individuals some sense about the life is Matriculation. This suggests that authorities should have to give proper attention towards primary and secondary agricultural based education and higher education, which enable someone to become the productive agent of the economy.

# REFERENCES

Ansari, Z., T. Barbetti, N. J. Carson, M. J. Auckland, F. Cicuttini *et al.* (2003), The Victorian ambulatory care sensitive conditions study: Rural and urban perspectives. *Soz Praventivmed.*, Volume 48(1), pp. 33-43.

Bhuyan, K. C. *et al.* (1996), Fertility differentials according to females' education, employment and family planning adoption in rural Bangladesh. *Nufusbil Derg*, Volume 17-18, pp. 21-39.

Caldwell (1979), Education as a factor in mortality decline: An examination of Nigeria data. *Population Studies*, Volume 33.

Deccache, A. *et al.* (1997), Evaluating quality and effectiveness in the promotion of health: Approaches and methods of public health and social sciences. *Promot Educ.*, Volume 4(2), pp. 10-5.

Dubois, L., M. Girard *et al.* (2003), Longitudinal Study of Child Development in Quebec (LSCDQ 1998-2002). Social inequalities in infant feeding during the first year of life. *Public Health Nutr.*, Volume 6(8), pp. 773-83.

Government of Pakistan, *Economic Survey of Pakistan* 1998-99.

Fane, G. (1975), Education and the managerial efficiency of farmers. *Review of Economics and Statistics*, Volume 57(4).

Gopaldas, T., P. S. Christian, R. D. Abbi, S. Gujral *et al.* (1990), Does growth monitoring work as it ought to in countries of low literacy? *J. Trop Pediatr.*, Volume 36(6), pp. 322-327.

Guisinger, S. (1984), Earning rates of return to education and the earning distribution in Pakistan, *Economic Educational Review*, Volume 3(4).

Lucarelli, P. *et al.* (2002), Raising the bar for health and safety in child care. *Pediatr Nurs.*, Volume 28(3), pp. 239-41, 291.

Rath, B. K., J. Mohapatra *et al.* (1998), Occurrence of few biological events in females in relation to literacy, economic status and adoption of family planning in rural and urban area of central Orissa, India. *Man India*, Volume 68(2-3), pp. 228-234.

Von Urff, W. *et al.* (1992), Comments on "Human Capital Accumulation in Post Green Revolution Rural Pakistan: a Progress Report". *Pak Dev Rev.* Volume 31(4 Pt 1), pp. 488-490.

Wirakartakusumah, M. D. *et al.* (1998), The impacts of health, education, family planning and electrification programs on fertility, mortality and child schooling in East Java, Indonesia. *Majalah Demografi Indones.*, Volume 15(29), pp. 37-73.