DOES FERTILITY DECLINE ALONE LEAD TO FORMATION OF UNECONOMIC SCHOOLS?

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The pattern of demographic transition of Kerala state (India) is widely acclaimed by international researchers. The transition has resulted in the reduction of students enrolled in schools affiliated to Directorate of Public Instruction (DPI). This has resulted in the formation of large number of "uneconomic schools' in the state with less than 25 students enrolled.

So far studies attempted to understand the linkages between demographic transition and the enrolment concluded that fertility decline is the sole reason for the formation of uneconomic schools. A limitation of these studies was that they focused only on schools affiliated to DPI. However, there is a parallel private unaided sector that is not affiliated to DPI and parents have shown keen interest to enroll the children in these schools. Results indicate that the shifting of students from DPI affiliated schools to private unaided played a crucial role in the formation of uneconomic schools.

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1.1 Introduction

Kerala's demographic transition compared to the rest of the world has been unique. Currently, the state is passing through the fourth stage of transition. However, the state is yet to achieve very high levels of per capita income, standard of living, industrialization, urbanization, infrastructure development etc, which are generally known to be associated conditions with this stage of transition. The transition and its applicability to the rest of the Indian states and in different cultural settings have also been widely discussed. The discussions suggest that the state has been able to reach low fertility and mortality regime through many conventional social and health correlates which include high overall literacy and particularly of females, increased mean age at marriage, successful implementation of maternal and child health care programmes that include universal immunization, effective administration and utilization of official family planning programmes, development of general health care system even in remote villages, political leadership committed to social welfare programmes including agrarian reforms, exposure to mass

media, communication and a settlement pattern that facilitated individualism (Krishnan, 1976; Ratcliffe, 1978; Nag, 1983; Nair, 1986; Bhat and Irudaya Rajan, 1990; Zachariah et.al, 1994; Zachariah and Irudaya Rajan, 1997).

Demographic transition process has inevitable positive and opposite consequences. Kerala is not an exception to this process. There has been a steady decline in the past and recently sharper declines in the proportion of children especially in the school going age group, while the proportion of the aged has increased significantly (Irudaya Rajan and Zachariah, 1997; Irudaya Rajan, et.al 1999). When fertility declines to replacement and below replacement levels, the initial direct impact is on school enrolments at the primary level and later on, the declining wave reaches to high school and the college level.

The educational statistics published by the Directorate of Public Instruction (DPI) from 1988 shows that there has been a rapid decline of enrolment in different types of schools, particularly government and private aided schools in the state. As a result, a larger number of schools have become uneconomic[1] and teachers of these schools were rendered as *'protected teachers'*. At the same time it was observed that, when the enrolments in government and private aided schools have began dropping down, the number of private unaided English medium schools have been spurting up even in the remote villages. If fertility decline was the only factor for the drop in enrolment, this paradox should not have occurred. Such a trend implies growing demand of parents for private unaided schools and reduced demand for the private aided and government school education. This decline in enrolment is said to be the result of fertility decline and might have reduced the demand for education because of lesser and lesser number of children. But the private unaided sector is growing fast both in terms of number of schools and total enrolment of students, while both private aided and government schools have shown a decline. However, the issue remains unresolved, as there is no clear source of data for the total enrolment in private unaided sector.

In this context, an effort has been made to assess the extent of students studying in the private unaided sector and investigate with empirical evidence whether the growth of such private unaided sector is an important factor or not for the significant reduction in enrolments in private aided and government sector.

Pathanamthitta a southern hilly district in the state is focused in this analysis given its lowest fertility and population growth for more than a decade. The district recorded a population growth rate of 0.09 percent in the year 1993. This was the lowest growth ever recorded by a district in the country (Malayala Manorama, 1993; Anonymous, 1994). The Total Fertility Rate (TFR) of the district was 1.7 in 1984-90, which declined to 1.5 in 2001, still one of the lowest fertility districts in the country besides metropolitan district such as Chennai (1.3) and Kolkata (1.4) (Guilmoto and Irudaya Rajan, 2002). The provisional census of 2001 shows that, the annual growth rate of population in the district was 0.037 percent, also one of the lowest in the country. With such a very low fertility scenario, it is expected that the parent's aspiration to provide quality education would rise and it is believed that private unaided schools are providing it.

1.2 Data Source and Methodology

The enrolment patterns of government, private aided and private unaided schools (those affiliated to DPI) were analysed using data published by the Directorate of Public Instruction, Trivandrum. DPI is the only government body in Kerala provides information on different aspects school education includes number of students studying at different levels of schooling, number of teachers, teacher pupil ratio, enrolment pattern etc. The data collected by DPI is widely used for framing educational policies in the state.

The enrolment in private unaided up to 2001 and total number of school going children up to 2016 are estimated based on the smoothed age sex- distribution of 1991 census data. *PEOPLE* population projection software by applying cohort component method was used in the estimation. Besides this, statistical tools such as index of change and proportions have been used to capture the changing enrolment pattern between different types of schools.

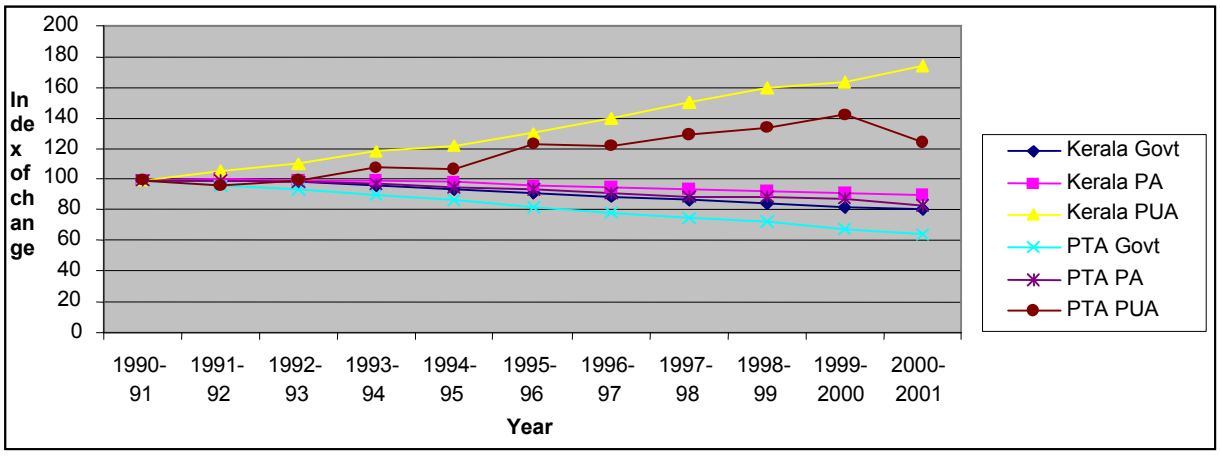
1.3 Enrolment Pattern in Government, Private Aided and Private Unaided (LP+UP+HS) Schools of Kerala and Pathanamthitta

The direct and foremost impact of declining fertility will be on the school enrolments particularly at the lower primary level and many studies have clearly documented it (Expert Committee, 1994; James, 1995; Irudaya Rajan and Mishra, 1996; Ambili, 1999). Analysis indicates a rapid decline in the absolute number of students enrolled in standard I in Kerala with greater decline in Pathanamthitta district from 1990-91 onwards.

This was due to the more rapid demographic transition in Pathanamthitta compared to Kerala (Retnakumar, 2001). In order to examine its impact, this section deals with the enrolment pattern at all the levels of school education such as Lower Primary (LP), Upper Primary (UP) and High Schools (HS) of private aided, government and private unaided schools that are affiliated to DPI in Kerala and Pathanamthitta. Here Kerala is taken as a standard for comparison.

The changing pattern of enrolment for different type of schools, such as private aided, government and private unaided is examined from 1990-91 to 2000-01 for Kerala and Pathanamthitta. The change in enrolment pattern is studied using the index of change[2]. This index indicates a rapid decline in the enrolment of private aided and government schools at all the levels of schooling. The government schools have been more severely affected compared to private aided schools. A possible explanation is that the private aided schools are providing better teaching and learning process compared to government schools. A significant explanation emerging from this analysis is that when enrolment in private aided and government schools decline, there counteracting the enrolment of private unaided schools both for Kerala and Pathanamthitta significantly rose (Figure 1.1).

Figure 1.1 Trends in school enrolment: Comparison of private aided, government, and private unaided schools of Pathanamthitta at LP, UP and HS levels



PUA- Private Unaided PTAPA- Pathanamthitta Private Aided PA- Private Aided
PTA- Pathanamthitta PTAPUA- Pathanamthitta Private Unaided

For Kerala, from 1990-91 to 2000-01, the enrolment in private aided and government schools declined by 9.8 percent and 19.7 percent respectively. At the same time, the enrolment in the private unaided schools rose by 73.3 percent. In Pathanamthitta, the decline was 17.2 percent in private aided school and 35.9 percent in government

schools during 1990-91 to 2000-01. In this district, the impact was relatively greater on government schools. On the other hand, the enrolment of the private unaided schools rose by 24.64 percent during the same period. During 1990-91 to 1999-2000 enrolments in private unaided grew by 42.07 percent but during 1999-2000 to 2000-01, it grew by 18 percent. It shows that, though there is a steep growth of enrolment in private unaided schools.

The changing proportion of students between the three types of schools shed more insight into the declining enrolment trends. The proportion of students enrolled in government schools has fallen sharply, while the proportion in private aided schools has increased marginally though the absolute enrolment is marked by a decline. On the other hand, the proportion in the private unaided schools has risen significantly. It is a clear indication that students have been shifting from government schools to private aided schools and more significantly to the private unaided schools. This has resulted in severe setback to the enrolment of government school compared to private aided schools. Also, the proportion of students in the private unaided sector in Pathanamthitta is greater compared to Kerala (Table 1.1)

Table 1.1 Total students and the changing proportion in private aided, government, and private unaided (LP+UP+HS) students in Kerala and Pathanamthitta in 1990-91 and 2000-01

	Kerala			**Pathanamthitta**		
Year	Private Aided	Government	Private Unaided	Private Aided	Government	Private Unaided
1990-91	3456814 (58.57)	2296572 (38.91)	147715 (2.50)	133045 (60.93)	74852 (34.28)	10429 (4.77)
2000-01	3119463 (59.77)	1842062 (35.29)	257527 (4.93)	110123 (64.04)	48011 (28.05)	12999 (7.59)

Source: Directorate of Public Instruction, Trivandrum
Note: Figures in parenthesis are percentage distributions

Comparatively, the enrolment in private unaided sector in Kerala is still growing very rapidly, while Pathanamthitta is marked by a small decline in growth (Figure 1.1). There are two possible explanations for this. First, our discussions with educational authorities and parents suggested that the newly emerging private unaided schools functioning throughout the state are not affiliated to DPI. They have affiliation to the Indian Council of Secondary Education (ICSE), Central Board of Secondary Education (CBSE), Indian Secondary Education (ISE) etc. and follow English as the medium of instruction. A parallel shift of the students in government, private aided and private unaided schools affiliated to DPI, to those new types of unaided schools is the consequence. One reason is the difference in curriculum between the private unaided schools.

The second is even the private unaided schools which are affiliated to DPI are finding it difficult to retain or increase the intake of students due to declining fertility and the resultant slow population growth in the district.

A major attraction of private unaided education was that they almost consistently follow the same pattern of syllabus for a longer duration, unlike the government and private aided schools where the syllabus and the curriculum are regularly changed. Aside from this, majority of the government and private aided schools that are administered under DPI follow the vernacular medium (Malayalam) till 10^{th} standard while English learning as a language subject starts only at the fourth standard. On the other hand, the new type of private unaided schools have adopted English as the medium of instruction from standard I. This has created a positive impression among the parents towards private unaided schools and they want to see that their children are learning English from standard I due to the international status of the language. Besides this, parents feel that these schools assure better quality of education in terms of better teaching and learning environment, personal attention and enforcement of strict discipline. This trend of rapid growth of private unaided schools with English as the medium of instruction is reported to be catching up all over the country, from developed states like Maharastra to the less developed states like Bihar (Amy Waldman, 2003). Although still smaller in magnitude, such tremendous growth of private unaided schools is an inevitable outcome in states like Kerala where elementary education is universal along with near universal adult literacy.

1.4 Enrolment Pattern in Private Aided, Government and Private Unaided Schools of Kerala and Pathanamthitta at the Lower Primary Level

The previous section documented the steady decline in the enrolment of private aided and government schools at all the levels of schooling (LP+UP+HS). An attempt is made in this section to know the pattern of enrolment trends particularly at the LP level schools affiliated to DPI in Kerala. Due to lack of district level data on enrolment at the primary level, the analysis is focused at the state level.

Both private aided and government schools have been severely affected due to declining enrolment. During1990-91 to 2000-01, the enrolment of private aided and government schools have fallen by 19.7 percent and 30 percent respectively. With steeper decline of enrolment in government schools compared to private aided schools. The enrolment of private unaided school on the other hand, shows a steadily increasing trend for all the periods and particularly, after 1999-2000 (Educational statistics, 2001).

Compared to this, enrolment in private unaided schools rose by 53.34 percent. The proportion of students studying in government schools has been falling sharply and the proportion of private aided schools has increased marginally though there is decline in absolute enrolment. But the proportion has increased significantly in the private unaided sector (Table1.2).

Table 1.2 Total students and the changing proportion in private aided, government and private unaided lower primary schools of Kerala in 1990-91 and 2000-01

Year	Government	Private Aided	Private Unaided
1990-91	1009287 (40.82)	1390774 (56.25)	72342 (2.92)
2000-01	705929 (36.51)	1116593 (57.75)	110930 (5.73)

Source: Directorate of Public Instruction, Trivandrum
Note: Figures in parenthesis are percentage distributions

In government schools having (LP+UP+HS) the decline in enrolment was 17 percent compared to 30 percent in the LP level. In the case of private aided schools the decline was 9.5 percent for all the schools and for LP level it was 19.71 percent. Counteractingly, the increase in enrolment was 73.34 percent for all the private unaided schools and 53.34 percent at the LP level. It shows that the declining impact is severe in LP level due to the rapid decline of fertility or shifting of the students to new types of private unaided schools.

Decline of enrolment in government and private aided schools and the resultant increase in private unaided schools are the result of stiff competition among private aided, government and among different private unaided schools. In their effort to attract the students, schools have come up with different strategies which include: canvassing of students by the teachers, installment fee schemes, free transport, free text book and the supply of free uniform etc. The DPI data from 2001 shows that the enrolments in the private aided schools are more or less constant implying that they have been able to compete with those private unaided schools to some extent.

The trend of growing enrolment in the private unaided schools indicates that declining fertility is not the sole reason for the declining enrolment in private aided and government schools. If that would have been the case, there may not be any growth in the enrolment of private unaided sector. So far studies on this subject have focused only on private unaided schools that are affiliated to DPI, they have not been able to conclude correctly that the studies have incorrectly concluded that the growth of private unaided sector played an insignificant role in the reduction as well as the generation of uneconomic schools in the government and private aided sector (Expert Committee, 1994;

James, 1995; Ambili, 1999; Expert Committee, 2001). The studies concluded by looking at the absolute decline in enrolments in government and private aided schools.

The DPI does not provide data on the enrolments of CBSE, ICSE and ISE Board schools, which are not administrated under their purview nor any other organization does it. In order to assess this, an indirect technique of projection of school going children is used here to estimate the total student enrolment in the private unaided sector for Pathanamthitta district. This exercise deals with the total private unaided students enrolment.

1.5 Projection of School Going Children Ages up to 2016 for Pathanamthitta

The school going children is projected for two reasons, one, to estimate the total number of students in the private unaided sector and second, to estimate the total number of school going children up to year 2016. School going children in the ages of 5-8 needs to be projected for the fact that the private unaided schools of Kerala which are affiliated to DPI is still increasing where as in Pathanamthitta it is declining. It is assumed that the children are shifting to other type of private unaided schools and these schools are more in Pathanamthitta. Besides this, Pathanamthitta has very low fertility compared to Kerala as a whole. Given this, the parent's aspiration to give quality education is expected. Possibly this is a right choice for the parents as private unaided schools appear to meet their aspirations.

School going population is projected up to 2016 in order to obtain the school going children by single year age group. In order to derive the total number of private unaided students from 1996, the smoothed age sex distribution at district level Census data is used as the base year population (Prakasam et.al, 2000). *PEOPLE* software is used to project the school going children by applying the cohort component method by age and sex. (Groenewold and Navaneetham, 1998).

1.6 Fertility, Mortality and Migration Assumptions for projection

The reliability of population projection is based on assumed trends in fertility, mortality and migration. Assumptions need to be adopted based on current and the past experience of some of developed countries.

A very important requirement to make inference about the future size, structure and composition of any population, in particular the school going children is the realistic assumptions on future fertility. In this study three different sets of projections have been done namely high variant, medium variant and low variant based on three assumptions of fertility trends to obtain a lower and upper limits of future school going children. Pathanamthitta district has achieved below replacement level fertility before the 1990's, further falling to 1.7 in 1991 and 1.5 in 2001. Given this low level of fertility, it is assumed that fertility will not decline further under the medium variant assumption. However, some of the developed countries that have reached below replacement level fertility have also experienced an increasing trend in TFR suggesting the need for an upper limit.

While formulating the assumptions of TFR, which is distorted by the changes in timing of childbearing (increase in the mean age at childbearing of various birth order), it has to be adjusted by eliminating the temporal component. The tempo adjusted total fertility rates provides more accurate levels and trends of past fertility and a firmer basis for projecting future fertility trends (Bongaarts and Feeney, 1998). An illustration of Taiwan indicates that the conventional TFR is 0.25 births lower than the tempo adjusted TFR. The TFR adjusted for this temporal component is adopted for estimating the number of school going children in this paper.

Of the three set of projection, medium variant is the most likely future trend of fertility. The other two variants are considered as realistic upper and lower limits of the future trends. With high variant assumption, the TFR will show an upward trend to reach 1.7 by 2011-2016. Under medium variant assumption the TFR will remain constant for the projected periods and with low variant assumption the TFR will decline moderately to reach 1.3 by 2016 (Table: 1.3).

Table: 1.3 Fertility and mortality assumptions to project school going children for Pathanamthitta (1991-96 to 2011-2016)

Year	High variant	Medium variant	Low variant	Female (e_o^o)	Male (e_o^o)
1991-96	1.7	1.7	1.7	73.62 (1)	68.23 (1)
1997-2000	1.6	1.6	1.6	75 (2)	70.69 (2)
2001-2006	1.5	1.5	1.5	75 (3)	71.67 (3)
2006-2011	1.6	1.5	1.4	75 (4)	72 (4)
2011-2016	1.7	1.5	1.3	75 (5)	72 (5)

Source: Rows (1) and (2) on life expectancy (e_o^o) is from Economic Review, 2000
Rows (3), (4) and (5) on life expectancy (e_o^o) is from Technical Group on Population Projection, 1996

The projected life expectancy at birth for Kerala was obtained from Economic Review (2000) and the Report of the Technical Group on Population Projection (1996). Since data on life expectancy at birth at the district level is not available, it is assumed that the Pathanamthitta district will have the pattern of Kerala. The value of life expectancy at birth is the same for the 3 sets of projection (Table: 1.3).

The migration component has relatively lesser impact on school going population particularly at ages 5-8 due to the selectivity of migrants in the adult age groups. The district-wise net out migration is not readily available, consequently the net out- migration rate for Pathanamthitta is assumed to be same as that of Kerala, that is –0.31 percent (Zachariah and Irudaya Rajan, 1997). Based on 2001 population, for each five-year period the net loss of population from Pathanamthitta will be 18420. Of this, it is assumed that 80 percent (14740) would be males and the remaining 20 percent (3680) females.

1.7 Projected School Going Children

In Pathanamthitta the school going population at the LP level in ages 5-8 will be 62016 in 2006 based on the assumption of constant TFR in all the projections. There will be small increase in the school going population after 2001 due to population momentum and the entry of more and more women in the reproductive ages. Though fertility is assumed to be declining, the changing age structure of the population is responsible for this increase after 2001. The changing age structure of women (more number of women in the reproductive ages) would be due to the increase in the survivorship of females from birth to reproductive ages. In addition, more children will survive from birth to school age groups because of the expected decline in infant and child mortality rates.

The projected figures show the total population in the district will increase only by 5.75 percent or nearly 75, 000 will be added to the existing population in the next 13 years. There will not be any drastic change in the size of population. The size of child population in the ages 5-8 ages indicate a very small magnitude of change in population size because the district has already achieved replacement level fertility. Table 1.5 shows that the number of children will decline according to low and medium variant, while under high variant a marginal increase.

Table 1.4 Projected total population and the lower primary students for Pathanamthitta (2003- 2016)

Year	Total population			School going at LP (5-8) Age group		
	Low Variant	Medium Variant	High Variant	Low Variant	Medium Variant	High Variant
2003	1289735	1289735	1289735	60086	60086	60086
2006	1313152	1313152	1313152	62016	62016	62016
2009	1327518	1329823	1331995	59871	59694	59517
2012	1341035	1348447	1355852	56400	57022	57643
2016	1349088	1364510	1379940	51149	55962	60776

According to the medium variant projection, the size of school going children in the ages 5-8 is expected to decline by 7.37 percent in 2016 compared to 2002. Under high variant assumption, the school going children is expected to increase by 0.62 percent. Under low variant projection a decline of 15.3 percent is expected. But since fertility has reached low level, no significant departure is expected away from medium variant. The two possibilities in Pathanamthitta district are either the number of school going children will remain constant or decline further. The district has reached the stage of population stabilization. The proportion of child population in ages less than 15 will fall to 15 percent in 2016 from the present level of 20 percent.

1.8 Estimated Size of Students in Private Unaided Schools

As reviewed earlier, the DPI has record only for students in private unaided schools under the State Board and not for those private unaided under CBSE, ICSE, ISE boards etc. The enrolment ratio in Kerala was cent percent (Irudaya Rajan and Mishra, 1996; Ambili, 1999) and the drop out rate was 1.03 percent in 2000-2001 for Pathanamthitta (Educational Statistics, 2001). Assuming this to be the same for all the periods, the total number of children in private unaided sector can be derived indirectly by deducting the enrolment of students in private aided and government from the projected school going children. In the absence of an alternative explanation, it is assumed that the children who are dropped out from the private aided and the government schools have not been enrolled anywhere else, except in private unaided schools.

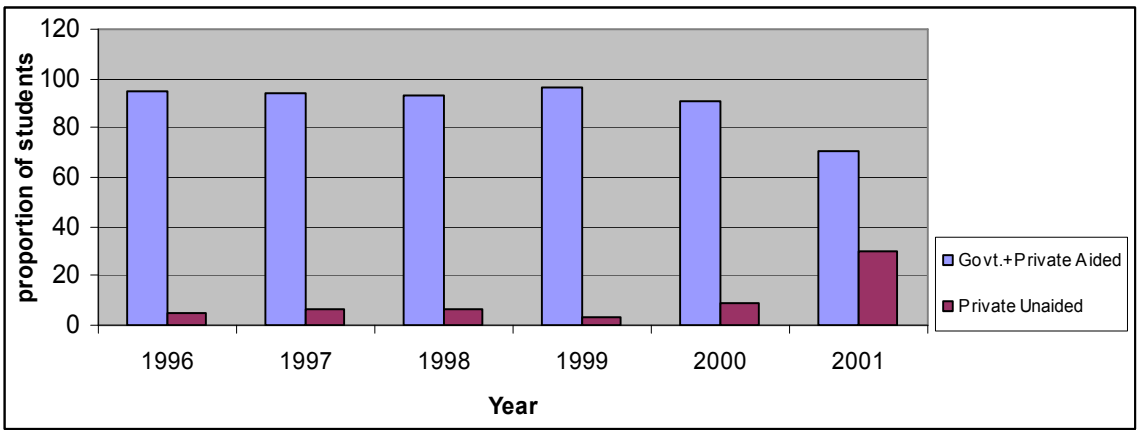
Table 1.7 shows the changing proportion of students between private aided and government schools and private unaided schools. Except in the year 1999 for all other periods the total enrolment in private unaided schools has increased.

The reason for reduction of enrollment in private unaided schools in 1999 was the government's decision to close down some of the private unaided schools having limited infrastructure facilities. This was reversed again in the following year, which resulted in sharp increase of the enrolment of private unaided schools.

This increasing enrolment in the private unaided sector was not captured in earlier studies as they have considered only the state affiliated private unaided schools, which do not cover private unaided schools affiliated to CBSE or ICSE etc. This is important evidence that was not taken into account in previous studies. It clearly proves the argument that fertility decline is not the sole reason for enrolment decline in private aided and government schools.

On the other hand, the enrolment has declined by about 18.7 percent between 1996 and 2001, which is the absolute decline primarily due to the decline in fertility. The changing proportion of students from a mere 5.13 percent in 1996 to nearly 30 percent in 2001 and the declining proportion in the government and private aided sector shows that a very significant proportion of students are studying in the private unaided sector (Figure 1.5 and Table 1.7)

Figure 1.2 Changing proportion of students in government, private aided and private unaided in Pathanamthitta during 1996-2001



If fertility decline was the sole reason there should not be any growth of enrolment in the private unaided sector in this fashion. This is a clear strengthening of the argument that the educational system in Kerala is gradually moving towards a self-financing model (James, 1995). This is not to suggest that this structural change is due to relatively better quality of private unaided schools in the state.

However, a lot of this is due to the perceived quality towards these schools from the parent's side. Further analysis is needed to understand whether the private unaided schools are providing better quality education.

Table 1.5 Changing proportions of lower primary students in private aided and government schools to private unaided schools in Pathanamthitta during 1996-2001

Year	Student enrolled (PA+G) (1)	Drop outs (2)	Actual students in (PA+G) (3)	Projected school going children (4)	Students in total PUA (4-3)	Total Students	Proportion of Students	
							PUA	PA+G
1996	73207	1018	72189	76088	3899	76088	94.87	5.13
1997	70280	977	69303	73817	4514	73817	93.88	6.12
1998	67109	933	66176	70818	4642	70818	93.44	6.56
1999	65919	916	65003	67411	2408	67411	96.42	3.58
2000	59343	825	58518	64196	5678	64196	91.15	8.85
2001	43981	611	43370	61832	18462	61832	70.14	29.86

Source: Column 1,2& 3 from Directorate of Public Instruction, Trivandrum

1.9 Summary and Discussion

This analysis dealt with two important issues: 1) declining school enrolment as a result of fertility decline and 2) its differential impact on private aided, government and private unaided schools in Pathanamthitta district, where fertility is the lowest in Kerala. The gross enrolments of school have dropped down. At the same time the private unaided schools have been spurting up in Pathanamthitta district as well as in Kerala as a whole. This suggests that declining enrolment in the government and private unaided school is not solely due to decline in fertility as suggested in earlier analysis. Apparently, the evidence in this analysis disproves the general argument of researchers and government authorities that the declining enrolment and the generation of uneconomic schools are mainly the result of fertility decline. From time to time, the researchers as well as government authorities have argued that the private unaided schools has no relation with the generation of uneconomic schools in the government and private aided sector in the state. If fertility decline was the only reason, it should not lead to growth of enrolments in the private unaided schools to this extent. On the contrary, it indicates that the increasing demand for private unaided English medium education that are emerging as proves to be counterattractive centers to private aided and government schools.

The government and private aided schools are loosing students partly as a result of fertility decline and significantly due to the shifting to the private unaided sectors on account of lack of improvement or deteriorating quality of teaching and learning process.

This is a key issue that needs to be addressed effectively taking the advantage of low fertility condition. There are various factors mediating against the qualitative improvement of private aided and government schools.

Though these schools are equipped with well-trained, experienced and well-paid teachers compared to those in any private unaided schools, such advantages are not reflected either in teaching and learning process in general. An assessment in few reputed private aided schools in the district shows that their enrolment is not affected much by declining fertility or shifting of the students to the private unaided sector despite the presence of attractive private unaided schools in the neighborhood. At this stage of low fertility regime, there is certainly rising aspiration of the parents to provide quality education to their children. This drives the trend towards a self-financing model of education in the state. In the present scenario, only schools that can provide quality education can sustain in the competition. If the government and private aided schools have to sustain, they have to be reoriented and equipped with better teaching and learning condition and to translate into good quality education quickly.

Notes:

1.The Kerala Education Rule (KER) defined uneconomic schools as those coming under paragraph one of rule 22(4) which requires that the minimum strength of students in lower primary, upper primary, and high schools per standard shall be 25. The rule requires that the minimum strength per standard in Sanskrit and Arabic schools shall be 15.

2.For the purpose of comparative analysis of Kerala and Pathanamthitta, the enrolments are converted into an index of change. It measures the relative change in enrolment with respect to base year period i.e. 1991 at 100. The deviation from 100 shows the increasing or decreasing trends in enrolments.

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