



Socio-Economic Determinants of School Dropouts: An Evidence from Households in Pakistan

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ABSTRACT

The present study analyzed the determinants of children who dropped out from school in Pakistan, based on PSLM microdata. The study employed the advanced econometric technique “the logistic regression model” to identify the correlates of the problem; thereby analyzing the marginal effects of the multiple attributes. The analyses show that a female child is more likely to dropout from school as compared to a male child. The education of the household head is also a significant contributor to reducing dropouts. Mother education also reduces the chances of a child to dropout from school. An employed mother will increase the chance of a child to dropout from school as compared with the unemployed mother. Other factors which reduce the chances of child dropouts from school are the female household head, lower distance from middle and secondary school, household wealth, and per capita household income. If household head belongs to agriculture sector then there are more chances that their child dropped out from school. Household economic condition is also a very important factor in reducing dropouts. If the economic condition of a household is better off than before then there is less chance of the child to dropout from school. Similarly, the economic situation of the community where the household resides also affects dropouts. If the community’s economic situation is better than before then it reduces the chance of child dropout.



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1. Introduction

Education and technology are the basic ingredients for the development of any economy. Because education and technology produce efficient human capital which improves the overall welfare of the society. Education is the basic tool for the development of any nation, society, and the individuals at large. Education is also associated with high economic growth rates, enrich the productivity of labor, social welfare, and sustainable development of the nation. Education can reduce poverty, because it reduces unemployment, improves female labor force, and regulating expenditure for the most valuable usage¹. Due to all these reasons, countries around the world are very concerned to provide education and skills to the people of that country.

¹ See “Situation analysis of the Pakistan education sector, UNESCO 2020” (UNESCO, 2020).

Schooling is broadly known as a key factor in human capital formation. It works as a path for decreasing poverty and reducing income inequalities in society. In many countries of the world, children either do not have access to schooling or are enrolled in schools of questionable quality. The objectives of any government are to increase access to primary and secondary schools by devoting funds to educational infrastructure and enhancing resources allocated to the educational sector. This can be made possible efficiently by having an understanding of the factors that determine the child's participation in schools.

The United Nations (UN) Convention on Child Rights (1989) promises that provision of education for all school going age children without any discrimination created on any ground. In the year 1990, the UN has launched its the agenda of Education for All (EFA) which promises that the access of education to all children is their basic right. The major aims and commitments of EFA agenda were to discuss the benefits and outcomes of providing education to everyone in the society. The EFA goals include the early childhood care provision, right to provide free and compulsory education, to fulfill the needs of all children who want to learn, increase the literacy rate of the nation, control the children dropout of schools, removal of inequalities persist in the society, to improve the children retention rate, and to enhance learning outcomes. The EFA goals gave special emphasis for all children regardless of their race and religion, particularly for deprived and for high vulnerable children. The UN millennium development goals (MGDs) also promises to provide the access of education to all school going age children till the years 2015. Now the UN also reiterate its promise of access of education to all children till the yeas 2030 in the sustainable development goals (SGDs) agenda. The major hurdle in attaining EFA and MGD goals around the world is the higher school dropout rate and the issue of the children who are out-of-school.

Out-of-school children and school dropouts are the major social, economic, political and cultural threats for any nation. School dropouts significantly differ in social status and wages with children graduated from school and the children who graduated from school Heckman (2008). For achieving the goals made by the UN, it important to formulate policies for the prevention of school dropout and enrollment of those children who are out-of-school. Thus this is important to study the issue of school dropout over time and be related to many possible determinants to understand its dynamics. Due to the problem of lower quality public schools, the effectiveness of public schooling is also questionable.

Like other countries, Pakistan has also not improved sufficiently the area of child schooling. Around half of the population in Pakistan is does not read or write. This situation of low literacy is a main hurdle in attaining skills and knowledge for achieving higher level of individual productivity and higher earnings. The allocation of funds for education are very low from the birth of the country, resulted the provision of very small amount for enhancement of school facilities, training of teachers, development of school curriculum, and effective monitoring of school education.

Pakistan has applied many policies to increase literacy and to attain the UN agenda of EFA and MGDs till 2015. But Pakistan could not achieve the EFA goals which were promised to complete by the year 2015. Pakistan is also a signatory of the SDGs goals, and EFA is an important part of SDGs. various policies and agendas have been formulated to better observe to progress made by countries to achieve the Sustainable Development Goals (SDGs).

This study will highlight the major factors which contributes in school dropout from Pakistan. The core objective of the present study is to explore the factors of high dropout rate of children from schools in Pakistan.

Section 2 review the literature related to children school dropout. Section 3 presents the methodology and model specification. In section 4 variable description is discussed. Section 5 discusses data set for the present study. In section 6 results of logistic regression analysis are presented. The final section will summarize the finding of the study.

2. Review of Literature

School dropout and children retention rate is a major area of research for academicians, researchers, and policymakers around the world. Results of the research studies on the issue of school dropout differ depending on the situation of country in which the research is being conducted, but geographical location i.e. rural/urban, gender, and distance from home to school are the most common causes of school dropouts in all the research studies. In current section, we review the existing literature regarding the issue of school dropout.

As in a study, Alderman, Behrman, Khan, Ross, and Sabot (1996) examine that the sociocultural factors which stop girls from attending co-education schools above the primary school, and single-gender schools located at distance. The shortage of the availability of single-gender schools has also been a major limiting factor of girls' education in middle schools as well as in high schools. They also determined that if gender gaps in primary schools be removed, it can reduce gender gap in illiteracy by 40 percent in the rural areas of Pakistan.

By using the data of India, Sengupta and Guha (2002) explore dropout, school enrolment, and completion of grads regarding girls' children in West Bengal. This study explores the effect of household demand factors on school participation. The study explores the effects of numerous factors on the education achievement of girl children between the ages of 7 and 18 years old children in West Bengal. Two urban wards and four villages of West Bengal were selected for study to access the relative importance of these factors on the schooling choices made for girls' children. Primary data is collected from 600 households by a survey carried in Jadavpur University School. The chance of child schooling was predicted by demographic, regional, household, and parent characteristics. A Probit model was used for potential determinants of low female retaining and high dropout in schools. Results of the study indicate strong factors about school participation and grade attainment are a household resource, father education, profession, and household size and income.

Bilquees and Saqib (2004) investigated the number of children who dropout from primary schools, middle schools, and secondary schools in Pakistan. The main objective was to explore the factors which cause dropout and inter-school movement among public and private schools in Pakistan. The data was collected from 3564 households in rural and urban areas from all over Pakistan. A cohort of 1891 children was selected for this study. Logistic model and cross-tabulation were applied to analyze the effect of several factors on the school dropout and interschool movements. Results show that illiteracy of parents, distance to school, and gender bias cause dropout generally. The male child dropout rate is 23.6% and female dropout of 21.1%. The income and economic status of the household are the important factors of dropout and inter-school movements.

Cardoso and Verner (2006) explored the dropout reasons from school in Brazil. The study analyzed that early parent-hood, child labor, poverty, and lesser chances of a good job are the consequences of low educational attainment. The data from World Bank Fortaleza Survey was collected from 500 respondents. The study used the Instrumental variables method and finds that early parental-hood conduct and poverty lead to school dropouts. The study recommends that by reducing schooling costs and poverty dropout problem can be handled.

Okumu, Nakajjo, and Isoke (2008) analyzed the socioeconomic factors of dropout from primary schools in Uganda. They used the data of National Service Delivery Survey for the year (2004). Logistic regression was used for the analyses of the dropout determinants. The results display that, distance from school, gender of the child, gender of the household head and dues of schools are the major determinants of dropout. The study recommends the government of Uganda have a deep eye on extra fees paid by parents to school which causes dropouts.

Sabates, Akyeampong, Westbrook, and Hunt (2011) explore school dropout patterns and causes in developing countries; Congo, Bangladesh South Africa, Namibia, Philippines, Botswana, Uganda, Rwanda, Cameroon, and Kenya. The study used Demographic Health Surveys data on the population of age 16 and 17 years. The logistic model was used in this study for the analysis of dropouts. The study explores the factors of dropout like poor health and motivation, child labor, poverty, minority language. School-level factors like teacher absence also contributes in increasing dropouts.

G. A. Khan, Azhar, and Shah (2011) determine the social and economic factors that cause dropout at primary school level from district Bannu in KP province of Pakistan. A structured interview is held of 40 parents and children using convenient sampling. By using descriptive statistics study argues that economic factors like low per capita income and social factors like rivalry among families are tested. The study concludes that factors like parents' illiteracy, poor economic conditions, and child labor were the major causes of children dropouts.

Hussain, Salfi, and Mahmood (2011) examine the major contributing factors of primary school dropout from Pakistan. Data were consist of the responses of 94 district level managers, 144 headmasters, 288 teachers, 288 parents, and 864 children (50 percent children were dropouts and 50 percent children were currently enrolled). By using the Mixed Research Method, this study found that costly education, School located at lager distance from home, harsh behavior of school teacher, parents low interest in child education, tough school syllabus, health issues, poverty of household, non-availability of school facilities, and homework are the major factors of dropping out.

By using inferential and descriptive statistics Farooq (2013) explored the causes of dropout at primary schools. Primary data was collected from 08 districts of Punjab province of Pakistan. The sample was selected randomly; one tehsil was selected from each district for a sample of 781 primary school teachers and 104 dropouts and their parents. An inclusive school model is developed for the prevention of school dropouts. Opinion of respondents shows carelessness of parents, low economic situation of household, out of the school friendship, absence, difficulty in learning, child labor, heavy workload, corporal punishment, parents' illiteracy, and child's health issues are main reasons of dropouts.

In a study, Mughal and Aldridge (2017) investigated head teachers' perceptions about the school dropouts from the government secondary schools in a rural area Punjab (Pakistan). They used primary data collected from 16 districts of the province of Punjab. They find that socio-economic, individual factors, different exam patterns, easy students upgrade policy, syllabus in English medium, substandard educational background of children, the higher rate of children failure in 9th class, non-academic duties of school teachers are responsible factors of dropout. The study also suggests that by the application of a good school syllabus, a parallel exam system, avoiding in engaging the school teachers from non-teaching activities, and by providing the financial resources to poor children can reduce school dropouts at the secondary school level. The study further examines that an easy promotion policy in early classes may results in reduction of dropout rate at primary level but it results in high dropout rate at the secondary level.

Similarly, Rashid and Awan (2019) investigated socioeconomic and demographic variables such as, attitude of child towards learning, school related factors, family background of the child and household characteristics which are key factors of school dropout.

Shah, Haider, and Taj (2019) investigated the reasons of primary school dropout from Pakistan. They adopted descriptive research method for the collection of data. This study took the opinions of educational managers, educators, parents of children and other members of the community regarding several sources of high dropout rate at primary school level. Sample consists of 208 educational managers and 291 teachers of primary schools. 96 schools and 12 districts were incorporated in the sample across the country. They found that, country's low economic development, low per capita income of the people, parent's illiteracy, large size of the family, child helping in domestic responsibilities, low priority of female education, poor health of child, school buildings, longer distance from home to school, teachers harsh attitude, corporal punishment, absenteeism of teachers and, non-availability of teachers are the contributing factors of children dropout from primary schools.

In a study from Pakistan Naz, Ejaz, and Khan (2019) investigates the major determinants of high dropouts in the rural areas of the city Islamabad. Primary data has been collected from 550 children of age group (5-18) years through a detailed questionnaire. For analysis children under the analysis were grouped into two main categories i.e. dropouts and currently enrolled. Probit model was used to explore the determinants of child dropout of school. The study showed that, school distance from home, financial barriers, education of father, age and gender are also extremely significant determinants of a child dropout. Education of mother did not effect dropout rate, maybe because in the rural areas of Pakistan households are typically headed by male members of the households.

Bhatti and Awan (2019) studied the socioeconomic determining factors of low elementary schools' enrollment from district Bahawalpur, Pakistan. A primary data of 200 children was collected through a detailed structured questionnaire. By applying the ordinary least square method they found that as school fee increases the enrollment to school decreases. Similarly, distance from school showed a negative association with school enrollment. Occupation of children's' parent has a positive correlation with school enrollment. Similarly, facilities at school also effect positively on school enrollment as number of class rooms increases then school enrollment increases. Road infrastructure also has a positive association with school enrollment, if road access to school is better increased the school enrollment. This study also examined that income of household head and the country's economic development both has positive correlation with school enrollment.

Rafique et al. (2020), conducted a study to explore the socioeconomic determinants of primary school attendance of the children age (5-9) years in the province Punjab, Pakistan. The study used Multiple Indicator Cluster Survey (MICS) 2014 data of the Punjab Bureau of Statistics with the selected sample of 31,466 children. The descriptive analysis and logistic regression model was applied for analysis of data. The study shows that nearly 50 % of children are out of school in Punjab. It was also concluded that girls are less likely to attend school as compared to boys. After controlling household wealth, rural children are more likely to attend school as compared to urban children.

To examine the effect of fragmentation of land on school dropouts Bui, Hoang, Nguyen, and Nguyen (2020) conducted a study in Vietnam. By using the Vietnam's Access to Resources Household Surveys data of (2008-2016) the study found that higher the fragmentation of land will reduce the probability of child school dropouts. This effects on the school dropouts of children ages (10-15) years, but it did not impact on school dropouts of children ages (6-10) years. The

study also concludes that as the fragmentation of land become higher it will result in empowerment of women.

Mughal (2020) analyzed the phenomenon of student dropout in Pind Dadan Khan, a rural area of Pakistan from the perspective of fathers of dropouts' children from school. Data of student dropout was collected from 33 government secondary schools out of which 17 were girls' schools and 16 were boys' schools. The data showed that total of 741 boys and 103 girls dropped out from school during the years (2011-12) and (2012-13). An inductive strategy for the analysis of data was used which was based on participant's views. The study examines that poverty of the family, poor academic performance, schooling background, and issues with school teachers are also contributing factors in children's dropouts.

By applying the multi-variate latent growth model Choe (2021) examined the research question, whether neglecting children, relationships of child with peers, relationships of student with their teachers, and school dropout exhibited a linear change over time? For this study he data was taken a Panel Data of Multicultural Adolescents from South Korea. The data contained 1316 adolescents, who were in 7th to 9th classes. The study concludes that neglecting a child directly effect on declining relationships of peers, student and teacher relationships, which increased the risk of dropout of school. A positive relationship of peer and relationship of student with their teacher directly effect in decreasing the risk of school dropout. This was also concluded that, relationships of peer and relationships student with their teacher had mediating effect on school neglect and dropout. The study recommends that to prevent the socially and linguistically different children from dropping out there must be positive relationships of children with their teacher and peers.

By analyzing the impact of COVID-19 on school dropouts and losses of learnings from Pakistan (M. J. Khan & Ahmed, 2021) examined that approximately 7.2 million children dropout particularly from primary schools due to a reduction in expenditures of household by 50 percent. The study recommended that, government should design healthy social protection and better education plans to control the closing of schools which adversely affect the children learning outcomes. The government should design some long period policies to make education system for the progress of future.

In a study Woldehanna, Endale, Hamory, and Baird (2021), explore the causes of dropout, absenteeism, and grade repetition in Ethiopia by using Gender and Adolescence: Global Evidence (GAGE) (2017-18) survey data consisting of 6800 adolescents. The study used regression model for analysis of decision making power of adolescent in the household, paid and unpaid children work contributes in dropout, school absenteeism, and on-time primary schooling completion. The major reasons of dropout were, lack of interest in getting education, supporting the household in agricultural in rural areas and work outside in urban areas, child own illness, disability, parent did not support for getting education, unaffordability of school costs and poor academic performance are the determinants of school dropouts.

By using the longitudinal mixed methods data of 1305 rural children Murphy-Graham, Montoya, Cohen, and Lopez (2021) explored the determinants dropout from upper secondary schools in Honduran. Qualitative and ordinary least square methods were applied for the analysis. They found that low percentage of marks obtained in the class and difficulties in learning's are some important factors of children decision to leave the school. Results of the study reported that in some cases parents of the child thought that education is enough till class 6th, so they decide to pull their children out of the school. Cost associated with school also a major determinant of school dropout. The study reveals that gender of the child plays a crucial role in dropping out from school. Poverty of the household was also found to be important factor of school dropouts. The study also concludes that transfer of cash to poor families by the

government play a decisive role in children enrollment in school.

Similarly, Marlow and Rehman (2021) by a meta-analysis of 33 studies observed the relationship between positive family processes i.e. parental involvement, parental support, and high educational expected outcomes and negative family processes like conflict, maltreatment, low supervision, and harsh punishments with absenteeism and dropout at primary and secondary level. They found a significant negative association between positive family processes and school absence and dropout. Negative family processes have significantly positive association between school absence and dropout. The relationship between positive family processes and school absence and dropout was strongest for primary school but the relationship between negative family processes was strongest for secondary school students.

Number of studies found many factors of school dropouts from developing countries like, gender of the child, age of the child, household income, household wealth, geographical location, parents' education, school quality, job availability, etc. (Alcaraz, 2020; Gibbs & Heaton, 2014; Mughal, Aldridge, & Monaghan, 2019; Nakajima, Kijima, & Otsuka, 2018). The other key factors such as, poverty of households, distance from home to schools, gender of the household head, school dues, non-availability of physical facilities in schools, teachers' harsh attitudes, children to help in household responsibilities, poor learning environment, health of children, low quality of education and teachers absenteeism are also increases school dropouts. Mostly studies on the issue of dropouts in Pakistan have explored the children dropout at primary schools. The studies also explore the determinants of school dropouts in specific geographical regions like in a district, village or in a province. Now it is needed to study the dropout phenomena not only at primary level but also at middle and secondary schools and at national level to identify the policies to prevent children dropout. Current study will explore the determinants of school dropouts of primary, middle and secondary school level from Pakistan. Despite the fact that number of other covariates also contributes in the school drop outs, but present study limited to the only available information in the PSLM microdata.

3. Model Specification for Dropouts

The correlates defining the likelihood that, student dropout from school is modeled using the logistic regression model. The dependent variable is of binary nature takes value, 1 if a student's dropout of school and 0 otherwise. We start with a general function:

$$DOS_j = f(DEM_j, ECO_j, SOC_j) \quad (1)$$

Where, DOS_j denotes child dropout from school takes value 1 if respondent j dropout from school and 0 if is currently enrolled. DEM_j is a vector of demographic variables of respondent j , ECO_j represents the vector of economic variables of the respondent j and SOC_j indicate the vector of social variables for the respondent j . Based on equation (1), the general logistic regression model is written as:

$$DOS_j = \alpha_0 + \alpha_1 AGE_CH_j + \alpha_2 EDU_H_j + \alpha_3 HH_IND_j + \alpha_5 EDU_M_j + \alpha_6 EMP_M_j + \alpha_7 HH_SIZE_j + \alpha_8 PCI_HH_j + \alpha_9 DPS_j + \alpha_{10} DMS_j + \alpha_{11} DSS_j + \alpha_{12} W_HH_j + \alpha_{12} HHD_F_j + \alpha_{12} GEN_CH_j + ERROR_j \quad (2)$$

The description of explanatory variables is given in table 1. The coefficients are partial derivatives that indicate the direction of change in probability relative to a unit change in the independent variable. In this study, the above-mentioned equation (2) is estimated for the overall samples.

3.1. Variables Description

The dependent, as well as independent variables used for empirical analysis, are presented in table 1 below. The dummy variable that indicates the outcome that the children either dropout of school or stay at school is the dependent variable in the logit model.

Table 1
Description of Variables

Variable Name	Notation	Description
Child Dropout	DOS	Child dropout at any level in the school education, having value 1 if a child is dropped out before completing the certain level of education at school, and 0 otherwise (the child who is currently attending school)
Age	AGE_CH	Age of a child is represented in three age groups, having value 1 if a child is between the ages 5-10 years, 2 if a child is between the age 11-14 years, and 3 if age is between the age 15-18 years
Gender	GEN_CH	Gender of the child, having value 1 if a child is a boy, and 0 otherwise.
Female Head	HHD_F	Female head is a binary variable takes value 1 if household head is female 0 otherwise.
Education of Head of the Household	EDU_H	Education of the household head is an ordinal variable, Containing value 1 if education is below primary, 2 if primary, 3 if below secondary, 4, if secondary, and 5 if above secondary (illiterate, is reference category)
Household Head Industry status	HH_IND	That in household head belongs to agriculture.
Child Mother Education	EDU_M	Education of the child's mother is an ordinal variable that takes value 1 if education is below primary, 2 if primary, 3 if below secondary, 4 if secondary, and 5 if above secondary (illiterate, is the reference category)
Households size	HH_SIZE	Represent the Household members
Per Capita House income	PCI_HH	Per capita household income.
Distance From Primary School	DPS	Time consumed to reach the nearest primary school is an ordinal variable takes value 1 if it takes 0-14 minutes to reach the nearest middle school, 2 if it takes 15-29 minutes and 3 if it takes more than 30-44 minutes and 5 if 45+ minutes
Distance From Middle School	DMS	Time consumed to reach the nearest middle school is an ordinal variable takes value 1 if it takes 0-14 minutes to reach the nearest middle school, 2 if it takes 15-29 minutes and 3 if it takes more than 30-44 minutes and 5 if 45+ minutes
Distance From Secondary School	DSS	Time consumed to reach the nearest secondary school is an ordinal variable takes value 1 if it takes 0-14 minutes to reach the nearest middle school, 2 if it takes 15-29 minutes and 3 if it takes more than 30-44 minutes and 5 if 45+ minutes
Wealth of household	W_HH	The wealth index represents the assets passion of the household. Index of the assets like, Refrigerators, washing machines, rooms in the house, sewing machines, electrical appliances, etc.
Mother's Employment	EMP_M	Employment status of the mother is dummy variable takes value "1" if the mother is employed "0" otherwise
Household's Economic situation	HH_ECO	Is a dummy variable that takes value 1 if worse off, 2 if same as before, 3 if Better than before, and 4 much better than before. Worse off is the reference category.
Household's Community Economic situation	HH_ECO_C	Is a dummy variable that takes value 1 if worse off, 2 if same as before, 3 if Better than before, and 4 much better than before. Worse off is the reference category

Source: Author's work

3.2. Data Set for the Study

This section is for the data set used for the present study, will also discuss the sources of data and periods for which the data will be used for analysis.

3.3. Data Source

The study is based on the microdata of the Pakistan Social and Living Standards Measurement Survey (PSLM) for the year (2014-15). This survey was conducted by the Pakistan Bureau of Statistics, Government of Pakistan. The PSLM is a countrywide survey that provides statistics on various aspects of the country's socio-economic conditions. The survey is administered countrywide and collects data at the individual and household level using a multipurpose household questionnaire.

PSLM 2014-15 data was collected from 78,635 households consisting of 513,099 individuals stratified by rural/urban by province and by districts. From this, we selected the sample of children who dropped out from school and who are currently attending school leave us with a sample of 283,915 children. After dropping children whose age is less than 5-years and more than 16-years, the sample was reduced to 119,101 children. Then dropped the children whose mothers are not alive or not present to capture the characteristics of mothers the sample was reduced to 113,223 children. The analysis in this study is based on the sample of 113,223 children who are currently attending school or dropped out from school.

4. Findings of the Data

In Pakistan from PSLM 2014-15 90.59% children of the age group (5-16 Years) are currently attending school while 9.42% are dropped out before completing the cycle of the school in which they enrolled in the past. Table 2 below indicates the distribution of currently enrolled and dropped out children between age group 5-16 years overall Pakistan by gender and by regions. This depicts that from total current enrollment from rural areas of Pakistan 62.32% are male and 37.68% are female i.e., enrollment of males is more in rural areas as compared to female children. From urban areas of Pakistan out of a total enrollment of the age group 5-16years 53.56% are male and 46.44% are female children. From rural areas, 46.58% of male children are dropped out of school and 53.42% of females are dropped out. But from urban areas male children are more dropped out as compared to female children 50.45% male and 49.55 % female children dropped out from school.

Table 2
Gender and region-wise distribution of enrollment status of a child aged (5-16 years) overall Pakistan

Enrollment Status	Rural			Urban		
	Male	Female	Total	Male	Female	Total
Currently Enrolled	51266	30992	82258	10879	9431	20310
	62.3%	37.7%	100.0%	53.6%	46.4%	100.0%
Dropped out	4237	4860	9097	791	777	1568
	46.6%	53.4%	100.0%	50.4%	49.6%	100.0%

Source: Calculations based on PSLM 2014-15

Table 3 indicates the percentage distribution of reasons for children dropout from school region i.e. rural/ urban and gender-wise. These appear to be significant factors for rural and urban male and female children. For a female child in rural areas too far-flung (65.9%), had to work at home (90.95%), marriages (92.93%) and parents do not allow (91.9%) are the major determinants of school dropouts. As compared to urban male child rural males are more affected

by these factors these factors more significantly affect rural male child dropout from school as compared to the urban male child. Poor quality school affects more on an urban male child (68.42%) as compared to rural male children (59.82%). if we compare the rural-urban female most of the effects of the factors urban female more significantly as compared to a rural female child. Distance from school matters for urban female children as compared to rural female children.

Table 3
Percentage reasons for not attending school region and gender-wise for the age group (5-16 Years) overall Pakistan

Reasons for not attending school	Rural			Urban		
	Male	Female	Total	Male	Female	Total
Education is expensive	60.76	39.24	100	54.55	45.45	100
Too far flung	34.1	65.9	100	21.85	78.15	100
Poor quality of schools	59.82	40.18	100	68.42	31.58	100
Had to work at home	9.05	90.95	100	6.42	93.58	100
Had to help with work	88.09	11.91	100	80.95	19.05	100
Parents do not allow	8.1	91.9	100	8.11	91.89	100
ill/handicapped	61.76	38.24	100	53.91	46.09	100
Too young	68.42	31.58	100	50	50	100
Child not willing	70.63	29.37	100	67.6	32.4	100
Lack of documents	61.54	38.46	100	50	50	100
Education not useful	66.39	33.61	100	61.11	38.89	100
Education complete	58.69	41.31	100	44.35	55.65	100
Marriage	7.07	92.93	100	4.81	95.19	100
Due to job or work	97.02	2.98	100	92.82	7.18	100
Others	62.68	37.32	100	61.09	38.91	100

Source: Calculations based on PSLM 2014-15

4.1. Results from Logistic Regression Analysis

The present study used a logistic regression model for the correlates of dropout from school for the overall sample of children's age group 5-16 years. As results show in table 4 a male child is less likely to drop out as compared to a female child as the marginal effect of (-.056) indicates that a male child has a 5.6% less likelihood to dropout from school as compared to a female child in the overall sample these results are consistent with (Naz et al., 2019). The age of the child indicates that as age increases than the child are more likely to dropout from school, this is because the child is either to help in work at home or help in other work or involved in jobs. With the increase in the household size, the child is less likely to drop out of school, this is because with the inclusion of one more person in the household work is divided and it brings the child to school. In female-headed households, it is less likely that a child drop out of school. In female-headed households 2.9% fewer chances of a child to dropout from school as compared to male-headed households.

The education of the household head has also a significant effect on a child's probability of dropout from school. Education category of below primary as compare to illiterate has an insignificant effect on child drop out. But primary education, secondary education, and above secondary education significantly affect the likelihood of child dropout from school. If house head education is primary as compared to illiterate the marginal effect is -0.11 indicate that there is a 1.1% less likelihood of a child to dropout. If the education level of the household head is below secondary there are 2.7% fewer chances of the child to dropout from school. As the education level of household heads increases the marginal effect shows that there are fewer chances of a child to dropout as compared to illiterate household heads this is in line with (G. A. Khan et al., 2011; Shah et al., 2019).

The education of the mother of the child also has a significant effect on child dropout. As the level of education of the mother of the child increase as compared to illiterate mother, there is less likelihood that a child of the age 5-16 years dropped out from school. If mother education is below primary there is 1.7% less chance of a child dropout as compared to illiterate mother. The child whose mother's education is has a 3% less chance of dropping out from school. If the education level of a mother is below secondary, secondary, and above secondary then the child has 4.2%, 6.1%, and 7.7% respectively fewer chances of dropping out from school.

Distance from home to primary school has a significant effect, but results show that as the distance from home to primary school increases there is less chance of dropping out from school. It may be because the quality of primary school which is located at a distance may be better than school located in close vicinity. Distance for middle school effect positively on the dropout decision of a child. If it takes 15-29 minutes travel time to reach a middle school has 2% more chances to dropout as compared to 0-14 minutes of travel time to reach the school. There are 2.1% more chances of a child to dropout if it takes 30-44 minutes to reach the nearest middle school as compared to 0-14 minutes travel time to reach the nearest middle school. If the distance is 45+ minutes then 1.7% more chances to dropout of school. Distance from secondary school has also a positive effect on dropping out of a child from secondary. As results show (see table 4) as compared to 0-14 minutes travel time to reach a secondary increase there are more chances of a child to dropout from secondary school our results are consistent with (Hussain et al., 2011; Shah et al., 2019).

If the household head is related to the agriculture sector, then there are .5% more chances of a child to dropout from school. The wealth of a household has also a significant effect on dropping out the decision of a household to send his/her child to school. As the result show that if the household has more assets like it shows that the household's economic condition is better. In this study, the wealth of the household means the possession for assets like washing machines, refrigerators sewing machines, electrical appliances, rooms of the house, etc. If a household has more assets then there is a .01% less chance of a child of that household to dropout from school. These results are in line with (Woldehanna et al., 2021).

Household per capita income also affects the decision to keep a child in school. If income increases then there is less chance of a child to dropout from school. If a mother of a child is employed then there is a 2% more chance of the child to dropout from school as to the child whose mother is not employed. If a mother is employed the child has to work at home so there is more likelihood of the child to dropout from school these results are consistent with (Shah et al., 2019).

The Household's economic condition also affects the decision to dropout of school. A question was asked to the household head regarding the economic condition of the household. As compared to worse off before if the house responds that his economic situation is the same as before then there is a .4% fewer chance of a child of that household to dropout. If the house responds that his economic condition is better than before then there is 1.3% less chance of dropping out. If a household responds that his economic conditions are much better than before then there are 2.6% fewer chances of the child dropping out of school.

Table 4
Determinants of School Dropouts (Overall Pakistan 2014-15)

Dropouts	Coefficients.	Marginal Effects	z-values
AGE_CH	0.553***	.035	113.22
GEN_CH	-0.882***	-.056	-36.73
Household Characteristics			
HH_SIZE	-0.008**	-.001	-2.09
HHD_F	-0.500***	-.029	-12.08
Household's Head Education Status			
Below Primary	0.021	.002	0.37
Primary	-0.157***	-.011	-4.28
Below Secondary	-0.423***	-.027	-11.25
Secondary	-0.644***	-.040	-16.46
Above Secondary	-0.872***	-.050	-20.40
Mother's Education Status			
Below Primary	-0.261***	-.017	-3.41
Primary	-0.498***	-.030	-11.30
Below Secondary	-0.731***	-.042	-11.92
Secondary	-1.211***	-.061	-18.84
Above Secondary	-1.808***	-.077	-23.57
Distance From Primary School			
15-29 mints	-0.112***	-.007	-2.97
30-44 mints	-0.222***	-.014	-2.75
45+ mints	-0.136	-.008	-1.19
Distance From Middle School			
15-29 mints	0.318***	.020	6.94
30-44 mints	0.325***	.021	4.54
45+ mints	0.268***	.017	2.70
Distance From Secondary School			
15-29 mints	0.121***	.008	2.68
30-44 mints	0.219***	.014	3.36
45+ mints	0.055	.003	0.64
HH_IND(Agri)	0.085***	.005	3.15
Wealth_HH	-0.008***	-.001	-6.68
PCI_HH	-0.095***	-.006	-5.11
EMP_M	0.314***	.020	11.69
Household's Economic Situation			
Same as Before	-0.059**	-.004	-2.02
Better than Before	-0.213***	-.013	-5.65
Much Better than Before	-0.444***	-.026	-5.15
Household's community Economic Situation			
Same as Before	-0.030	-.002	-0.95
Better than Before	-0.169***	-.011	-3.63
Much Better than Before	-0.406***	-.024	-3.55
Mean dependent variable	0.09	SD dependent variable	0.29
Pseudo R ²	0.309	Number of observations	110621
Chi-square	20953.36	Prob. > Chi-square	0.000
AIC	47029.84	BIC	47356.7

Source: Estimation based on PSLM 2014-15, *** p<0.01, ** p<0.05, * p<0.1

The economic situation of the community where the household resides also affects the decision to dropout of school. A question was asked to the household head about the economic condition of the community where the household is residing. As compared to worse-off conditions if the household responds that the economic situation of the community is the same as before then there is a .2% fewer chance of a child of that household dropout from school. If the house

responds that the economic condition of the community is better than before then there is 1.1% less chance of dropping out. If a household responds that the economic condition of the community is much better than before then there is a 2.4% fewer chance of the child dropping out of school.

5. Conclusion

The current study analyzed the determinants of children aged 5-16 years who dropped out from schools in Pakistan, based on PSLM micro-data for the year 2014-15 surveyed by the Pakistan Bureau of Statistics. The analyses show that female child is more likely to dropout from school as compared to male child. The education of the household head is also a significant contributor to reducing dropouts. Mother education also reduces the probability of a child to dropout from school. An employed mother will increase the chance of a child to dropout from school as compared with the unemployed mother. The other factors which reduce the chances of child dropouts from school are the female household head, lower distance from middle and secondary school, household wealth, and per capita household income.

If house head belongs to agriculture sector then there are more chances that their child dropped out from school. The Household's economic situation is also a very important factor in reducing dropouts. If the economic situation of the household is better off than before then there is less chance of the child to dropout from school. Similarly, the economic situation of the community where the household resides also affects dropouts. If the community's economic situation is better than before then it reduces the chance of child dropout. It is suggested that the government should establish more middle and secondary schools to reduce the distance from schools to prevent the dropout rate at middle and secondary classes. It is also recommended that government should introduce effective policies to improve economic condition of the households and community, where the household reside to control the children dropout of school.

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