CHANGING DEMAND PREFERENCES IN SCHOOLING AND ECONOMIC IMPACT OF CLOSURE OF SECTIONS IN SCHOOLS IN KERALA

Dissertation

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GANGA S

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DECLARATION

Date: 30/04/2022

I, GANGA S, hereby declare that this M.Phil dissertation entitled 'CHANGING DEMAND PREFERENCES IN SCHOOLING AND ECONOMIC IMPACT OF CLOSURE OF SECTIONS IN SCHOOLS IN KERALA' is based on my original research work, and to the best of my knowledge, has not been submitted in whole or in part in this University or in any other University for the award of any degree.

Ganga S

CERTIFICATE

This is to certify that the dissertation entitled 'CHANGING DEMAND PREFERENCES IN SCHOOLING AND ECONOMIC IMPACT OF CLOSURE OF SECTIONS IN SCHOOLS IN KERALA' is the work undertaken by Ms. GANGA S under the supervision of Prof. N. V. Varghese, as part of her M.Phil degree. We recommend that this dissertation be placed before the examiner(s) for evaluation and award of the degree of M.Phil.

Prof. N. V Varghese

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Chapter 1

Introduction

1.1 State intervention in education

The resource allocation principle in public sector dominated economy is to maximise social welfare while that in a market economy is guided by self-interest in the satisfaction of private wants (Musgrave and Peacock, 1958). Private goods are optimally produced and distributed according to the consumer's demand for a good, consumer thereby being the king. However, the societal needs go beyond individual wants. Public goods on the other hand were produced according to social wants and the required resources were allocated and distributed by the government. State intervention is justified for the public goods as their private allocation called for 'free rider problems'. The provision of public goods still depends on the willingness to pay of the people (Hardin and Cullity, 2020) (Valarie and Nathalie, 2019).

Richard Musgrave promoted the idea of merit goods wherein the state takes up a paternalistic role in the provision of some goods; in such cases individual preferences are distorted enough to not understand the need for consuming the particular good. Consumer sovereignty is thereby overturned in such goods. Merit goods are "considered so meritorious that their satisfaction is provided for through the public budget, over and above what is provided for through the market and paid for by private buyers" (Musgrave, 1956: 13). The services like education and healthcare rendered primarily by the public authorities are merit goods.

The concept of merit goods took deeper roots with the later normative framework that reconciled human behaviour to traditional economics which stressed on market. This took away the spotlight from the idea of rational man to irrationality and ignorance of a consumer and the need to bring everyone on a common platform. Musgrave (1987) gave a hint of link of Rawls' primary goods to his idea of merit goods, wherein there are some basic rights, liberties, income and wealth which form the basic metric of justice (Tremblay, 2016).

State decision and subsequent allocation of merit goods thereby makes a society more egalitarian in nature. Primary education is considered a prominent merit good (Misra and Ghadai, 2015; A.R, 2004). Its neighbourhood effects make state provisioning inevitable. Paternalistic intervention is not just confined to providing adequate information in the case of

elementary education but extend to expanding supply, gentle persuasions and active coercion to allocate and redistribute the good (Plank, 2005). This has resulted in educational expansion across the globe.

1.2 Expansion of Primary Education

Primary education has reached universal levels in terms of access. Gross primary school enrolment percentage in the world has reached 101.715% in 2019 (The World Bank, 2022). The increased access has cut down the number of out of school children. The number of out of school children in the world has fallen by 50 million since late 1990s and is currently standing at 58 million children (UNICEF, 2021). Even in the least developed Sub-Saharan Africa, the out of school primary school going age children have fallen by 10 million students since late 1990s (Our World in Data, 2015).

This leap in primary education in the past three decades owes to the idea of "Education for All" movement initiated with the Jomtien conference of 1990, which paved way to the *World Declaration on Education for All and a Framework for Action to meet Basic Learning Needs*. The United Nations initiative of "The Millennium Development Goals" signed in 2000 included a provision that all girls and boys should complete the primary schooling cycle by 2015. The target could not be achieved even when the progress made in primary education in developing countries was considerable – enrolment increased from 83% to 91% in 2015. Education, included in the Sustainable Development Goals (SDGs), was again taken up in 2016 for the year 2030. Goal 4.1 of Sustainable Development Goals (SDGs) proposed to ensure free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes for all girls and boys by 2030.

India has been taking initiatives and developing programmes since independence to universalize elementary education. The disparities in educational development became evident and more pronounced from 1970s onwards. In the 1990s, the government identified educationally backward districts to hasten the process of expansion of primary education as a follow-up to the commitment made during the Jomtien conference. The District Primary Education Programme (DPEP) launched in 1994 is a good example of district-based intervention strategies to expand and universalize primary education. It was operationalised as proposed in National Policy on Education (NPE, 1986) and Programme of Action (POA, 1992), with the help of external aid. In four phases, the project covered 219 districts across 18 states in India. About 160,000 schools were built along with 84,000 Alternative schools (AS) to

expand education in the country. It was found that the programme increased the probability of attending primary school by 2.1 percentage points, probability of completing primary school by 1.8 percentage points and years of schooling by 0.16 years (Azam and Saing, 2016). The DPEP programme was extended to Sarva Shiksha Abhiyan (SSA) in 2001. The country's flagship programme aimed to complete the cycle of primary schooling by 2007 and cycle of elementary education by 2010 by bridging social, cultural and regional gaps.

Legislative measures further helped educational expansion. Education was initially stated only in Article 45 in Directive Principles of State Policy (DPSP). Subsequently 86th amendment (2002) of the constitution made Right to Education as a fundamental right in Article 21 (A). This was later followed up by legislating an act for universal primary education. The Right to Education (RTE 2009) Act enforced education as a fundamental right and ensured free, compulsory primary education to all children in the age group of 6-14 years. SSA, with the firm hand of law of RTE Act, positively impacted enrolment, teacher appointment, construction of schools and development of textbook/curriculum. The target of SSA to open 240, 072 schools increased from 77.9% in 2002-07 to 91.1% in 2010-11. The Unified District Information System on Education (UDISE) data of 2015-16 shows that 94.65% of children were enrolled in 14.49 lakh elementary schools with an average of 136 children per school. Out of school children decreased from 134.6 lakh in 2005 to 61 lakh in 2014. It has also resulted in improvement of transition rate and pupil teacher ratio (Yadav et.al, 2018).

Although primary education expanded in India, it seems that there has not been any drastic progress in improving primary enrolment after 2007. India still needs to bring all children under the fold of compulsory, free education. Though percentage of gross primary enrolment in India has shot up from 96.829% in 2019 to 99.9% in 2020, the percentage of out of school primary school children has increased from 2.262% in 2013 to 5.373% in 2020.

The primary schools in India had almost ensured universal access and educational quality was taken into consideration after 2010. The Right to Education (2009) Act put forward minimum standards for the running of primary schools in the country. It can be classified into infrastructural norms, student enrolment and teacher appointments. For first to fifth class, there should be a minimum of two teachers for sixty students. And for enrolment exceeding the above, the number of teachers proportionately increases. For sixth to eight class, there should be one teacher per class (of 135 students) for science and mathematics, social studies and languages. For enrolment above hundred in upper primary classes, there needs to be a

headmaster/headmistress and part time instructors for health education, work education and arts. Every school is bound to have drinking water facilities, boundary wall, teaching learning equipment, library, sports/playground equipment, kitchen, separate toilet for girls and boys and one classroom for every teacher with an additional office-cum-store room- cum- Head teacher's room. For first to fifth class, there should be a minimum of 200 working days and 800 instructional hours per year. For sixth to eighth class, there should be a minimum of 220 working days and 1000 instructional hours per year. An ultimatum was provided to schools across the country to comply with the norms by 2013 regarding infrastructural facilities and 2015 for teacher appointments. Only 10% of the total number of schools had met all the minimum standards. Educational expansion coupled with quality is therefore the nation's primary motto.

1.3 Uneconomic schools and their rationalization in India

Categorisation of schools which are small in size is quite contested in literature. Govinda (1995) considers schools with lesser than 100 students and a single teacher as small. Aggarwal (1997) considers enrolment less than 60 with two teachers as small. Using the DISE 2009-10 data, Diwan (2015) has divided small schools into two: with an enrolment of (i) students less than or equal to 25 and (ii) students ranging from 26 to 50. Guidelines for Rationalising Small Schools (2017) has categorised schools with low enrolment into three: mainly primary schools with zero enrolment, primary schools with enrolment less than fifteen and primary schools with less than thirty.

As the nation ensures universal access to primary education, primary enrolment in government schools is dwindling. Declining birth rates, increasing private schools, many government schools in proximity and low quality of government schools have resulted in low enrolment in government schools (Dongre and Tewary, 2020). This has made the schools 'small' in size. "According to U-DISE 2016–17 data, nearly 28% of India's public primary schools and 14.8% of India's upper primary schools have less than 30 students. The average number of students per grade in the elementary schooling system (primary and upper primary, i.e., Grades 1–8) is about 14, with a notable proportion having below 6; during the year 2016–17, there were 1,08,017 single-teacher schools, the majority of them (85743) being primary schools serving Grades 1–5" (NEP, 2020).

Most of the schools with low number of students work with single classroom schools, poor infrastructural facilities and inadequate teachers. These schools do not satisfy the RTE norms.

The schools even resort to multigrade teaching which reduce the effectiveness of educational transaction (Dongre and Tewary, 2020). Inadequate number of teaching staff, low enrolment, geographical isolation, and administrative difficulties in supervision are some of the few problems of small schools. The small size of these schools had made them "economically sub-optimal" and "operationally complex" (NEP, 2020)

Small, economically sub-optimal schools are proposed to be tackled by the National Education Policy, 2020 with the idea of school complexes/clusters which had been left unimplemented by the Education Commission (1964-66). The aim is to bring small, lower grade schools including Anganwadis in a radius of 5-10 kilometers under the ambit of a single secondary school. This improves the learning outcomes of the students by improving the infrastructural and physical resources, tightening the teacher community, better devolution of authority and increased supervision. This gives the lead school powers to share both human and physical resources to schools working underneath it, thereby improving school quality. It does not thereby involve a physical relocation.

Rationalisation/ Consolidation as a policy tool has been undertaken in various Indian states since 2014 to physically 'amalgamate' or 'reduce' the number of small schools. The schools that are small in size are combined with an identified bigger school thereby integrating the teachers, students and resources of the schools. This necessarily entails the closing/ shutting down of smaller schools. The closure of schools is decided by competent educational authorities along with the community (through SMCs) by providing necessary options, transportation and time for the students to shift to the new option. The policy, as stated on the paper, does not compromise the neighbourhood norms mentioned in the RTE act. Rationalisation can even go forward to establishing new schools if need arise (Rao, 2017; Bordoloi and Shukla, 2019).

Rationalisation has been taken up across various states according to their respective state policies. The criteria of rationalisation- the minimum number of students required in a school- thereby differ. The state of Odisha closed down about 165 schools at primary and upper primary level with enrolment less than five and further measures are underway to close 813 schools with enrolment less than ten. Telangana redeployed the teachers in zero enrolment schools thereby closing these schools down. Due to protests by civic organisations, schools with low enrolment could not be shut in the state. The state of Rajasthan had taken up the policy of consolidation on the basis of enrolment and distance. A primary or upper primary school was

merged if the enrolment was less than thirty or if they were situated near a secondary or higher secondary school. The merger allowed in the creation of Adarsh Vidyalayas/ model schools in Rajasthan. The merger was either administrative merger or complete physical merger. In the first drive of consolidation, 14672 schools were merged. The second drive of closure proposes a merger of 4451 schools in the state (Rao, 2017).

1.4 Uneconomic schools in Kerala

There had been a visible decline in enrolment in government and aided schools in the state of Kerala since 1970s. The declining enrolment and resulting economic non-viability have reduced the number of government and private aided schools over time. It is seen from Table 1 that the number of government schools have fallen in number from 1961-62 while the private aided schools have declined from 1980-81. From 1961-62 to 2019-20, the number of government schools have fallen from 2835 to 2595. In the case of private aided schools, the number has fallen from 4143 (1980-81) to 3911 (2019-20).

Table 1.1: Number of Government and Private Aided schools in Kerala from 1961 to 2019

Year	Number of Government Schools	Number of Private Aided Schools
1961-62	2835	3910*
1970-71	2804	4091*
1980-81	2744	4143*
1989-90	2608	4069
2000-01	2552	4035
2010-11	2542	3979
2019-20	2595	3911

Source: Kerala Economic Review

*Till 1980-81, the data does not show a distinction between private unaided schools and private aided schools. The figures are thereby clubbed under the umbrella term private schools.

The declining enrolment in government and aided schools made them small in size. The average effective strength per standard was fixed 25 students per class by Kerala Education Act and Rules (KER). With class sizes lesser than the optimum number fixed by the state, these schools become uneconomic (Kerala Economic Review, 1990). The Directorate of Public Instruction (DPI) further brought down the standard from 25 per class to 15 per class in 2018.

Uneconomic schools posed an economic burden and were closed down. 89 private aided schools and 23 government schools were closed in the 1990s (Varghese, 2015). The move to close schools was also taken during the period of 2001-2004. School closure was considered as a cost-saving measure and over 2650 schools were earmarked to be closed. This included over 993 government schools and the rest included aided schools. 105 schools were notified in 2002 to hand over their keys by March 31. The then Chief Minister publicly announced the government's stand on maintaining the uneconomic schools, "Why should the state keep spending its resources on schools where there are no students?" (Radhakrishnan, 2002).

The continuing school closure was greatly opposed by public protests in various parts of the state after 2000. The active participation of people kept the spirit of public education alive even during its decline. School Protection Committees headed by local people and flak drawn in by opposition parties has furthered the cause of protecting uneconomic schools.

The 2015-16 annual review of the Department of Education, Kerala claims that around 44 schools were identified uneconomic and four of these schools were given an order by the high court to be closed. The latter government of 2016 took up these schools thereby saving these four schools from closure ("Kerala government to take over loss making schools". Deccan Chronicle. June 8, 2016). The state and civil organisations have thereby opposed the move to close schools and have instead resorted to bettering the educational atmosphere of these schools.

The 130-year-old A.U.P School, Malapparambu in Kozhikode was on the headlines for a very long time as the 2011 state government decided to close it for poor enrolment. Even a high court order was produced in favour of the school closure. The people vehemently opposed the move and stopped the authorities from carrying out the procedure. The localities claimed that the manager of the school had wanted to close the institution for selling the property

("Malaparamba among four schools facing closure". The News Minute. June 8, 2016). The protection committee, formed for the conservation of the school, fought strongly and had even broken into minor scuffles with the police during the attempts by Directorate of Public Instruction (DPI) to close the school. ("Activists prevent officials". On Manorama. May 26, 2016)

The option was between a compulsion for school consolidation for economic and viability reasons and continuation of small-sized schools from the point of view of equity in access. The schools with low enrolment were thereby identified by the state and continued as uneconomic schools. These schools witness closure of sections due to fall of students. After 2018, the state decided to change the terminology of such schools to "schools with less number of students" (Kerala Economic Review, 2018). This was justified by the argument that school is not just another profit seeking institution to be categorized on the basis of its economic viability.

The sharp decline in the enrolment of students in the government and aided sector since 1970s has been widely covered in the literature. The earlier literature surrounding the issue has dealt with uneconomic schools as a by-product of the demographic transitioning in the state. While the later literature paints a more complex picture of declining school enrolment and uneconomic schools in the state. They throw light on mushrooming private recognised and unrecognised schools in the state. The changing demand preferences for English medium, central syllabus education backed by high SDP, international remittances lead to increasing private schooling and declining enrolment in government and aided schools. It is also coupled with declining government expenditure in education and low quality of government schooling.

The declining fertility has attributed to the cut in the school going population at primary level of education. James (1995) showed that the number of LP schools has declined from 2624 (1984-85) to 2565 (1992-93) in the government sector and from 4094 (1984-85) to 4067 (1992-93) in the aided sector respectively. He argued that the decline in enrolment is mainly due to demographic transition and not due to the increase in unaided schools in the state. There was an increase in the enrolment in unaided private schools from 0.18 lakhs in 1973 to 0.79 lakhs in 1993, which constituted only a meagre 0.73% of total LP school enrolment in 1993. Retnakumar and Arokiasamy (2003) explains the fertility decline as a cause and declining school enrolment in aided and government schools as its direct impact. The study conducted in Pathanamthitta showed a Total Fertility Rate (TFR) of 1.7 in 1984-90 which came down to 1.5 in 2001, with an annual growth rate of population of 0.037%. There was a decline of school

enrolment of 28%: from 6,17,681 in 1984-85 to 4,42,087 in 2000-01 in Kerala. The numbers were 21,547 and 13,496 respectively in Pathanamthitta during the same period, with a decline of 37%. Demographic decline of school going population at the LP and UP level has also been stressed on by Tharakan and Navaneetham (2000).

The latter literature on declining school enrolment thereby doesn't account the entire phenomenon of uneconomic schools to demographic transition. The parents demand for quality education is measured in terms of English medium education and ICSE/ CBSE syllabus. These needs are satisfied by the mushrooming private schools in the state. High SDP and international remittances in Kerala have backed this demand.

Retnakumar and Arokiasamy (2006) conducted a study in Pathanamthitta to map out the increasing number of unaided private schools and declining school enrolment. The study identifies a decline in enrolment in government schools and a counteracting increase in unaided schools in Kerala and Pathanamthitta. By 2001, half of the student enrolment is in private aided schools and a fourth in government schools. The number of unaided schools has shot up from 5% in 1990-91 to 8% in 2000-01. The parents prefer these schools due to syllabus like CBSE/ ICSE/ISE and English medium education. The rise in per capita income due to international remittances further the cause. The increasing migrant population pump more money into their ward's education, thereby shooting up private schooling in the state. Fertility decline in the state therefore only partially explains the phenomenon of uneconomic schools.

Varghese (2015) further builds on the argument put forward in the previous study by pointing out the growth in unaided, unrecognised schools. Malappuram, Kozhikode, Thiruvananthapuram and Kollam accounted for 48% of the rise in private unaided unrecognised schools in the state. 1730 such schools were added in the period 2000 to 2007. The market sector of school education has been divided into two- preferential and residual segments. The preferential segment includes recognised private unaided schools mostly preferred by the elite section who doesn't want to send their children to state run schools. The residual segment, which includes unrecognised unaided private schools, enrols students who couldn't make it to the preferential segment. The emerging middle-class aspirations, due to high per capita income and international remittances, have led to the rise in the residual segment. The service sector jobs in Kerala and abroad demands a skill set satisfied by central syllabus and English medium education, something which the current government schools are

unable to provide. This has resulted in rising number of private, unrecognised schools and subsequent uneconomic schools in government and aided sectors.

1.5 Rationale of the Study

There has been a total of 12,951 schools in Kerala in 2019-20, out of which 4,693 (36.24 per cent) are Government schools, 7,216 (55.71 per cent) are aided schools and 1,042 (8.05 per cent) are unaided schools. More government schools are functioning in lower primary section than upper primary or high school sections. Aided schools outnumber government schools in all sections.

The state of Kerala witnessed high number of uneconomic schools- schools with insufficient strength of pupils (below an average of 15 students per class). All the uneconomic schools are either in the government sector or in the aided sector. In the year 2004, there were 2622 uneconomic schools in the state of Kerala out of which 1284 were in the government sector and 1338 in the aided sector respectively. In the year 2008-09, there were a total of 1839 and 1822 uneconomic schools in the government and aided sectors respectively. Out of a grand total of 5715 uneconomic schools in Kerala in 2015-16, 2606 were in the government sector and 3109 schools were in the aided sector. In the year 2016-17, it has again risen to a grand total 5723 uneconomic schools with 2589 and 3134 schools in the government and aided sectors respectively. With the revival of government and aided schools through Public Education Rejuvenation Campaign in 2016, the number of uneconomic schools has decreased to 996 in 2019. The research tries to understand the trend of uneconomic schools in the state.

The private unaided schools (both recognised and unrecognised schools) meet the changing demand preferences of schooling: CBSE/ICSE syllabus taught in English medium. The private unaided recognised schools in the state had risen from 1427 (2004-05), 1551 (2008-09) to 2481 (2015-16). Private unaided unrecognised schools in the state were 528 in number before 1991. Thereafter a visible growth was seen in the subsequent years: 733 (1991-2000), 916 (2000-2007), 2646 (2009), 1199 (2012-13), 1660 (2013-14), 1632 (2014-15), and 1563 (2015-16). The changing demand has been backed by high income of the state and increasing international remittances. This changing demand, coupled with the inability of state to provide quality education, had resulted in the declining enrolment in government and aided schools. The study tries to understand the determinant factors that has resulted in the closure of sections in schools in Kerala. The study also undertakes to analyse the effect of closure of sections on the schools, in terms of infrastructure and protected teachers.

1.6 Research Questions

- What are the trends of uneconomic schools in Kerala over the years?
- What are the determinant factors that influence closure of sections in schools in Kerala?
- What are the economic impacts of closure of sections on teachers and infrastructural facilities in the schools?

1.7 Research Objectives

- To understand the trends of uneconomic schools in Kerala over the years
- To examine the determinant factors that influence closure of sections in schools in Kerala
- To analyse the economic impacts of closure of sections mainly on teachers and infrastructural facilities in schools

1.8 Methodology

Mixed method approach is used for the purpose of the research. The first research objective is addressed by quantitative analysis of secondary data of uneconomic schools for about fifteen years (2004-2019). The data is collected from the reports by Kerala State Planning Board (KSPB). The time series data (on Schools with less number of students/ Uneconomic schools) helps in understanding the trends in uneconomic schools in the state over the years. It also reveals the district wise difference in uneconomic schools in the state. The second research objective is addressed with the help of secondary data from Unified District Information System for Education (UDISE). The trends of private unaided recognised and unrecognised schools in Kerala are read alongside with the data of uneconomic schools for studying the changing demand preferences in schooling in the state. This is further supported by literature.

The primary data relied on for the study pertains to the district of Thiruvananthapuram, Kerala. The district of Thiruvananthapuram has been chosen as it shows a fairly high number of uneconomic schools in the state. The district has also witnessed changing demand preferences in schooling for CBSE/ICSE syllabus and English medium education, thereby resulting in increased private unaided schools.

The fourth chapter, based on primary data collected from schools and teachers, closely examines the impact of closure of sections in schools in Kerala. Lower and upper primary schools are selected for the study as they constitute a major segment of the uneconomic schools in the state. The study constitutes both survey research and case studies. The impact on school infrastructure is understood through case studies of aided and government schools from selected educational sub districts. Structured interviews were conducted with the headmaster/headmistress of the respective schools on the basis of open-ended questionnaires.

The decline in enrolment in private aided schools result in the teachers becoming higher than the fixed pupil teacher ratio. This renders them surplus. Unable to retain the teachers in the respective school, the teachers are thrown out of employment. The surplus teachers are absorbed into the teachers bank created by the state educational department and thereby become protected teachers. Teachers bank consists of such surplus teaching and non-teaching staffs protected by the government. The bank redeploys the protected teachers to government schools/aided schools with vacant teaching posts created by death, retirement, resignation, death or voluntary retirement. These teachers are taken back by their parent school as an when vacancies re-arise. The protected teachers are affected both emotionally and financially.

The impact on teachers is understood by survey research among the protected teachers in the district. This includes protected Lower Primary School Teachers (LPST) and Upper Primary School Teachers (UPST) from Thiruvananthapuram. It is conducted by both direct and telephonic interviews with the help of closed ended questionnaires. The bigger picture of the district is understood by open-ended interviews with respective Assistant Educational Officers (AEOs).

1.9 Brief Description of the Chapters

The first chapter is an introduction to uneconomic schools in the country and in the state of Kerala. Educational expansion in India and the subsequent declining school enrolment is explained in the chapter. School rationalisation which emerged as a solution to the uneconomic schools has also been discussed in the chapter. The chapter consists of rationale, research questions and objectives, theoretical framework, methodology, tools, sample and population used for the purpose of the research.

The second chapter includes the review of literature. This chapter helps the researcher to compile previous research articles based on which the research gap is identified. It provides a

brief overview of the educational expansion in the state. The chapter covers the phenomenon of uneconomic schools in the state. The chapter also understands the factors that have resulted in declining enrolment in schools in Kerala. It explains the initial literature on declining school enrolment and demographic transitioning in the state. The changing demand preferences in the state for CBSE/ICSE syllabus in English medium, resulting in the rise of private unaided schools, are explained by the later literature. The changing demands have led to increased private schooling in the state and declining school enrolment in government and aided schools.

The third chapter describes the trend of uneconomic schools in the state for over two decades. Secondary data from Kerala State Planning Board (KSPB) and Unified District Information System on Education (UDISE) is used to understand the trends and factors that influence the declining enrolment in the state. The recent revival of government and aided schools in the state is also explained.

The fourth chapter includes findings and analysis of the research undertaken in the district of Thiruvananthapuram. The chapter includes the impact of closure of sections on the teachers and infrastructure of schools. The primary data obtained through case studies, interviews and survey research is analysed in this chapter.

The fifth chapter presents the conclusion of the study. It provides snippets of the above three chapters. It discusses the background of the study, the literature used to back up the study, the research methodology, the findings and the analysis. The chapter provides the limits of the research and prospects in the field.

Chapter 2

Review of Literature

2.1 Education as a public good

Public goods possess mainly two characteristics- non-excludability and non-rivalry (Samuelson, 1954). Non-excludability implies that no person can be excluded from the consumption of the good/ service while non- rivalry concludes that the consumption of a good by one person doesn't make it unavailable for another. Public goods are mostly provided by the state. Pure public goods include road, defence etc. Education has been widely agreed to as a public good. But this agreement rests on varied definitions of "public good".

Grace (1989) identifies alternate conceptions of a public good as education doesn't fit the pure public good category of non-exclusiveness, non-positional and non-competitive good. She extends the idea of education as a public good as following: (i) a good which expands the potential of a person irrespective of his social standing (ii) a good which improves the moral, social, economic and political responsibility of a citizen and (iii) a good which helps in the functioning of a democratic society.

The private aspirations in education and corresponding supply cannot be ruled out with the existing definitions of public good. This has resulted in acknowledging the private and public benefits of the good. Levin (1987) equates private benefits and social benefits of schooling to education as a private good and public good respectively. Schooling enhances private benefits like individual earnings, promotion of family values and wide variety of other personal outcomes. As a public good, schooling enhances economic growth, democratic functioning of society and equality of diverse populations. Education can thereby be restructured to capture social benefits in the core curriculum along with private aspirations. He stresses on how social/ public benefits of schooling cannot be entirely captured by a private market and can lead to increasing divisiveness in the society.

The above literature defines education as a "public good" quite vaguely, referring it mostly to social benefits. Education doesn't categorically fit the definition of the above term in economics. Though schooling is provided prominently by the state, there are increasing private aspirations and corresponding supply by private players. This tug of war of the state and the private players in provisioning education cannot be explained by the concept of it being a public

good. Therefore, state intervention can be understood better if we consider education as a merit good.

2.2 Need for state intervention and education as a merit good

Education is an investment to improve the productive capacity of an individual. The period of training postpones the active participation of the individual in the production process only to earn better wages later (Psacharopaulos and Patrinos, 2018). This not just increases the demand of an individual labourer but improves the skill set of the nation's human capital. It can step up the nation's economic development. Growth models emphasise on how educational investment on human capital can boost economic growth through innovations and technical change. The increased and improved production process can raise the economic standing of the nation. In the long run, education brings down poverty and economic inequality (OECD, 2012).

Education is a necessary investment not just for the obvious economic advantage. It creates positive externalities, which are benefits to society above and beyond the private benefits of the individual decision maker. McMahon (1987) compiles the various positive externalities of education- (i) necessary for effective democracy and democratic institutions (ii) lower crime rates and reduced penal system expense (iii) lower welfare, medicaid, unemployment compensation and public health (iv) public service in community and state agencies and (v) complementarities in production.

Even market enthusiastic economists have vouched for government intervention in primary education to provide a levelling ground later in life. Friedman (1955) justifies government intervention only on three conditions: (i) when there is a natural monopoly of the government (ii) when the government has a paternalistic concern for children and irresponsible individuals (iii) when the activity has substantial neighbourhood effects. He thereby actively vouches for government intervention in education. The education of a child adds to the formation of a stable and democratic society; the significant neighbourhood effects thereby push the government to provide universal education. The nationalised education also removes parochial, divisive tendencies in the society to discriminate children. The natural monopoly of government enables it to set up schools wherein private competition finds no profit. In small, rural communities the number of students is very less to justify schools and so private competition cannot be relied to pitch in.

Boissiere (2004) compiles the various reasons why government should step in to supply primary education. The public investment in primary education has a lot of social returns like democratic strengthening, social cohesion and economic growth. The externalities thereby make it unable to leave primary education in the hands of free market. Poor parents with little education due to information asymmetry fail to realise the returns to education. The credit market imperfections make it difficult for poor parents to afford primary education unlike rich or middle-class parents. Poterba (1996) finds that the parents may be unaware/underestimate the children's future earning potential which may result in low investment in education. It is not also advisable for private educational suppliers to have a free rein in the market. Private educational suppliers will have parochial interests which can result in fragmentation of society on the terms of religion/caste/class. With a profit motive, private schools needn't cover places with very few students. Educational production has a fixed cost which may not have economy of scale in rural areas. With various social and private benefits accrued to education, its provisioning is therefore left safe in the hands of the state.

Public investment argument can be further strengthened by the role of primary education in developing the human capital of the country. The supply by the government thereby reduces poverty and inequality in the country. With the need for optimal state allocation decided by the state, primary education can be considered a merit good (Misra and Ghadai, 2015; A.R, 2004). The term 'merit good' has been coined by Richard Musgrave in his seminal work "A Multiple Theory of Budget Determination" published in 1957. Musgrave considers it necessary to allocate the merit goods "over and above that by provided by private buyers" (Musgrave, 1957: pp.13).

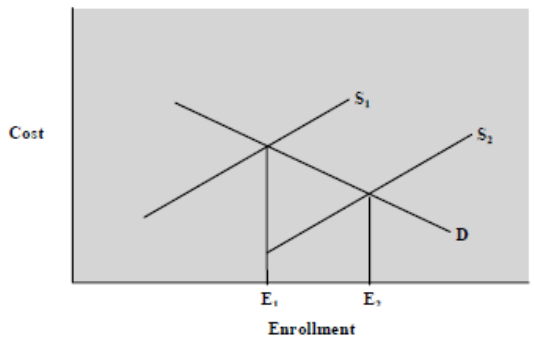
Pulsipher (1971) discusses the properties and relevance of merit goods. The individual preferences rest on sacrosanct principle of complete market knowledge of the consumer in traditional economics. The state interferes to protect the citizens from distorted demand preferences, as the people are bombarded with options from mass media and advertising. Most of the merit goods by Musgrave belong to the fifth category of mixed social-merit-private wants. These goods satisfy specific and general wants and also when the preferences are 'distorted'. There is extra-personal benefit or costs involved in the consumption of these goods. Optimal amount of these goods is determined by the political decision-making bodies.

Valarie and Nathalie (2019) says that public good is linked to consumer's willingness to pay (taxation) and his consumption levels. But a good becomes merit good when individual choices

are defective and thereby detrimental. The state/ higher authority decides for the individuals their authentic preferences. The government acts as a mediator to help the consumer deal with his/her meta-preferences. These goods are provided by the state as it might be either over/ under consumed in a society, if left to private players. The concept has been marginalised in mainstream economics due to its normative concept of government and infringement of consumer sovereignty.

Primary education has been dominantly financed and controlled by the state, as it is a merit good (Misra and Ghadai, 2015; A.R, 2004). Both the state and the central government stepped in to ensure universal access to education, when most of the people were unaware of the benefits of education due to distorted preferences. While provisioning education, the state achieves a paternalistic role and decides for the collective of the people. With various positive externalities, the onus rests on the state to intervene. The state intervention has effectively increased enrolment and expanded education. Plank (2006) explains how government policies have increased the supply as well as demand in schooling. The supply side dynamics ensure that education is available to all, irrespective of differences while the demand side ensure that the parents are persuaded or coerced into enrolling their wards in schools. The supply side has tried to reduce the cost of schooling, provide cheaper alternatives, mass subsidies and school feeding programmes. This has resulted in an increase in enrolment, thereby shifting the supply curve outwards. In Fig 1, S1 and D are the original supply and demand curves respectively. At the equilibrium point, enrolment is E1. With the government intervention (subsidies, mid-day meal programmes and establishment of new schools), the supply curve shifts outward to S2 and the resultant equilibrium point is E2. E2 thereby signifies a higher enrolment.

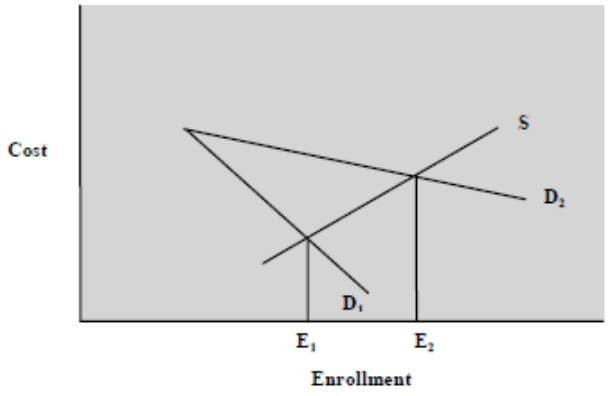
Fig 2.1: Supply side dynamics of schooling



Source: Plank, David (2005)

The demand policies of the government have either gently persuaded or actively coerced the parents thereby increasing the enrolment of students. Through compulsory schooling and child labour laws, the government has made clear that schooling is relatively cheaper than alternative use of children's time. This has made changes in the attitudes of parents thereby increasing the demand for schooling and enrolment. In Fig 2, D1 and S are the original demand and supply curves respectively, with their equilibrium point at E1. With gentle persuasion and active coercion, the demand of the households has changed in favour of schooling shifting the demand curve outward. The new demand and supply curves are D2 and S respectively with equilibrium point at a higher E2.

Fig 2.2: Demand side dynamics of schooling



Source: Plank, David (2005)

The role of government in educational expansion is relevant. The widespread supply and demand push in education can only be financed and controlled by state. This not only includes large schools (profitable for the private players) but also schools in far flung areas. Government intervention to set up schools has gone a long way in increasing student enrolment.

2.3 International picture of school consolidation

The experience of the developed countries which have universalized basic education indicates that educational expansion resulted in the establishment of rural schools across countries in Europe, North America and Australia. However, these countries experienced change in demographic structure, rural decline and rural-urban migration from 1950s and 70s. This resulted in low enrolment in the rural schools, making them small in size. Small size of the

schools made it economically unviable to run these schools. The poor fiscal capacity of the public exchequer and local bodies forced shutting down of many small and uneconomic schools.

Sigsworth and Solstad (2005) map the history of school consolidation in Norway. Compulsory education was enforced across the nation by the 1739 Act on Rural Schools of Norway. By 1900s, 80% of the population were living in rural areas. The widely dispersed population of 650,000 people live in peripheral municipalities; there existed a need to maintain rural schools in Norway. Within fifty years, the scenario reversed as 80% of the population shifted to urban areas. The change in demographic structure brought huge changes in the educational sector. The enrolment dropped and the number of schools reduced to half during 1950-1970. The initially centralised system slowly devolved the authority to rural areas. The decentralisation of block grants from national to local level in 1986 resulted in keeping the onus of spending on the municipalities. This tightened the latter's purse strings and school consolidation became a favourable option on economic lines. The small schools further reduced by half during 1980s.

Sigsworth and Solstad (2005) paint a similar picture in Sweden. The primary education act of 1958 expanded and brought about educational equality in the country. In 1974, there were about 1065 rural schools, twice as that of 2008. Economic recession, educational decentralisation, demographic transitioning and rural-urban migration were marked as the reasons for school closure. The status of rural schools was checked in 1997 and consolidation was brought up as a solution. Rural school consolidation gained momentum again in 2002.

Egelund and Laustsen (2007) explain the school closure in Denmark due to the change in demographic structure in rural areas. Modern centralised schools with teachers' housing, seven classrooms, science and gymnastic facilities were built in the 1950s and 1960s to replace the older smaller schools. These schools became the pride of the local community. By 1960s and 70s, industrialisation of slaughtering, farming and diary production pushed the people to bigger cities. Municipalities dwindled from 1360 to 277 in number. This led to the first wave of school closures. Eventually there was widespread closure of rural schools built during 1950s and 1960s. The depopulation of rural areas resulted in fewer shops and development. The dwindling rural population continued till the end of 1990s. The second wave of school closure in 2006 was mainly due to merging of small municipalities with inhabitants less than 30,000. The demographic characteristics of Denmark thereby revealed school closures of the following types: "(1) Mass closures, where municipalities decide to close all small schools (2) Single

closure of a school with a sharply dwindling number of pupils (3) Closure of schools in municipalities which had previously put great emphasis on the preservation of small schools through school development and new activities (4) Closure of schools near big cities, where rural areas have been changed into suburban areas and (5) Closure of schools on small islands".

The trend in Scandinavian countries of Norway, Sweden and Denmark was reflected across some of the other European countries too. Autti and Hyrey- Beihammer (2014) provide an overview of the school closure in Finland. After the district division decree of 1898 in Finland, rural schools were set up in every 5 km. The compulsory education law of 1921 also escalated the number. The land settlement policy and after-war development increased the number of rural schools till mid-1950s. By the end of 1960s, these schools started closing down due to demographic transition. The baby boomer generation were educated and migrated towards urban areas leaving the rural parts of the country desolate. Though there was a push to move students to bigger schools, The Finnish government took efforts to maintain the existing chain of small schools to ensure educational equality in the country. Economic growth of 1980s and state subsidy helped in the maintenance. The golden period didn't last long. The fall of Soviet Union created an economic recession in 1990s that pushed the state to adopt money saving policies. This resulted in the second wave of school closures. The state devolved the authority to municipalities and funds were low. Due to the continuing fall in population in rural areas, municipalities find no reason whatsoever to maintain the low pupil schools. Earmarked fund of state government pushes the municipalities to justify school closure on the basis of economic lines.

Sigsworth and Solstad (2005) find similar trends in Ireland and Wales too. Wales has seen a decline in family size, rural farming and economy in the past fifty years. The local population, with the support of the Local Educational Authority (LEA), had opposed the move to close down schools. Subsequent changes in political climate have forced the country to close many rural schools owing to economic instability. Ireland has also been forced to close down/ amalgamate many of its rural schools from 1960s due to decline in population. The cost of maintaining the one or two teacher schools shot up as the area is widely dotted by small schools set up by various Christian denominations. 42% of Ireland's primary schools teachers work in small schools and 49% of the primary students are enrolled in these schools.

Berry (2008), Dean (1981) and Bard et.al (2006) explain school consolidation in United States of America as a result of rural decline and policy changes. The school consolidation in the

United States of America has started as early as 1800s as larger schools were found to be more efficient than small ones. The advent of better roads and automobiles made transportation easier resulting in the decline of one teacher schools built by early settlers. The policy also favoured uniform, centralised schools. Administration shifted from school authorities to educational bureaucracy. The one best model was advocated to produce better human capital in larger schools thereby making small schools deficient.

There was an exodus of 30 million people, from 1930s to 1970s, to urban areas (mostly due to farm consolidation) in USA. Rural economic decline and attractiveness of urban areas resulted in declining enrolment in government schools. This resulted in the decline in the number of school districts; rapidly in 1950s and 60s and slowly since 1970s. There were over 55,000 school districts in 1950s which decreased to fewer than 17,000 by 1972. Demographic structure of the nation shifted after 1970s when primary school enrolment started decreasing. The end of baby boomers, increase of contraception and change of attitude towards family planning resulted in the demographic decline. The elementary and secondary schools declined by 69% from 1940 to 1990 in the nation. But the country has seen a revival of small schools on a minute scale as a form of experimental education; initially in 1960s and later in 1990-2003.

Halsey (2011) explains how small schools with one or two teachers dotted the Australian landscape and ensured education to rural communities. Small schools still remain important in providing education to far flung areas. There are over 2500 schools with enrolment less than 100 in 2008. Those with enrolment less than 200 constitute 45% of the total schools. The growing pressure for universal access to secondary education and accelerated farm amalgamations in 1940s increased school consolidation. School complex and improved rural transportation further increased the process.

Kearns et.al. (2009) mark a similar pathway of school consolidation in New Zealand. The school closure becomes relevant when 10% of the school population attend rural schools. Out of the 2727 schools in the country, 32% of them are located in settlements with population less than 1000- 43% of the schools have enrolment below 50 and 71% below 100. The country recorded the closure of 75 schools alone in 2000-2005. Rural decline due to industrial restructuring and liberal reforms has resulted in school amalgamation in the country. In some of the sub regions, there was a decline of population of 9.1% from 1996-2006.

Mei et.al. (2015) discussed school consolidation in China in 2000s. The country initially issued a *Decision on Educational System Reform* in 1985 and *Compulsory Educational Law of the*

People's Republic of China in 1986 for educational expansion. This resulted in a compulsory nine-year education. A primary school was set up in every village and a middle school in each town. The action resulted in the rise of enrolment rate of school aged children to 99.1% in 1991. But soon rural schools started becoming empty as people migrated to urban china for better employment and livelihood opportunities. From 1985 to 1998, the rural primary schools, school admissions and school enrolment dipped by 35.61%, 20.80% and 14.78% respectively. The country moved to school consolidation by 2001 with the Decision on Compulsory Educational Reform and Development. This was mainly enacted as the empty schools were an economic liability to the township government. The rural tax and fee reform placed the burden of funding the village schools on the township government, crippling them. The school consolidation reduced the primary schools by 57.78% and teaching posts by 66.46% bringing their numbers to 257410 and 66941 respectively.

2.4 Educational Expansion in the State

Kerala ranks highest in literacy with a magnificent 93.91%, most of which is owed to the successful primary educational institutions spread across the state. In 2019-20, there had been a total of 12,951 schools in the state out of which 4,693 (36.24 per cent) are Government schools, 7,216 (55.71 per cent) are aided schools and 1,042 (8.05 per cent) are unaided schools. The aided schools are the highest followed by government schools and private unaided schools. Most of the schools are in the lower primary section than upper primary section or high schools. Apart from the State Government syllabus, there are 1529 schools providing other syllabi- 1,315 CBSE schools, 164 ICSE schools, 36 Kendriya Vidyalaya and 14 Jawahar Navodaya Vidyalayas. The current school enrolment stands at 37.17 lakhs (Kerala Economic Review, 2020).

The state's achievements in education are due to various historical reasons. Nair (1976), KSTA (2017) and Tharakan (1984) maps out the socio-economic changes in Kerala and connects it to its educational expansion. Erstwhile Kerala had been divided into three- Travancore, Cochin and Malabar. The beginning of 1800s saw a school for every 1196 students in Malabar while Travancore and Cochin lagged behind by one school for every 3434 and 3186 students respectively. The earlier schools were mostly indigenous, vernacular schools reserved for the upper castes. With the arrival of missionary schools, the situation in Travancore and Cochin improved for the better. Education was slowly democratised by these schools among the lower castes.

The need for education in the path of progress was realised by various communities. People's participation and grant-in- aid provided by the government in 1869 increased the number of schools. Schools were set up by Sree Narayana Dharma Paripalana Yogam (SNDP), Nair Service Society (NSS), and Sadhu Jana Paripalana Sangham (SJPS) for educational upliftment of their respective community. Vernacular education pushed forward the enrolment in these schools. The British control over Malabar kept the area under deep societal inequality and educational backwardness compared to the other provinces. By 1945, primary education was made compulsory by the Travancore government, later joined by the Cochin government, which led to the rise in government schools in the state. The educational progress in Malabar, though lagging behind, slowly started to pick up.

Table 2.1: Number of schools in various provinces in Kerala before independence

Area	Number of Schools			
	1820	1870-71	1900-01	1946-47
Travancore	264	217 (1873/4)	3687	4577
Cochin	70	13	1289	1526 (1947/8)
Malabar	759	196	1690 (1895/ 6)	5038 (1950/1)

Figures in parantheses show the year in which data were available

Source: Salim and Gopinathan Nair, 2002

The school expansion was mostly spearheaded by unaided schools before independence in the two provinces of Travancore and Cochin. In Malabar, private aided schools flourished. The organisations that arose as art of the reformation movement led the educational expansion in south. But the uneven development in various educational pockets was filled in by the intervention of the princely states. This soon led to the fall in unaided schools in 1900s. The unaided schools turned to private aided schools and more government schools were set up. The composition of schools changed as aided schools constituted higher percentage of the state's schools, followed by government schools. Private unaided schools became a meagre constituent. In 1957, there were a total of 9137 schools in Kerala in which 2054 were government schools, 6980 were private aided schools and 103 were private unaided schools (Director of Public Instruction of Kerala, 1957). The trend has remained so over the years.

Table 2.2: Schools according to the type of management in various provinces in Kerala in 1890/91

Education scenario in 1890/91

Management	Schools					
	Travancore		Cochin		Malabar	
	Number	Percent	Number	Percent	Number	Percent
Government	423	11.5	57	4.4	49	5.2
Private Aided	937	25.5	124	9.6	684	72
Private Unaided	2313	63	1108	86	217	22.8
Total	3673	100	1289	100	950	100

Source: Travancore Administration Report, taken from Dhanuraj (2006)

Schools continued to be set up in the state but educational expansion stagnated at the primary level by 1970s. The state soon witnessed a negative growth in primary enrolment. Though aided and government schools still hold a significant percentage of students, there is no evident expansion. Varghese (1999) has compiled the data in growth of primary education in the state for over three decades. Educational growth in primary education was positive (0.2%) only till 1970-71. From 1970-71 to 1994-95, the recorded growth in primary schools have been negative. The declining growth in government and aided schools is phenomenal- 6745 (1961-62), 6895 (1970-71), 6861 (1980-81), 6767 (1990-91) and 6694 schools (1994-95). From a total share of 72.1% in 1961-62, primary schools fell to 55.4% in 1994-95. Even the enrolment in primary schools have declined for government and aided schools from 1970-71 to 1994-95: 3,50,700 to 2,08,300 and 4,46,300 to 3,09,100 respectively. The decline in enrolment in higher grades of schools has been recorded much later in 1990s.

Varghese (2015) explained the decline in the share of schools and enrolment in later time period. The number of schools have fallen from 2548 (2006-07) to 2539 (2011-12) and from 3992 (2006-07) to 3978 (2011-12) for government and aided sectors respectively. Even the share of enrolment has seen a dip from 33.3% (2004-05) to 30.1% (2014-15) and from 58.1% (2004-05) to 53.1% (2014-15) for government and aided schools respectively (Economic Review, 2005; Economic Review,2015).

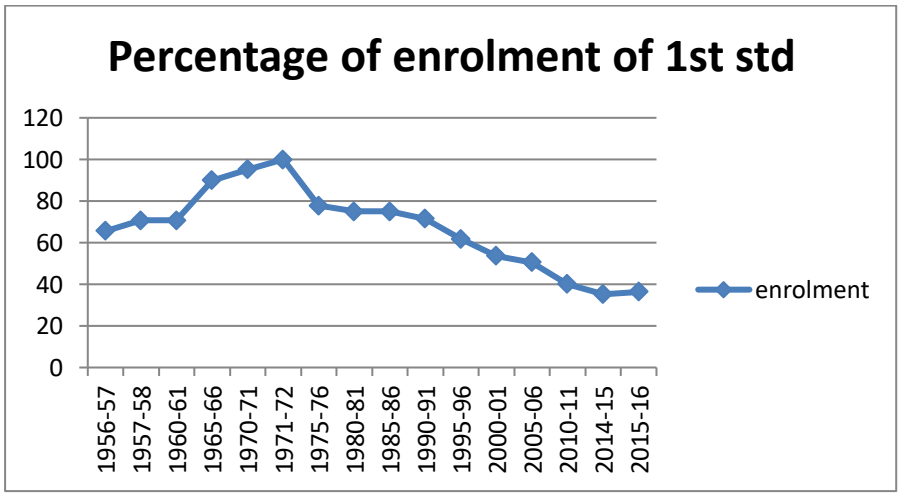
Table 2.3: Percentage share of enrolment in Government, Private Aided and Private Unaided Schools at primary level in Kerala

Sector/ Year	1974-75 (in %)	1984-85 (in %)	1994-95 (in %)	2004-05(in %)	2014-15(in %)
Govt. Schools	44.5	42.4	39.4	33.3	30.1
Private Aided Schools	54.8	56.4	56.8	58.1	53.1
Private Unaided Schools	0.7	1.2	3.8	8.6	16.9

Source: Kerala State Planning Board

The negative trend in primary education can be graphically understood better if we consider the enrolment in 1st standard over the years. It shows that the incoming students to primary education have fallen over the years, which has resulted in a decline and further stagnation in the number of schools. The year 1971-72 is considered as the base year, as it exhibits the highest enrolment in class I and by 2015-16, the value has touched 36%.

Figure 2.3: Percentage of enrolment of first standard in Kerala from 1956 to 2016



Source: KSTA (2017), Derived from the data by DPI, Kerala

The decline in enrolment makes the schools small in size and thereby "uneconomic". These schools have been termed uneconomic schools in the earlier periods, and was later changed to "school with less number of students" in 2018 (Kerala Economic Review, 1987; Kerala Economic Review, 2018).

Uneconomic schools in Kerala include schools from government and aided sector. The number of uneconomic schools in Kerala increased from 964 in 1990 to 5715 in 2015 and declined to 996 in 2019.

Table 2.4: Number of uneconomic schools in Kerala from 1990 to 2015

Year	Number of uneconomic government schools	Number of uneconomic aided schools	Total number uneconomic schools
1990	455	509	964
1995	542	805	1347
2000	993	1251	2244
2005	1457	1462	2919
2010	2147	2133	4280
2015	2606	3109	5715
2019	382	614	996

Source; Kerala Economic Review

The uneconomic schools in the state, considered for the research, is not to be confused with small schools. Small schools exist alongside with formal primary schooling in Kerala. With Education for All stressed at the Jomtien conference (1990), there was move to improve educational equality. With DPEP and SSA, the motto was eventually fulfilled. This led to the establishment of both primary schools across the state and Alternative and Innovative Education (AIE) centres in areas where formal educational institutions were difficult to be set up. This has resulted in the setting up of alternate schools (AS) in far flung areas to improve educational expansion. These schools are characterised by low enrolment, single teacher, multi graded learning and poor infrastructural facilities compared to the formal primary schools.

They are also termed as small schools. The rise in uneconomic schools in Kerala has kicked off even before the bout of educational expansion in 1990, as is evident from the study by Varghese (1999). The growth of primary schools and their enrolment had reached its peak in the 1970s after which it has been recorded to be negative. Therefore, the increasing number of uneconomic schools cannot be accounted by the move to set up small schools/ primary educational institutions to increase educational equality. The research thereby focuses on schools which have turned to be unviable over time.

2.5 The phenomenon of "uneconomic" schools in Kerala

Kerala had been witnessing a sharp decline in the enrolment of students in the government and aided sector since 1970s. Nair (1974) correlates the decline in primary enrolment from 1951 to 1971 to population decline in the state. From 3.1% in 1950s it has risen to 4% by 1960s but sharply fell to 1.6% in the second half of the sixties and early half of seventies. The decline in enrolment has resulted in the schools being small in size and 'uneconomic', the teachers being listed under the 'protected' category and the infrastructure either wasted/ re-used. The earlier literature surrounding the issue has dealt schools with less number of students as a by-product of the demographic transitioning in the state. While the later literature paints a more complex picture of declining school enrolment and "uneconomic" schools in the state. They throw light on mushrooming private unaided recognised and unrecognised schools in the state; pushed by the changing need for English medium, CBSE/ICSE syllabus education.

Kerala, with its improved health and education sectors, exhibits social indicators at par with the developed countries. Owing to high female literacy, the birth rate per 1000 had plummeted down from 32% in 1970-71 to 16% in 2001 and further to 13.9% in 2018 (Economic Review, 2020). Rajan et. al. (2019) shows how Kerala has moved to a low fertility and low mortality scenario with declining or stable population. The state had achieved below replacement fertility rate three decades before. The Infant mortality rate was 25 in 1989 and has decreased to 10 in 2016, while India has an IMR of 34 in 2016. With the low birth rate and death rate, the population has transitioned and the natural rate of growth in population has declined over the years. Bhat and Rajan (1990) have separated the significant factors from the rest and have explained the fertility decline. They found that the decline is best explained by the diffusion hypothesis; the increase in age of marriage and preference for sons are not significant while the increased use of contraceptives and adult female literacy are relevant. The fertility rate

declined drastically in 30 years thereby decreasing the newer population. The decline has been slower among the Muslim population due to cultural and religious norms.

The declining fertility has contributed to the decrease in the school going population at primary level of education. James (1995) pointed out a fall in the number of LP schools in government and aided sectors from 1984 to 1992. The LP and UP enrolment values projected to 2001 showed that the school population would further as the fertility rate nearly touches zero. The increase in enrolment in unaided private schools is brushed off as meagre value. Retnakumar and Arokiasamy (2003) explains the fertility decline as a cause and declining school enrolment in aided and government schools as its direct impact with the aid of data from Pathanamthitta.

Demographic decline of school going population at the LP and UP level has also been stressed on. Tharakan and Navaneetham (2000) have projected the population to 2026 for low, medium and high variant populations. According to the projection, school age population at the LP level will increase from 22.64 lakhs in 1991 to 23.76 lakhs in 2006 and decline to 19.87 lakhs in 2026. In the UP level, the population will decline from 17.89 lakhs in 1991 to 16.51 lakhs in 2001. The decline in both the above cases will start in 2006 and 2011 for LP and UP sections respectively.

Rajan et.al. (2019) shows that the declining fertility has created more nuclear families with increased educated younger population. As the state is unable to provide employment for all of them, international migration has increased (though the state has seen a decline in emigrants post 2011). Kannan and Hari (2020) with the aid of time series data of 47 years, ranging from 1972-73 to 2019-20, concluded that Kerala witnessed an increase in emigrants from 1 lakh in 1981 to 21.22 lakhs by 2019, of which the latter value is approximately equal to the share of people employed in Kerala's organised sector. This increase in emigrants (even though the state has seen a decline in number of emigrants since 2011 due to demographic transition) has resulted in a rise in total remittances (mainly due to depreciation of Indian rupee and increase in the number of highly educated share of emigrant population) and per capita remittances thereby making Kerala a high consuming and high saving state. The remittance has shot from 536 crore rupees during 1980-1985 to 90,468 crore rupees in 2015-2020. On an average, they found that remittances constituted 15% of the Net State Domestic Product (NSDP). The per capita income of Kerala as measured by NSDP is US$3194 at 2019-20 while per capita Net Domestic Product (NDP) of India is US$1906.

Kerala is a state with high per capita SDP, a significant share of which is contributed by international remittances. The per capita Gross State Domestic Product (GSDP) at constant prices (2011-12) in 2019-20 was ₹1,63,216 and ₹1,58,564 in 2018-19, showing a growth of 2.93% in 2019-20. At current prices, the growth rate is 7.61% with per capita GSDP at ₹2,45,323 and ₹2,27,979 respectively. The per capita Net State Domestic Product (NSDP) at constant prices (2011-12) in 2019-20 was ₹1,49,563 and ₹1,45,521 in 2018-19, thereby showing a growth of 2.78% in 2019-20 (Kerala Economic Review, 2020).

International remittances have helped provide people a choice in terms of educational quality. The search for quality has pushed the parents to choose private schooling over state run schooling. Valatheeshwaran and Khan (2017) claims that the flow of money due to migration has reduced the liquidity constraints of households thereby increasing private schooling in the age group 6-17 at primary, upper primary, secondary and higher secondary levels. The remittance receiving household spend three times more on schooling (in private schools) than the others, as they have a higher score in the asset index. There is a rise in probability of 44.9% to join private schools with the receipt of remittances compared to the non-receiving households. The impact is higher in rural areas and among boys and the effect is not much visible among SC/ ST population.

The later literature on declining school enrolment explains a changing demand preference for CBSE/ICSE syllabus in English medium and subsequent growth of private unaided schools in the state. Retnakumar and Arokiasamy (2006) used Pathanamthitta to map out the decline in enrolment in government schools and a counteracting increase in unaided schools in Kerala and Pathanamthitta. The increase in private unaided schools were caused as the parents prefer these schools due to syllabi like CBSE, ICSE and ISE and English medium education. The rise in per capita income due to the increasing migrant population pumping more money into their ward's education, shoot up private schooling in the state.

Varghese (2015) further points out the growth in unaided, unrecognised schools. The changing demand preferences for English medium education and ICSE/CBSE syllabus is not entirely covered by private unaided recognised schools, in turn resulting in the rise of private unaided unrecognised schools. The market sector of school education has been divided into two- preferential and residual segments. The preferential segment includes recognised private schools mostly preferred by the elite section who doesn't want to send their children to state run schools. The residual segment, which includes unrecognised private schools, enrols

students who couldn't make it to the preferential segment. The emerging middle-class aspirations, due to high per capita income and international remittances, have led to the rise in the residual segment. Retnakumar and Arokiasamy (2003) see the increase in enrolment in private unaided schools as a second consequence of fertility decline, the first being the decline in enrolment in government and aided schools.

Coupled with the changing demand preferences, the state also witnesses supply constraints like low educational expenditure by government and low quality of government and aided schools which negatively affects the uneconomic schools. The changing demand preferences have been poorly met by the state because of declining educational expenditure and low quality of schooling. Supply constraints in the government and aided sectors contribute to the shift of students to private unaided schools. Gadbade and Kokate (2021) have studied the percentage share of educational expenditure to Gross State Domestic Product (GSDP) over 29 years in 18 states in India. The state wise expenditure on education as percentage of GSDP in Kerala has shown a drastic fall from 1990-91 to 2018-19: 5.64% in 1990-91, 3.63% (2000-01), 2.63% (2010-11) and 2.52% (2018-19). Though the state governments spend lion's share on education, the share has witnessed a downward fall from 2000-01. It has fallen from 88% in 2000-01 to 75.49% in 2016-17. The percentage share of expenditure by central government has seen an upward spike in the same period, but still lesser than the state spending. The centre's contribution increased from 12.36% in 2000-01 to 24.51% in 2016-17. The government and aided sectors are not only unable to cope with the changing demand preferences for English medium education in CBSE/ICSE syllabus, but are also unable to prove effectiveness in the current transaction. Varghese (1999) emphasised that the state of Kerala has been keen on increasing the number of schools in primary education rather than improving the effectiveness of these schools. A study conducted in 113 primary schools in Malappuram, Kazargod and Wayanad measured the level of achievement in Malayalam and Mathematics among students of grade two and four. Even with the initial favourable endowments, the mean achievement levels of students in Kerala are worse than the mean achievement levels of better off students from other backward states. There was a significant within school variance than among the school variance in terms of learning achievement, which denotes an equitable distribution of resources across the state. The within school variance shows the poor performance of students.

Chapter 3

Changing Demand Preferences in Schooling in Kerala

3.1 Introduction

The previous chapters reviewed the literature on the school consolidation of uneconomic schools and closure globally and in India. This chapter attempts to analyze the changing demand preferences for school education thereby resulting in uneconomic schools. This chapter is based on secondary data on uneconomic schools collected by the researcher on Kerala.

3.2 Closure of Sections and Uneconomic Schools in Kerala

As discussed in the previous chapter closing down of the uneconomic schools met with local resistance and as a result the government moved to closing down of sections with low enrolments. The state of Kerala has resorted to closure of sections in schools to deal with declining enrolment. There are four grades in LP schools and three grades in UP schools with a minimum of four sections and three sections respectively (each grade consists of various sections). The proportion of teacher to students is maintained at a ratio of 1:30 in Lower Primary sections and 1:35 in the Upper Primary Sections (fixed by Right to Education, 2009). This entails that a minimum of 30 students are needed for maintaining a section in LP classes and 35 students in the UP classes. An increase of students beyond 30 in the LP section gives scope to create an additional section and students will be divided accordingly (say a rise of enrolment to 31 results in the creation of separate classes of strength 15 and 16 respectively). A decrease of enrolment even by one pupil can result in the deletion/closure of a section.

Closure of sections eventually make the schools small in size and uneconomic. Uneconomic schools are LP/ UP/ High schools with individual class strength less than 15 (G.O (MS) No. 83/2018). This minimum bar had come down from the earlier 25 students per class/ total enrolment of 100 students in lower primary, upper primary or high schools according to KER; (Para 1 of Rule 28 (4)/ Chapter V, R 22 A of Kerala Education Act and Rules). These schools have only one section per grade with bare minimum of students.

Some schools even lack grades due to non-availability of students. Schools with enrolment below a certain level have been categorized as uneconomic schools till 2017 as they were economically unviable. The state of Kerala did not agree with the conception to project schools as economic units and profit-making institutions. They changed the terminology of uneconomic schools into "schools with less number of students" (Kerala Economic Review, 2018). The minimum number of students thereby needed for a school is thereby 60 students for LP and 45 students for UP.

3.3 Population of the Study

The remaining part of the study is based on the secondary sources of data collected for the study. The author collected data on the "Uneconomic" LP schools of all 14 districts of Kerala and have been closely analyzed for understanding the trends in Kerala. The data on uneconomic schools/ 'schools with less number of students' is issued by Kerala State Planning Board (KSPB). It is obtained from the Kerala Economic Review, an annual publication by KSPB. The number of schools with less number of students have been compiled from 2004-05 to 2019-20. The data has gaps during 2006 and 2017 as the number of schools might not have been accounted during these years. The data of all these years have been divided into four groups of equal frequency distribution: 2004-07, 2008-11, 2012-15, 2016-19.

Table 3.1: Uneconomic LP Schools in Kerala from 2004-2019

District/Year	2004-07	2008-2011	2012-15	016-2019
Thiruvananthapuram	341	829	1286	397
Kollam	403	784	1233	417
Pathanamthitta	887	1445	1502	728
Alappuzha	576	995	1182	537
Kottayam	676	1219	1369	616
Idukki	321	485	646	242
Ernakulam	623	1109	1234	471
Thrissur	405	849	1177	440
Palakkad	342	832	1236	435
Malappuram	130	395	854	253
Kozhikode	769	1528	1890	629
Wayanad	113	238	297	98
Kannur	1323	2146	2349	814
Kazargode	298	503	654	197
Total	7207	13357	16909	6274

Source: Kerala Economic Review, Kerala State Planning Board

Uneconomic schools in Kerala have slowly climbed up from 7207 (2004-07) to 13357 (2008-11) and reached its zenith at 16909 (2012-15) and declined to 6274 (2016-19). District of Kannur has seen the highest number of uneconomic schools in absolute number for all different time periods- 1323 (2004-07), 2146 (2008-11), 2349 (2012-15) and 814 (2016-19). The lowest number of uneconomic schools in absolute number is seen in Wayanad for the same time periods-113 (2004-07), 238 (2008-11), 297 (2012-15) and 98 (2016-19).

Lower Primary schools (LP schools in the state of Kerala are those which have students from grade I to grade IV according to KER, 1959) have been considered for the study as it constitutes significant percentage of the uneconomic schools. This is evident from the following table. Table 3.2 has been derived from the data of KSPB. It is seen that that the share of LP schools among the total uneconomic schools are higher than 75% for all the years. This is mostly because primary schools widely set up to ensure educational equality in the state has turned uneconomic over time. The national share also shows similar trend which has been stated in the National Policy on Education (2020), wherein over one lakh single teacher schools were recorded in 2016-17 of which majority are lower primary schools.

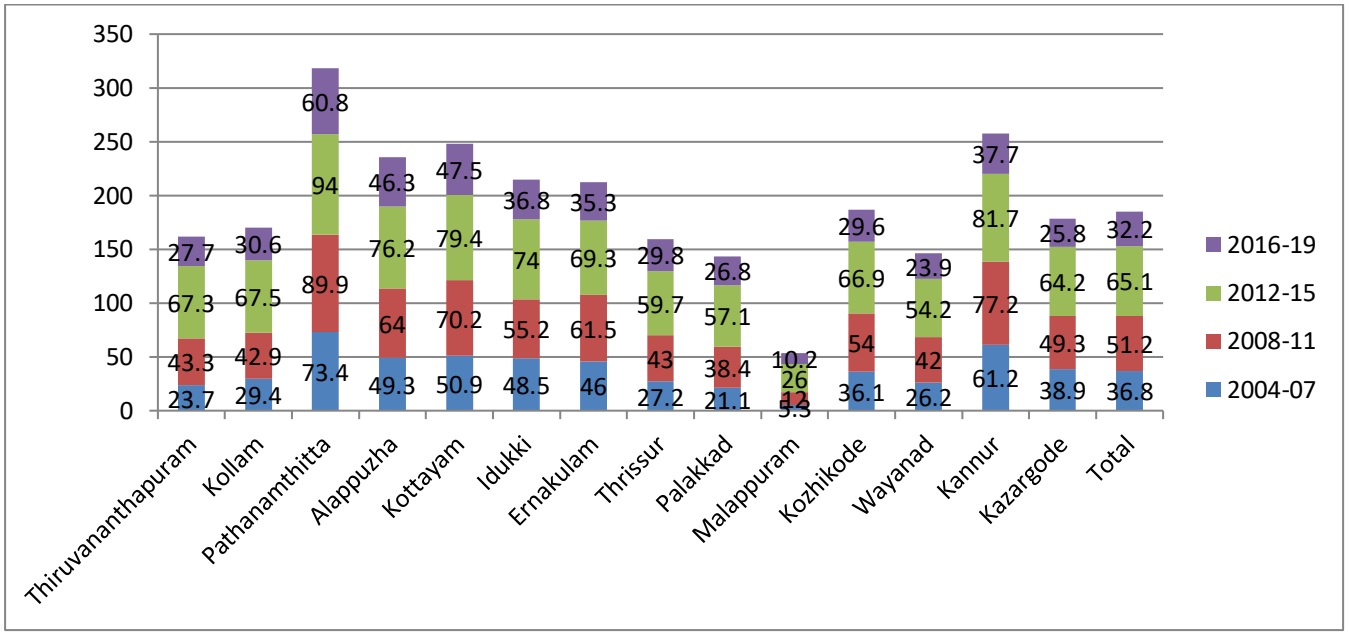
Table 3.2: Share of uneconomic LP schools to Total uneconomic schools

Year	Uneconomic Lower Primary schools	Total uneconomic Schools (LP+UP+HS)	Share of uneconomic LP schools to Total uneconomic schools (%)
2004-07	7207	8956	80.5
2008-11	13357	16517	80.9
2012-15	16909	21837	77.4
2016-19	6274	7835	80.1

Source: Derived from table on uneconomic schools in Kerala Economic Review, KSPB

A definitive trend in uneconomic schools can be seen over the years. Figure 3.1 illustrates the trend in uneconomic LP schools in Kerala. It shows the yearly and district wise changes in Kerala for four different periods of time.

Figure 3.1: Percentage of uneconomic LP Schools in Kerala to total number of government and aided LP schools from 2004-19



Source: Derived from Kerala Economic Review

Figure 3.1 shows that Pathanamthitta has the highest percentage of uneconomic schools to the total number of government and aided schools for all the four different time periods: 73.4% (2004-07), 89.9% (2008-11), 94% (2012-15) and 60.8% (2016-19). Malappuram shows the lowest percentage of uneconomic schools to the total number of government and aided schools: 5.3% (2004-07), 12% (2008-11), 26% (2012-15) and 10.2% (2016-19). When considering the year wise share of uneconomic schools to the total number of government and private aided schools in the state, 2012-15 shows the highest percentage: 36.8% (2004-07), 51.2% (2008-11), 65.1% (2012-15), and 32.2% (2016-19). The relative share of uneconomic schools to total number of government and aided schools is highest for all districts during 2012-15: 67.3% (Thiruvananthapuram), 67.5% (Kollam), 94% (Pathanamthitta), 76.2% (Alappuzha), 79.4% (Kottayam), 74% (Idukki), 69.3% (Ernakulam), 59.7% (Thrissur), 57.1% (Palakkad), 26% (Malappuram), 66.9% (Kozhikode), 54.2% (Wayanad), 81.7% (Kannur) and 64.2% (Kazargode).

The highest spurt of uneconomic schools has been recorded in 2012-15 across the state. This is explained by the changing demand preferences for CBSE/ICSE syllabus with english medium, resulting in an increase of private unaided schools. 2012-15 showed the highest growth of private unaided schools in the state. The same causative factor is reflected in the

district wise changes too. In case of district values, Pathanamthitta has seen the highest percentage of uneconomic schools to total number of government and aided LP schools for all the four different time periods. The lowest percentage of uneconomic schools to total number of government and aided LP schools is accounted by the district of Malappuram for all four different time periods. Pathanamthitta recorded the highest percentage of private unaided schools to total number of schools while Malappuram saw the lowest percentage of private unaided schools to total number of schools during the time period 2012-19. Thereby the district wise changes are justified. Demographic transitioning in the state also explains the district wise trends. Pathanamthitta has a population growth rate lower than the state average while Malappuram record a population growth rate higher than the state average. The decline in uneconomic schools after 2016 is explained by the Public Education Rejuvenation Campaign, a mission to improve the functioning of public schools in the state. The revival of government and aided schools under the mission has diverted the state populace from private unaided schools to satisfy their quality concerns. This has resulted in the lowering of the number of uneconomic schools during 2016-19.

3.4 Private Schooling in Kerala

There has been a changing demand preference in schooling in the state. The educated populace of the state understands the need for quality schooling, which equip their wards in the labour market. The parents prefer education in CBSE/ICSE/ISE syllabus in English medium schools. English medium schools are perceived to be quality institution by many parents. Their demand for better quality education brings them to private unaided English medium schools. In other words, the changing demand preference for “quality” of education is met by private unaided schools in Kerala. Private unaided schools have slowly picked up from 1970s. Their share in enrolment to the total number of schools has grown from 0.7% in 1974-75 to 16.9% in 2014-15.

Varghese (2015) categorises the private unaided schools in Kerala two kinds of schools- private unaided recognised schools and private unaided unrecognised schools. The preferential segment of the population, those who prefer to send their children to private schools instead of government and aided schools, goes for private unaided recognised schools. While the residual segment, the ones unable to get into preferential segment, opts for private unaided unrecognised schools.

Table 3.3: Percentage share of private unaided recognised and unrecognised schools to total number of schools in Kerala from 2012 to 2019

Type of school/Year	2012	2013	2014	2015	2016	2017	2018	2019
Private Unaided Recognised LP school	12.1	11.1	11.4	13.7	14.1	10.5	9.8	9.8
Private Unaided Unrecognised School	6.6	10.6	11.2	9.9	9.4	6.8	6.1	4.9

Source: Derived from UDISE data on Recognised and Unrecognised Schools in Kerala

The share of private unaided unrecognised and recognised LP schools to total number of schools in Kerala is shown in table 3.3. The share of private unaided schools of two different categories has been derived from the raw data in UDISE. The continuous data for recognised and unrecognised private unaided schools in Kerala (district-wise) is available only from 2012-13. LP schools have been chosen. The percentage has been obtained by dividing value of each year to the total number of schools (including schools under department of education, private aided schools, private unaided recognised schools and private unaided unrecognised schools) from 2012-19. The data reveals higher share of private unaided schools during 2012-16. Private unaided recognised schools increased from 11.1% (2013) to 14.1% (2016). Private unaided unrecognised schools rose from 6.6% (2012) to 9.9% (2015). After 2016, there is a decline in the share of both private unaided recognised and unrecognised schools.

Alternating pro-market government rules in Kerala has greatly assisted the changing demand preferences in the state. KSTA (2017) identifies that private unaided schools were set up in the state during the government rule of 1970-80, 1982-87, 1991-96, 2001-06 and 2011-16. A total of 391 unaided LP schools were granted permission by the government during the above-mentioned period from 1970-2016 while none was allowed during the intervals. The following table 3.4 shows the year of the government rule and number of private unaided schools allotted during the respective period. From the table, 2011-16 shows the highest number of private unaided LP schools allotted in the state of Kerala.

Table 3.4: Number of private unaided LP schools allotted during various years in Kerala

Year of rule	1970-80	1982-87	1991-96	2001-2006	2011-16
Number of private unaided LP schools allotted during the period	6	96	33	119	137

Source: Kerala State Teacher's Association (2017)

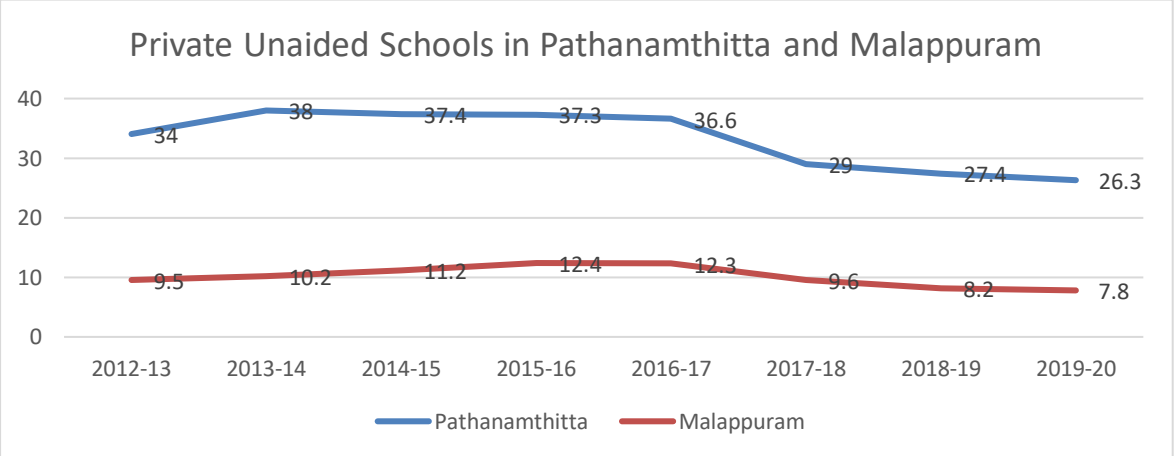
This changing demand preferences has been backed by increasing foreign remittances. Kerala is currently a high consuming and a high saving state with State Domestic Product higher than the national average, most of which is contributed by international migration. The emigrant population sent money to the state, fuelling the changing demand. The migrant households, visibly displeased with the low quality of government schools, shift/ do not send their wards to government or private aided schools. The parental preference changed from government and aided schools to private unaided schools. The families are attracted by private unaided schools because they provide CBSE/ICSE/ ISC syllabus and instructions in English medium. This shift in the household/parental preferences lead to reduced enrolment in government and aided schools. The resulting government/aided schools are left with less number of students who are unable to move/ afford even the private, unaided, unrecognised schools.

The table 3.1 and figure 3.1 show that the highest number of uneconomic schools in Kerala was recorded from 2012-15 in all the districts. This can be explained through the changing demand preferences for private unaided schools. High number of private unaided LP schools (137) have been granted recognition during 2011-16. This is shown in the high percentage share of private unaided recognised schools to total number of schools- 11.1% (2013), 11.4% (2014), 13.7% (2015) and 14.1% (2016). The demand by the residual segment, met by private unaided unrecognised schools, also shot up- 10.6% (2013), 11.2% (2013) and 9.9% (2014). The increasing share of enrolment (8.6% in 2004-05 to 16.9% in 2014-15) in the private unaided sector have contributed to the declining enrolment in government and aided sector. This in turn led to increased number of uneconomic schools in the state.

Figure 3.2 shows the percentage of private unaided schools to the total number of schools in the district of Pathanamthitta and Malappuram respectively. The two districts have been singled out to show the range. The percentage share of other districts lies between these two districts. Private unaided schools in both the districts have climbed up from 2012-13 and plateau till 2016-17 and decline during the later years. For Pathanamthitta the values are as follows: 34% (2012), 38% (2013), 37.4% (2014), 37.3% (2015), 36.6% (2016), 29% (2017), 27.4% (2018) and 26.3% (2019). The values of Malappuram is shown as follows: 9.5% (2012), 10.2% (2013), 11.2% (2014), 12.4% (2015), 12.3% (2016), 9.6% (2017), 8.2% (2018) and 7.8% (2019).

The district wise trends in private unaided schools from 2012-13 to 2019-20 further strengthen the argument that changing demand preferences and increasing private schooling has resulted in increasing uneconomic schools in the state. Pathanamthitta and Malappuram has shown the maximum and minimum number of uneconomic schools respectively for all four different time periods from 2004 to 2019. Both these districts, Pathanamthitta and Malappuram, have shown maximum and minimum share of private unaided schools respectively from 2012 to 2019. The following figure 3.2 shows the percentage share of private unaided schools in Pathanamthitta and Malappuram from 2012-13 to 2019-20.

Figure 3.2: Percentage of private unaided schools in Pathanamthitta and Malappuram to the total number of schools



Source: Derived from UDISE data

*Total number of Schools include government schools under Department of Education, Private Aided schools, Private Unaided Recognised Schools and Private Unaided Unrecognised schools

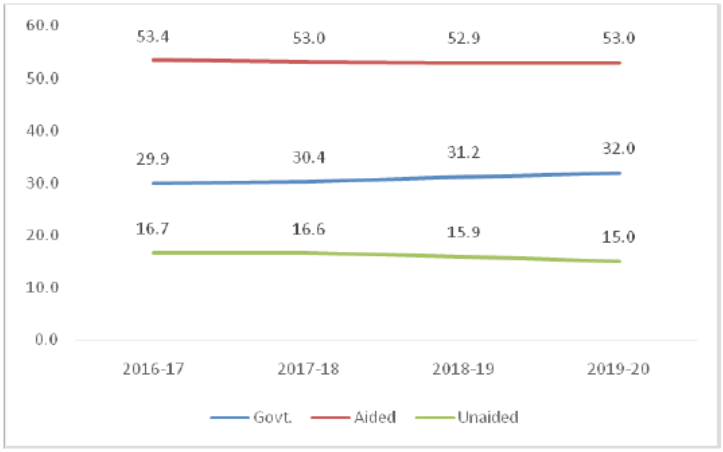
3.5 Public Education Rejuvenation Campaign

The private unaided schools, as discussed before, have catered to the parental aspirations for English medium, CBSE/ICSE/ ISC syllabus education for their wards. From 2016, the Kerala government has stepped up to meet the changing demand preferences through Public Education Rejuvenation Campaign. The project led to infrastructural changes, changes in curriculum and pedagogy, increase in public perception and participation in the government and aided schools in the state.

The above-mentioned action-oriented programme, launched by the Government of Kerala in 2016, is an integral part of the Nava Kerala Karma Padhathi (Mission for a New Kerala). This big step had been taken owing to the steep decline in enrolment in government and aided schools and increasing private unaided schools in the state. The project has earmarked 5 crores for 141 schools marked to be Centres of Excellence and 3 crores each for 229 aimed for betterment of infrastructural facilities in the first phase. A total of 1392 crore is spent towards the improving 370 schools. The fund has been moved through Kerala Infrastructure Investment Fund Board (KIIFB). An extra 970 crores had been set apart in the state plan budget for education. About 45,000 classrooms in 4775 schools were made hi-tech in the first phase. This is slowly extended to primary and upper primary sections. The online education portal "Samagra", as a part of the mission has energised the school community by sharing educational resources and necessary data (KITE, 2022)

Public Education Rejuvenation Campaign saw quick reactions as the enrolment in public schools rose by 1,50000 students in 2018 (People's democracy, 2018). Directorate of Public Instruction (DPI), Kerala has successfully recorded a growth of enrolment of 5,04,851 students in public educational institutions in the state from 2016 to 2020. The government schools have seen a growth from 29.9 in the former period to 32.0 in latter period while the aided sector has seen a small decline from 53.4 to 53.0 in the same time period (Venkiteswaran and Sivadasan, 2021). This is illustrated in figure 3.3.

Fig 3.3: Change in enrolment in different schools in Kerala from 2016 to 2020



Source: Venkiteswaran and Sivadasan, 2021

The revival of public schooling is counteracted by a declining growth in number and enrolment of private unaided schools. The enrolment of private unaided schools in Kerala has fallen from 16.7% in 2016-17 to 15.0% in 2019-20. Even the number of private unaided schools have dipped substantially. The percentage of private unaided recognised schools to the total number of schools have shown a decline: 14.1% (2016), 10.5% (2017), 9.8% (2018) and 9.8% (2019). The percentage of private unaided unrecognised schools to the total number of schools have also shown a decline sharper than the former: 11.2% (2014), 9.9% (2015), 9.4% (2016), 6.8% (2017), 6.1% (2018) and 4.9% (2019). The decline in private unaided schools correlated to the decrease of uneconomic schools show that the populace identifies government and aided schools as a better option to satisfy their demand preferences.

The shift of students back to government and aided schools, as they have become better equipped to provide quality education, has resulted in the decline of uneconomic schools. The years 2016-19 (6274) has reported the least number of uneconomic schools in the state of Kerala. The individual years of 2018 (1031) and 2019 (901) show sharpest of the decline (Table in Appendix). There is a negative growth of 76.25% in total uneconomic LP school in Kerala from 2016 to 2018. All the districts have recorded a sharp decline during this time.

The overarching authority of the government has brought to question the promised quality in the private schools. Private unaided unrecognised schools have been increasingly set up across the state with the promise of providing "quality" education in tune with the demand preferences of the people. Along with the shift of students to public schools, the decline in private unaided

unrecognised schools can be explained by the government's stringent actions to axe such schools. The state's compliance to the RTE norms was proven by the order (Order no 100/11 dated 30.04.2011) wherein the unrecognised schools were asked to obtain recognition from the department of education. This list of accepted schools, based on a set of guidelines, was published in 2015 (order no. 114/2015 dated 14/05/2015) and the non-compliant schools were asked to be shut down. This has resulted in a gradual and consistent decline in private unaided unrecognised schools from 2015. It has been reported that closure notice was provided to over 1500 private unaided unrecognised schools in Kerala in 2018 ("1500 schools get closure notice", Times of India, March 22, 2018). The spike in private unaided recognised schools in 2015 and 2017 can be due to some of the unrecognised schools receiving recognition overtime.

3.6 Demographic Transitioning

The available data on private schooling in the state alone is unable to explain the district wise trends in uneconomic schools. This thereby brings to foreground the importance of demographic transitioning as a causative factor in the phenomenon of uneconomic schools. From Figure 3.1, it is evident that the number of uneconomic schools have been highest in the district of Pathanamthitta and lowest in Malappuram during all the four different time periods.

Kerala has reached the third stage of demographic transition wherein the birth rate and the death rate is low and the growth of population has attained stability. Though the average growth of population is low in Kerala, district wise changes are quite evident. Malappuram is the district exhibiting the highest growth in population, greater than the state level growth. Pathanamthitta on the other hand exhibits a growth rate in population lower than the state average. This can be explained with the aid of 2011 census data. The child population (0-6 years) in Kerala was 34,72955 in 2011. Malappuram accounted for the highest child population in terms of absolute number and growth rate. When the entire state reported a declining average growth rate of -8.44%, Malappuram recorded 4.08% rise in the growth rate of child population. Pathanamthitta recorded the greatest decline in child population with a drop of -23.76%. All the districts in Kerala have shown a fall in child population except for Malappuram.

The high child population in Malappuram thereby explains the high inflow of students to primary schools. The large number of uneconomic schools in the district of Pathanamthitta is evident from the respective low growth in child population. The impact of demographic

transitioning in the district of Pathanmthitta has been supported by Retnakumar and Arokiasamy (2003). The decline of student enrolment, due to fall in child population, from 1984-85 to 2000-01 was 28% in Kerala while Pathanamthitta recorded a fall of 37% during the same period. The spike of uneconomic schools in the district of Pathanmathitta has again been covered by Retnakumar and Arokiasamy (2006). They identify that the district has the lowest fertility scenario coupled with increasing private unaided schools (affiliated to DPI) till 2001. From 1900-01 to 2000-01, when the decline in enrolment in aided and government schools in Kerala were 10% and 20% respectively, Pathanamthitta recorded 17% and 36% respectively.

Chapter 4

Economic Impact of Closure of Sections in Schools in Kerala

4.1 Introduction

The chapter covers economic impact of closure of sections in schools in Kerala. It is based on an empirical study conducted among uneconomic schools in the district of Thiruvananthapuram. The chapter is divided into two parts: a) impact on school infrastructure; and b) impact on protected teachers. The first part is covered by case study method using open ended interviews among headmaster/headmistress. From the field work, the impact has extended to include other human and physical resources. The second part is covered by survey method with the aid of close ended questionnaires among protected teachers in the district.

4.2 Process of Closure of Sections in Schools

Closure of section in schools is carried out by following an elaborate and a detailed process. The process, as has been explained during the interviews with school headmaster/ headmistress and AEOs shows the following. The headmaster/headmistress of the school updates the details of the students at the school every academic year, along with their Unique Identification Number (UID), in the Kerala Government portal Sampoorna. This is done on the sixth working day since the school reopens. Keeping in mind the teacher-student ratio, the educational authorities decide the required number of staff for each school through staff fixation exercise.

Staff fixation is an administrative process to ensure that every school gets adequate number of teachers as per norms. The process helps to rationalize the allocation of teachers so that no school will have excess/shortage of teachers. If there is not adequate number of students for a section (30 for LP and 35 for UP), that section will be closed. This closure takes place even when the section is short by one student. Similarly, an increase of one pupil from the minimum will result in the maintenance of the section. In such instances the 31 students will be split into two separate sections of 15 and 16.

The staff fixation is done by Assistant Educational Officers (AEOs) for Lower Primary (LP) schools and Upper Primary (UP) schools in their respective educational sub district. For high schools in the district, the process is carried out by the District Educational Officer (DEO). The uploaded student enrolment is used for the purpose. The staff fixation is completed by July 15. The list is released with the aid of another portal Samanwaya, run by the Department of Education through KITE. The teachers are deployed/ transferred to new schools latest by September in the same academic year.

Each school has a list of teachers arranged according to their seniority. The seniority list is maintained according to the date of appointment of the teacher. A fall in section renders the junior most teacher in the school as "surplus". The surplus teacher from an aided school is protected by redeploying them in other government schools, either permanently or temporarily. The surplus teachers are listed in the teachers bank maintained by the Department of Education, Kerala. It is a scientific method by which teachers in aided sector are recruited. The list mentions the teachers, their parent school, and their redeployment. The surplus teacher from a government school is found through staff fixation and merely transferred to schools with vacancies. Because the government is the overarching authority in the appointment of government teachers, there is no need for protection.

4.3 Impact of Closure of Sections on Schools

4.3.1 Population and Sample of the Study

"Schools with less number of students" have been selected for the purpose of understanding the impact of closure of sections in schools. The population of the study includes uneconomic schools from the entire state- 378 in the government sector and 606 aided schools (2019-20). The sample is chosen from the district of Thiruvananthapuram. This is mostly because the district has shown a fairly high number of uneconomic schools in the state over the years. The choice has also helped the researcher in terms of time and travel. There are 34 uneconomic schools in the government sector and 15 schools in the aided sector respectively in 2019-20 in the district of Thiruvananthapuram.

Case study of nine schools were undertaken for empirical purposes. The selected schools include five aided and four government schools. The aided schools have been chosen from the

educational sub districts of Kilimanoor, Neyyatinkara and Kattakada respectively. Four of the schools are run by single management while one is run by a trust. The government schools have been selected from the educational sub districts of Attingal and Kaniyapuram. The aided schools are LP schools while government schools are LP and UP schools. UP schools in Kerala have been chosen as they witness the maximum number of closure of sections followed by LP schools (Teachers Bank, 2019). All the schools currently run with one section for each grade. Open ended interview has been conducted with the headmaster/headmistress of the respective schools.

4.3.2 Profile of the Schools

The current details of the nine uneconomic schools were collected from primary data sources and interviews with headmaster/headmistress. Though the two UP schools taken for the study have enrolment above the minimum level (45 for UP section), it is still considered by educational authorities (AEOs) as an uneconomic school. The educational authorities have set the minimum baseline for both UP and LP school as 60. The total number of teachers, including the headmaster/ headmistress, is allocated separately for each section of a grade. If the school has four sections, there are four teachers in the school. A decline in section will reduce the number of teachers too. Following is the profile of all the schools considered for the study.

Table 4.1: Profile of the schools selected for the case study

School/Number of students in each grade	I	II	III	IV	V	VI	VII	Total	Number of Teachers
1	2	3	-	7	-	-	-	12	3
2	11	6	11	6	5	-	-	39	5
3	10	8	4	5	10	-	-	37	5
4	7	11	6	10	-	-	-	34	4
5	12	7	9	14	-	-	-	42	4+1
6	-	-	-	-	19	27	7	53	3+2

7	9	10	19	17	-	-	-	55	4
8	-	-	-	-	12	12	16	40	3+2
9	15	7	12	19	-	-	-	53	4

Source: School Wiki

* '+' denotes the language teachers in the school.

The student and teacher profile of these uneconomic schools for 2016-17 is considered for understanding the trend of enrolment. This is obtained from the UDISE School Report Card.

Table 4.2: Teacher and Student profile of the sample schools for 2016-17

School/Number of students in each grade	I	II	III	IV	V	VI	VII	Total	Number of Teachers
1		2	3	5				10	4
2	6	9	4	5	18			42	5
3	11	6	10	8	6			41	5
4	5	6	8	7				26	3
5	10	20	24	34				88	8
6					17	19	27	63	8
7	29	23	32	27				111	8
8					28	30	37	95	12
9	22	23	26	29				100	8

Source: UDISE School Report Card

Except for school 4, all the other schools have witnessed a decrease in enrolment from 2016 to 2020. All the four government schools have shown a plateau in the trend of enrolment over the years, while the private aided schools have shown a sharp decline in enrolment.

4.4 Reasons for low enrolment in the selected uneconomic schools

The sample schools have witnessed a declining enrolment becoming uneconomic schools over the years. The students from the catchment area of the uneconomic schools are absorbed by government, private aided or private unaided schools. Five out of nine uneconomic schools in our sample indicate that the nearby government school as a major reason for their declining enrolment. One out of nine of the uneconomic school state private unaided school as a reason. Three out of nine of the schools have stated both private unaided and government schools/aided schools as a reason for them being uneconomic. The parental preference for quality education (CBSE/ICSE syllabus with English medium instruction) is the main reason for changing school preferences. Parents invariably look for quality education of their children. If they find that another school (government or private) is of better quality, they would like to transfer their children to those schools. In other words, the decline in enrolment in the uneconomic schools happened because of the parental preferences for quality education offered by other schools.

English medium education has been greatly preferred in the state. A 2019-20 UDISE report claims that only 35% of the students prefer to be taught in Malayalam while the rest prefer instruction in English; the value has decreased from 45% in 2014-15. This need was initially satisfied by the private unaided schools. With the Public Education Rejuvenation Campaign in 2016, public schooling has been improved to meet with the need. In 2017, 4169 public schools have been converted to English medium schools (Balakrishnan, 2017). Even then, the uneconomic schools have failed to cater to English instruction mainly due to the government regulation on starting an English parallel section. English medium section can only be started, with the strength of 30, by a school if it can maintain a Malayalam medium section. This calls for a minimum total enrolment of 51 to have English parallel section (G.O. (MS) 156/12) (Praveen, 2013). Unable to meet the minimum enrolment, the uneconomic schools are unable to keep up with the changing needs of people.

The students withdrawn from an uneconomic school need not be enrolled in a nearby school. They may be shifted to a faraway school which provides instruction in English. In other words, the empirical evidence shows that when the primary concern is quality, distance to the school would no longer be constraint for parents to choose a school to shift their children. This reduces their demand for neighbourhood, rural schools (All nine uneconomic schools are rural schools). The fieldwork highlights that the preferred government, private aided and private unaided

schools provide bus facilities to the students, thereby making the choice easier for the parents. The preferred schools also have better infrastructural facilities which put some of the uneconomic schools at a disadvantage. Improved infrastructure and transport facilities thereby add an edge to the school preference based on the perceived notion of quality of education. The following are the cases of the nine uneconomic schools selected for the study, citing other schools with the prospects of quality education, and infrastructural facilities as reasons for low enrolment.

4.4.1 Government Schools

School 1: The students in the locality prefer better quality private unaided and private aided schools. Bus facilities in the preferred schools also contribute to declining enrolment in School 1. The school has very poor infrastructural facilities. The few students from various grades are seated together in two classes or even one. The two functioning classrooms and staffroom have been interchangeably used for teaching. The panchayat has allocated money to construct a new building, but this is only halfway through and has not yet materialized for over 3 years. The building often gets inundated due to the flooding of the nearby canal which affects the safety of the students.

School 2: The nearby government school with high enrolment draws in the parents and their wards. They provide buses which attracts students too. The government schools with their ability to provide quality education has severely reduced the enrolment of the respective school.

School 3: The nearby government UP school with bus facility attracts most of the students in the respective catchment area. The infrastructure of the school can be a determinant as it mostly includes classes made of sheds that are either separated or un-separated.

School 4: The catchment area of the school mostly consists of very rich households with foreign remittances. They prefer the nearby unaided school run by the church. The parents who prefer and can afford public education opts for the bigger government school.

4.4.2 Aided Schools

School 5: The nearby government school with grades from pre-primary to HSS is mostly preferred by the parents. Infrastructural facilities of the school are poor compared to nearby schools. The school had lacked a boundary wall. The management has recently started to renovate the park, set up CCTV surveillance and build a boundary wall.

School 6: The nearby bigger government school poses a threat to the enrolment in the schools. The infrastructure of the school is poor with sheds for classrooms. The feeder government LP school has also witnessed a decline in enrolment which has affected the catchment population of the school.

School 7: The nearby bigger government school is preferred by the students. Nearby unaided school has also attracted students in the catchment area of the school. The Okhi cyclone has destroyed a significant part of the school in 2018. The destruction of infrastructure has cut down the student enrolment of the school.

School 8: The school has faced low enrolment due to a significant decline in the feeder schools. The students from feeder schools prefer nearby high school or HSS. The school is surrounded by bigger schools from government, private aided and private unaided sectors.

School 9: The nearby government school is located near the market and the main junction. This helps the parents to send the children and run their errands all in one go. The government school is renovated better and has grades from pre-primary till XII. It also provides pre-primary schooling free. This has drawn students from the school's pre-primary section, a major attraction for the parents.

4.5 Effects of Low enrolment

4.5.1 Economies of Scale

Economies of scale is a cost advantage in the process of production. In the long run, the production process becomes efficient as more output is produced with the same level of inputs. The fixed capital is put into full use and cost is brought down substantially. The factory fetches profits till the optimum point of production beyond which there are diseconomies of scale. The unhindered rise in inputs causes an increase in costs. It brings loss to the factory as the fixed capital is no longer able to use the excess inputs for the production process (OECD, 1993).

The theory of economies of scale has been applied to the field of education too. The optimum size of class, school or school districts are determined to find the economies of scale. The average cost of these educational units can be brought down with adequate number of students. Few students can increase the per student expenditure as resources remain unused. If the number of students increase beyond a certain point, the resources cannot be fairly distributed among the students

Bee and Dalton (1985) explain an inverse relationship between school size and average cost. Riew (1966) found economies of scale exists up to 1650 students in high school in Wisconsin. Cohn (1968) found the optimum point extends up to 1500 students. Butler and Monk (1985) found that smaller school districts with enrolment less than 2500 are efficient than larger districts. The economies of scale argument are used to justify school/ school district consolidation. The literature post 1970s has attacked school consolidation by pointing out that student performance is better in smaller classrooms (Wolfe,1975) (Sher, 1988) (Monk, 1990).

4.5.2 Increased Per-Student Expenditure

The state government of Kerala has set the critical total enrolment of 60 below which the schools are rendered economically non-viable. The government bears a huge burden of increased per student expenditure in uneconomic schools. The teachers who are appointed for a class of thirty ends up teaching less than 15 students. This causes diseconomies of scale as there are inadequate number of students to use the available human and physical resources.

For example, we take a smaller sized school and a normal sized school for comparison of per student expenditure. An LP school and UP school has four grades and three grades respectively. Each grade is considered to have one teacher and one section each. This makes a total of 4 teachers and 3 teachers in a LP and UP school respectively. Lower Primary School Teacher (LPST) currently earns a basic monthly salary of 25,200 rupees while an Upper Primary School Teacher earns a salary of 54,000 rupees.

Annual salary of LPST: 25,200 rupees x 12 months = 3,02400 rupees

Annual salary of UPST: 54,000 rupees x 12 months= 6,48000 rupees

Assume the expenditure of a school constitutes only payment of teachers. The other expenditures are considered constant.

Total expenditure of LP school= 3,02400 rupees x 4 teachers= 12,09600 rupees

Total expenditure of UP school= 6,48000 rupees x 3 teachers= 19,44000 rupees

With a minimum requirement of 30 students in each section, a LP school will have 120 students. With minimum requirement in a section in UP school being 35, the schools will have 105 students respectively. Thereby the per student expenditure of these schools are as follows.

Per student expenditure in LP school of 120 students: Total expenditure of LP school/ 120 students

Per student expenditure in LP school of 120 students: 12,09600 rupees/ 120 students= 10,080 rupees per student

Per student expenditure in UP school with 105 students: Total expenditure of UP school/ 105 students

Per student expenditure in UP school with 90 students: 19,44000 rupees/105 students= 18,514 rupees per student

In an uneconomic school the maximum number of students is 15 per grade. This will amount to 60 students in a LP school and 45 students in a UP school. But the total expenditure in these schools will remain the same as teachers of each grade are maintained no matter how small the enrolment is. The per student expenditure in uneconomic schools are as follows.

Per student expenditure in LP school with 60 students: Total expenditure in LP school/ 60 students

Per student expenditure in LP school with 60 students: 12,09600 rupees/ 60 students= 20,160 rupees per student

Per student expenditure in UP school with 45 students: Total expenditure in UP school/ 45 students

Per student expenditure in UP school with 45 students: 19,44000 rupees/ 45 students= 43,200 rupees per student

There is a visible increase in per student expenditure due to decline in enrolment.

Percentage change in per student expenditure due to decline in enrolment in LP school= (Per student expenditure in LP school with 60 students- per student expenditure in LP school with 120 students)/ Per student expenditure in LP school with 120 students x 100

Percentage change in per student expenditure due to decline in enrolment in LP school: (20,160-10,080) rupees/10,080 rupees x 100= 100%

Percentage change in per student expenditure due to decline in enrolment in UP school= (Per student expenditure in UP school with 45 students- per student expenditure in UP school with 105 students)/ Per student expenditure in LP school with 105 students x 100

Percentage change in per student expenditure due to decline in enrolment in UP school: (43,200-18,514) rupees/ 18,514 rupees x 100= 133%

Therefore, the school experiences a 100% and 133% increase in per student expenditure due to decline in enrolment to 60 and 45 in LP and UP schools respectively. The increase of cost due to less number of students show the diseconomies of scale in smaller schools.

The under use of existing infrastructure, decreased quality of class interactions, paucity for funds from parents and local authorities and increased per student expenditure in mid-day meal scheme are results of diseconomies of scale. The low enrolment thereby affects the functioning of the school. Following are the various effects recorded during the fieldwork.

4.5.3 Low quality of Class interactions

Lower Primary and Upper Primary sections are heavily based on constructive methods of teaching. A lion's share of such methods includes group interactions and activities among the students. All the schools in the case study have enrolment less than 60. From the interview with the HM, it is found that few students (less than 15 in each grade) affect the quality of class interactions. The group activities cannot be properly carried out by such small classes. The teaching methods used in large classes cannot be very well applied in small classes (Wright et.al.,2019). The teacher-student dynamics too is affected by the smaller number of students. The teachers can give individual attention to the students, but they lack motivation in teaching smaller classrooms.

4.5.4 Workload for Headmaster

The headmaster/ headmistress of uneconomic schools is also given class in- charges. The HM can confine himself/ herself to administrative tasks only if there is a minimum of 150 students in the school i.e., by appointing an extra teacher to take his/her place. The class charges bring heavy workload for the head of the institution.

4.5.5 Paucity for funds

Low enrolment affects Parent Teachers Association (PTA) fund. Due to low enrolment, there are not enough parents to contribute for the fund. Even the existing students in the school hail from disadvantaged communities, thereby creating a shortage for fund as their parents earn meagre income to contribute enough. There is hardly any fund for the school to spend for its functioning. The local authorities/MLAs also do not consider these schools' request for various grants/funds seriously. They feel it useless to spend on the smaller schools. The uneconomic private aided schools are neglected by the respective managements as it is no longer profitable for them. The private aided schools make new teacher appointments with hefty donations. The lack of students result in a fall in the number of teachers and no new donation can be collected. This cuts the private management of some substantial sum of money. Schools with higher enrolment in Kerala currently receives heavy funding from the state government and local authorities.

4.5.6 Increased per student expenditure for Mid-Day Meal (MDM) Scheme

Schools with enrolment up to 150 students are provided eight rupees per head for MDM scheme while higher enrolment schools are paid six or seven rupees per head. The salary of the cook and expense for rice is paid by the government. The schools must purchase the groceries and the cooking gas with the allowance. With enrolment as low as 60, the provisioning of Mid-Day Meal scheme is badly affected. Bulk order for the provisions and groceries come at a cheaper price. But the schools are unable to place such orders due to the less number of students. This results in high per student expenditure for mid-day meal provisioning. Unable to pay for it from the allotted fund, the teachers and HM are forced to pay for the functioning of the scheme. Some of the teachers bring food from home to balance the gap.

4.5.7 Infrastructure

The decline in enrolment makes the infrastructure of the school either redundant or they are used for purposes other than classroom activity. The classrooms made for the purpose of teaching are thereby re designed to avoid wastage of school resources. Seven schools have reused the classrooms for mini-auditorium, library, hall, computer lab and science corner. The classrooms have also been given for public activities like ward programmes or temple festivals. The schools have also made use of the extra classes for pre-primary section. School 1 does not

have enough infrastructures in the first place. School 7 has lost the extra furniture to weather changes.

4.6 Impact on teachers due to closure of sections in schools

4.6.1 Protected Teachers

In 1969, the state government considered the request by school teacher's organizations to protect the job of private aided school teachers who witnessed a decrease in posts due to reasons external to them (decline in enrolment). As a result, teachers who were appointed in regular post with a service period equal to or more than two years were protected by the government. The teachers were deployed in government schools within the same educational district. They were taken back by the home school or the respective management in their school as and when vacancies arose (G.O. (Ms) No.104/69/GEdn). The order was later corrected to retain the teachers with service of more than five years in the home school itself (G.O. (Ms) No. 62/73/ GEdn). In 1984, the government decided to retain people with 40% disability, teachers with service more than 15 years, relatives of Jawan, last grade employees and teachers who retire in 1985 in the home school itself. The management was also asked to retain a single teacher if there had been ten teachers who fell out due to closure of sections (in the ratio 10:1). Rest of the teachers was eventually re-deployed in nearby educational sub districts, revenue districts, educational districts and districts. Primary schools and high schools (including government schools) with a total strength of 500 and 1000 students respectively were supposed to appoint a protected teacher (G.O. (Ms) No.2311/84/GEdn.).

Retention in the home school was soon stopped due to the heavy financial loss for the government. These teachers were soon redeployed to open/ new posts in any government or aided school. The newly opened schools were bound to appoint protected teachers. The teachers who failed to join the post where to face loss of grade and salary (G.O. (Ms) No.83/88/GEdn.). As the appointment of protected teachers restricted the options for PSC rank holders, the government ordered that the latter's appointment should also be taken care of (G.O. (Ms) No.95/88/GEdn.). The teachers with service of 26 years and relatives of Jawan were retained in the home school in 11/10/1988.

Protection was formerly given on the basis of years of service but was later changed in 1996. Teachers appointed before 15/07/1995 with continuous service of seven years were given protection. The teachers were protected outside schools as literacy campaign co-ordinators or

in the office of Assistant Educational Officer. (G.O.(Ms) No.60/96/ GEdn). In order to protect teachers, the government changed the teacher student ratio from 1:45 to 1:40. Teachers appointed till 14/07/1994 in regular posts were given protection later. The protected teachers were taken back by the home school as and when vacancy arose. If posts arise due to retirement, resignation, death, leave or voluntary resignation, the school can appoint only its respective protected teachers. The teachers after 1997-98 was not protected by this order (G.O. (Ms) No.240/99/GEdn).

The rules of 2011 are relevant in the current staff fixation. The teachers bank included 3389 teachers who were working without salary, 2987 protected teachers, 1700 teachers who were retrenched from 1997 to 2010 and those going to be retrenched in 2011 with staff fixation. The teachers bank was restricted to appointments before 30.3.2011. (G.O (P) No.199/2011/G.Edn). The successive years followed staff fixation based on the order from 2011. Protection of teachers was possible with the teacher student ratio of 1:30 in LP, 1:35 in UP and 1:45 in high school. The protection was extended for teachers from 2011-12 to 2014-15 (G.O (P) No. 29/2016/ G.Edn). In 2017, the student teacher ratio was decreased to 40:1 for standard 9 and 10 (G.O (MS) No.80/2017). The last staff fixation was done in 2019-20.

4.6.2 Population of protected teachers

Declining enrolment in government and aided schools result in teachers being excess of the current pupil teacher ratio. The private aided schoolteachers who are rendered "surplus" through staff fixation are absorbed into the teacher's bank, thereby making them eligible for protection. They are deployed from the teachers bank to other government schools. There are currently 2817 entries in the teacher's bank of 2019-20 (Teachers Bank, Samanwaya). The teachers bank consists of both teaching and non-teaching staff (52 categories) from aided schools across the state.

The study considers teachers who have become surplus due to a fall in section. These surplus teachers are mostly covered under the government's protection. The population includes Lower Primary School Teachers (LPST) and Upper Primary School Teachers (UPST) who have been protected due to decline in enrolment. There are 449 LPST and 458 UPST protected teachers in Kerala who are specified in the bank. Both of these categories have the highest number of protected teachers in the bank.

4.6.3 Sample of protected teachers

The sample for the study consists of protected teachers from Thiruvananthapuram. The district has the highest (98) number of UPST protected teachers and ranks third (56) after Thrissur (80) and Kollam (67) in LPST protected teachers. The teachers for the study have been taken from LP, UP, HS and HSS schools in the educational sub districts of Thiruvananthapuram South, Kattakada, Attingal, Kaniyapuram, Balaramapuram, Kilimanoor, Neyyatinkara and Varkala.

The empirical evidence was collected from 28 teachers who have become surplus due to closure of sections. Out of these total numbers of teachers, 22 (78.6%) teachers have been protected by the government and are included under the teacher's bank. Three of them (10.7%) have been formerly protected and have returned to their home school due to rise in enrolment. Two (7.1%) are not protected but have faced the impact of closure of sections. Status of protection for one of the respondents is ambiguous. The research includes 7 (25%) male and 21 (75%) female teachers.

Out of the 28 teachers, 17 (60.7%) of these teachers have been posted as Upper Primary School Teacher (UPST) and 11 (39.3%) under Lower Primary School Teacher. 18 (64.3%) of the total teachers work under private aided schools run by single managements while 10 (35.7%) of them work under schools run by organizations/ trusts (SNDP, Ayyankali mass trust and Hindu Nadar

Deployment of protected teachers can be of two types - permanent or temporary. Excluding the two who remain out of protection and two who have returned to their home schools, 24 have been currently deployed. Out of the 24 teachers, 22 have been temporarily deployed and 2 have been permanently deployed.

Most of the deployments (84.6%) within the district are in government schools. From November 2021, protected teachers from Thiruvananthapuram have been deployed in aided schools in Malappuram and Idukki. Out of the total 26 protected teachers, 10 (38.5%) of them had been posted in Malappuram, four (15.4%) in Idukki and 12 (46.2%) within the district of Thiruvananthapuram.

The impact on protected teachers is covered under three categories: decrease in real income of teachers, safety concerns of the teachers and personal issues regarding one's health and family care. The impact of protected teachers on public exchequer is also added to the list.

4.6.4 Decrease in real income of teachers

Real income is the amount of money left with a person for consumption after adjustment for inflation. This economic concept is used to explain the financial difficulties experienced by protected teachers. Instead of inflationary adjustments, the extra expenses due to redeployment are considered by the researcher. Though a normal teacher and a protected teacher have the same salary, the latter is left with less money to spend because of extra expenses posed due to redeployment.

Due to redeployment/ break in service, the protected teachers are left with less disposable income for their consumption while their salary remain same as that of other LPSTs and UPSTs. Though government teachers are also shifted with decline in enrolment, their transfers are justified as part of their appointment. Most of the interviewed private aided teachers prefer their respective parent schools which are located near their homes. They want stability in terms of the place of employment. They even pay a hefty donation to the management during their appointment to ensure their career in the institution. The management thereby profits from the appointment while the teachers are left with lower real income and instability in their professional life.

Inter district redeployments have significantly affected the real income of the teachers. The travelling distance from Thiruavanthapuram to Malappurama or Idukki is 355km and 238km respectively. Due to which all the 14 respondents who have been deployed outside the district have complained of increase in travel expenses and extra spending on accommodation/food. This has further reduced the real income of the teachers who are deployed outside the district.

Even in intra-district deployment, six of the twelve teachers have reported an increase in travel expense. Three of the teachers must travel over 40 km, 2 have to travel over 60 km and one teacher have to travel to about 100 km daily to reach the schools. This is calculated by the maximum distance covered by the teachers among the various deployments in the protection period. The rest six are quite satisfied with the deployment because of the comfortable travelling distance. One of the teachers was severely affected by the constant travel that she changed her child's schooling, employed house help and even resorted to Ayurveda treatment for her poor health caused by excess pressure.

Two of the fourteen inter district deployed respondents had to move their families to a new place and change their children's schooling. One of the fourteen respondents had to employ an additional help at home to look after their families.

Out of the 21 female teachers, 9 of them single handedly run the household with number of members ranging from two to six. These teachers have no other earning family member in the household. Out of the seven male teachers, 4 of them support their family with no support from other members. A decline in real income due to re deployment puts more pressure on these teachers as singly employed people in the household.

The surplus teachers have been readily taken into protection and given the security of job in less than a month. Only 6 of them have faced a longer time in re-deployment. One among them is yet to get back into the service. The teachers mostly faced a gap of 1-3 months (1person) 3-6 months (1person) or more than 6 months (4 people). The people who had break of service for less than 6 months have been paid salary for the gap and restored their increments. The longer gap of more than 6 months is because they are not covered under the protection due to many reasons. Out of the 4 who had faced a gap of more than 6 months in their careers, two have faced service break. The service break had decreased the teachers' real income in turn cutting down their spending on food/clothing, luxuries and transportation. They faced mental pressure/ illness during the period. These respondents reported to have poor relation with family members during this time. The inability to obtain an employment result in a subsequent frustration which is reflected in their behaviour to the family. They were also unable to pay bills during the period. They also met difficulties in paying loans and three of suffered with a loss of increment or grade due to the service break.

Out of the four who took more than 6 months to be redeployed, two of the respondents had been absorbed into BRCs after a gap. This tampered with the regularity in their salary and increments. The decrease in salary also reduced the real income left with them to spend. The posting was done under a project and basic salary was paid. When these teachers were redeployed to government schools under protection, their salary payment was moved to SPARK (Service and Payroll Administrative Repository for Kerala). This created anomalies in the timely release of their salary as their data has not yet been updated in SPARK. These teachers currently remain out of salary. Their increment and service years are yet to be added.

4.6.5 Safety

Out of the total 26 deployed teachers, most (77%) of them have been deployed in two to three schools, five (19.2%) of them in one school and one (3.8%) in more than four schools during the entire period of their protection. This constant change in the place of work creates a feeling of instability which is covered by enquiries about their safety concerns.

Out of the 26 protected teachers, 18 (69.2%) of them feel safe in the redeployed schools/area and 8 (30.8%) don't. 15 (57.7%) of the total number of teachers are in a constant fear about the security of their job while 11 (42.3%) are quite sure about the safety net of the government. Some of the respondents feel uncomfortable in the newly deployed government schools. The teachers in government schools, for having entered the service with merit qualifications, look down upon the teacher deployed from aided schools. The aided school teachers enter into the profession by paying hefty donations to their respective managements, which creates a difference among the government and private aided employees. One of the teachers has even experienced a tussle leading up to complaints lodged with the AEO. There are positive responses for the same wherein the protected teachers are perfectly happy with their government counterparts. The respondents even receive greater respect from the students and teachers in government schools. The government schools are preferred by some teachers for the higher enrolment which helps in a better class atmosphere.

For the teachers who have been deployed from Trivandrum to Malappuram feel that many of them are deployed in schools which are located in remote rural areas with limited transport facilities to reach there. The late train hours pose a concern of safety for the teachers. For teachers in Idukki, the bus travel can be quite hectic. The teachers complain of sitting 7-8 hours continuously in the bus which affects their body and health. There is mixed response regarding the staff dynamics in these schools. Most of the respondents receive a positive response from the teachers of the new school. Some of the teachers face unwelcome behavior from the staff of the new school.

The home schools personally harass the junior teachers to canvas and bring in more students to the school, failing which their jobs are threatened. This provides a constant source of uncertainty for the teachers throughout their service period. "I have no security for my job for the past 23 years", reports one of the respondents. Some of the deployed teachers are asked to do canvassing even in the newly deployed schools. Some of the deployed teachers are asked to donate for the home school.

4.6.6 Personal Issues

The deployment to faraway places from their homes has affected the families and family life of the teachers. With their families fragmented, the children are not properly cared for. The female teachers are concerned about the safety of their daughters. The teachers are unable to move the family along with them due to the fear of disrupting their child's schooling. The children are left in the care of elderly parents. With unwell family members, the condition becomes further worse. Elderly care is difficult with such large distance. One of the teachers lost his father due to inability to provide timely health care.

The distant posting has mentally affected some of the teachers. It is even more difficult for teachers who have not travelled out of the district. The teachers are in shock and disbelief regarding the sudden posting to faraway places. Many of them get worried about their loneliness in the faraway places and anxiety about their family and future. The lack of proper self-care has affected the health of some of the teachers too. One of the teachers had engaged in social and cultural events along with colleagues to escape from the mental agony.

The teachers also explain difficulties in communicating effectively with students from other districts due to differences in the style of speaking and regional variations in the spoken language. The Arabic influenced dialect in Malappuram and Tamil influenced dialect in Idukki are examples of barriers to effective communication with students inside the classrooms and outside.

Chapter 5

Conclusion

5.1 Mapping of Educational Expansion

There has been a dramatic expansion of school education in the 20th century. The increased interest in education by the governments led to the faster expansion of education globally. It is important to note that education is a basic human right and has become an integral part of the sustainable development goals (SDGs). The state support and the funding by the international agencies for the expansion of basic education continue in most less developed countries.

Educational expansion in India was mostly through public institutions and state funding. Even though education has many positive externalities, it is unable to understand it through the idea of public good. Education is thereby adequately by the concept of merit good. Merit goods are those goods whose allocation is taken up by the state, without which it may remain under used because of lack of proper information. Being a developing nation, India's large share of population had been unaware of the need for education. The state thereby took upon itself a paternalistic role to expand education, both by supply of new schools and creating demand among people. With public intervention, school education in India expanded fast during the post-independence period. The constitutional commitment to universalize elementary education, DPEP, SSA and the Right to education (RTE) Act of 2009 are reflections of progressive policy initiatives to achieve the goal of universalizing basic education.

The school education in India consists of more than 1.5 million schools, 9 million teachers and nearly 250 million students. The education policies of 1968 and 1986 emphasised on the need for universalization of elementary education. The National Policy on Education 2020 (NEP 2020) envisages a new structure of school education, namely, 5+3+3+4 to start schooling of children at the age of 3 and continue till the age of 18. This shows the gravity of effort taken up to provide universal, quality school education in the country.

The move for expansion kickstarted in the state of Kerala way before the rest of the nation. The intervention of princely states and communitarian participation in pre-independent Kerala gave a head start for the state's populace in terms of education. With the state formation, government's commitment to universalise primary education shot the enrolment up quickly and increased the share of government and aided schools. From a total of 9137 schools in 1957 (2054 government schools, 6980 private aided schools and 103 were private unaided schools) the number of schools shot upto 12,951 schools in 2019-20 (4693 government schools, 7,216 private aided schools and 1042 private unaided schools). The enrolment currently stands at a grand total of 3716897 students (1168586 in government schools, 2158452 in private aided schools and 389859 in private unaided schools).

From 1970s, the state of Kerala witnessed a decline in enrolment in the government schools and aided schools in the state. Educational expansion had achieved a saturation level and enrolments and the number of schools started declining. Further the share of enrolment in the government schools also declined. The enrolment share declined from 44.5% (1975) to 30.1% (2014-15) in government schools and 54.8% (1975) to 53.1% (2014-15) in private aided schools respectively. The number of schools saw a decline from 2835 (1961-62) to 2595 (2019-20) and 4143 (1980-81) to 3911 (2019-20) in government and aided sectors respectively. As the social indicators of Kerala matched the developed nations of the world, the dip in enrolment was explained by demographic transitioning. With improved health and education, the state had achieved the third stage of natural growth in population with low fertility and low mortality rates. This was at par with the developed nations of the world and earlier than the rest of the states in India. The declining enrolment in primary education was thereby accounted by the falling child population in the state.

Public schooling had shaped the contour of the state, delivering it into one of the highest literate states in the country. Majority of the state's students have been enrolled in private aided schools followed by government schools. This trend had remained same since independence. Yet there has been a slow but increasing growth in number of private unaided schools and its share of enrolment. The declining enrolment in government and private aided schools is thereby not fully explained by demographic transitioning, with the share of enrolment in private unaided schools increasing over the years- 0.7% (1975) to 16.9% (2014-15).

The initial stage of educational expansion is carved according to the paternalistic will of the state. The subsequent generations of educated population in Kerala have moved on to

demanding quality education. This has been poorly met by public schooling. The private players stepped in to cater to the respective needs of the labour market- CBSE/ICSE syllabus transacted through English medium- with private unaided schools. Private unaided recognised schools rose as a response to the quality demands of the preferential population in Kerala. A bandwagon effect set in and private unaided unrecognised schools rose in number to cater to the residual segment of the population. This led to the rise of private schooling in the state. This want has been backed by international remittances flowing into the state and high State Domestic Product. The increasing enrolment and number of private unaided schools, in accordance to the changing demand preferences, is thereby read as another attributing factor to falling enrolment in government and aided schools.

The falling enrolment in government and aided schools have resulted in the class size being less than the optimum number. The optimum size, according to the Kerala Education Act & Rules (1959), was 25 per class. These schools with class size less than 25/ total enrolment less than 100 is termed as uneconomic schools in Kerala. Declining enrolment had widely resulted in school closures across the state. The 1990s alone saw a closure of 112 government and aided schools. The move to close uneconomic schools were met by wide resistance across the state after 2000s. The later governments thereby stopped school closure and retained them as uneconomic schools. The Directorate of Public Instruction lowered the bar to 15 per class in 2018, to deal with the menacing headache of uneconomic schools. This made 60 the minimum total enrolment in LP schools and 45 in UP schools. They were also renamed to “schools with less number of students”; the terminology was justified by schools not being profit making institutions.

The number of uneconomic schools in Kerala has risen over the years to peak at 2015 and slowly decline. In 1990, there were a total of 964 uneconomic schools with 455 and 509 in the government and aided sectors respectively. This rose to a total of 1347 in 1995 (542 in government and 805 in aided sectors respectively). In 2000, the total number of uneconomic schools stand at 2244 with 993 in the government and 1251 in the aided sectors respectively. This has seen a slow increase to 2919 in 2005 with 1457 government schools and 1462 aided schools respectively. The values quickly jumped to 4280 in 2010, with 2147 government uneconomic schools and 2133 aided uneconomic schools respectively. The number of uneconomic schools reached its zenith in 2015, with a total of 5715 uneconomic schools. By 2019, the total number of uneconomic schools dipped to 996 with 382 government schools and 614 aided schools respectively.

The study consists of three research questions which have translated to three research objectives and has been studied using apt research designs. Mixed method approach has been adopted for the study.

5.2 Understanding the Trends of Uneconomic Schools in Kerala

Research Question: What are the trends of uneconomic schools in Kerala over the years?

Research Objective: To understand the trends of uneconomic schools in Kerala over the years

Uneconomic schools have showed huge shifts over the years. Quantitative method is used for this part of the study. This is studied with the aid of secondary data from Kerala State Planning Board. The data is collected from Kerala Economic Review reports for fifteen years from 2004 to 2019. The data has been divided into four time periods: 2004-07, 2008-11, 2012-15 and 2016-19. The uneconomic schools considered for the purpose of the study are lower primary (LP) schools as they constitute significant percentage (more than 75%) of uneconomic schools for all the different time periods.

The uneconomic LP schools have shot from 7207 (2004-05) to 13357 (2008-11). It reached its peak at 16909 (2012-15) and eventually declined to 6274 (2016-19). In terms of absolute value, Kannur has seen the highest number of uneconomic schools: 1323 (2004-07), 2146 (2008-11), 2349 (2012-15) and 814 (2016-19). The lowest number of uneconomic schools in absolute number is seen in Wayanad for the same time periods:113 (2004-07), 238 (2008-11), 297 (2012-15) and 98 (2016-19).

The percentage share of uneconomic schools to the total number of schools in the state provide a more accurate picture. Pathanamthitta has the highest percentage of uneconomic schools to the total number of government and aided schools for all the four different time periods: 73.4% (2004-07), 89.9% (2008-11), 94% (2012-15) and 60.8% (2016-19). Malappuram shows the lowest percentage of uneconomic schools to the total number of government and aided schools: 5.3% (2004-07), 12% (2008-11), 26% (2012-15) and 10.2% (2016-19).

When considering the year wise share of uneconomic schools to the total number of government and private aided schools in the state, 2012-15 shows the highest percentage: 36.8% (2004-07), 51.2% (2008-11), 65.1% (2012-15), and 32.2% (2016-19). The relative

share of uneconomic schools to total number of government and aided schools is highest for all districts during 2012-15: 67.3% (Thiruvananthapuram), 67.5% (Kollam), 94% (Pathanamthitta), 76.2% (Alappuzha), 79.4% (Kottayam), 74% (Idukki), 69.3% (Ernakulam), 59.7% (Thrissur), 57.1% (Palakkad), 26% (Malappuram), 66.9% (Kozhikode), 54.2% (Wayanad), 81.7% (Kannur) and 64.2% (Kazargode). Uneconomic schools have shown a sharp decline during 2016-19. 2016-19 (6274) has reported the least number of uneconomic schools in the state of Kerala. The individual years of 2018 (1031) and 2019 (901) show sharpest of the decline. A negative growth of 76.25% was recorded from 2016 to 2018. All the districts have recorded a sharp decline during this time.

5.3 Factors Affecting Closure of Sections in Schools in Kerala

Research Question: What are the determinant factors that influence closure of sections in schools in Kerala?
Research Objective: To examine the factors that closure of sections in schools in Kerala

This objective has been answered using quantitative methodology, with the aid of secondary data and quantitative analysis. The data on uneconomic schools is obtained from Kerala Economic Review. The data on private schooling in the state has been collected from Unified District Information System (UDISE) and KSTA (2017) report. Continuous data on private unaided recognised and unrecognised schools can only be obtained from 2012-13.

LP schools in Kerala has 4 grades and UP schools have three grades respectively. Each grade has various sections. A section is supposed to have teacher-pupil ratio of 1:30 and 1:35 for LP and UP schools respectively. The declining enrolment in the government and private aided schools in the state has resulted in closure of sections in schools. Closure of sections eventually lead to lowering of school size. When the school is left with a section each for every grade and the existing section has less than 15 students per class, the school becomes uneconomic in nature.

The initial literature surrounding the determinant factors influencing the closure of sections in school points fingers at demographic transitioning. The state has seen a declining birth rate from 32% (1970-71) to 13.9% (2018). The declining child population has led to decrease in the incoming students to grade I: 95% in 1970-71 to 36% in 2015-16. The district wise trend

in uneconomic schools shows that Pathanamthitta has the highest percentage of uneconomic schools to the total number of government and aided schools. This is explained by very low child population in the district. The entire state showed a declining average growth rate of child population of -8.44% while Pathanamthitta recorded the greatest decline in child population with a drop of -23.76%. Malappuram showed the least percentage of uneconomic schools to the total number of government and aided schools. Malappuram recorded 4.08% rise in the growth rate of child population. Compared to the state average, this growth in child population is quite high. This growth in child population has decreased the number of uneconomic schools in the district.

The literature on uneconomic schools explains the changing demand preference among the state's populace for quality education as a determinant factor. The preference for CBSE/ICSE syllabus transacted under English medium is catered to by the increasing private unaided schools in the state. The year wise and district wise changes in uneconomic schools can be explained by the growth of private schooling in the state.

The private unaided recognised schools in the state have shown the highest growth in number and share of enrolment from 2012 to 2015. This is understood by the percentage share of private unaided recognised and unrecognised schools to total number of schools. The private unaided recognised schools climbed from 11.1% (2013), 11.4% (2014), 13.7% (2015) and finally to 14.1% (2016). The private unaided unrecognised schools grew from 6.6% (2012), 10.6% (2013), 11.2% (2014) finally to 9.9% (2015). Pro-market attitude of alternating state government has also greatly supported the rise of private schooling in the state. Government rule of various years have given rampant recognition to private unaided schools. Following are the number of schools which have received recognition during various years: 6 (1970-80), 96 (1982-87), 33 (1991-96), 119 (2001-06) and 137 (2011-16). The government has approved the highest number of private unaided schools during 2011-16. The same time period has also displayed the highest number of uneconomic schools in the state.

The districts of Pathanamthitta and Malappuram has seen the highest and lowest number of uneconomic schools respectively for all different time periods. This is read alongside with the growth of private unaided schools in the district. Pathanamthitta has shown the highest share of private unaided schools to total number of schools among all the districts in the state: 34% (2012-13) and 37.3% (2015-16). Malappuram has shown the lowest share of private unaided schools to the total number of schools: 9.5% (2012-13) and 12.4% (2015-16). Both the districts

have shown a growth in private unaided schools during the period 2012-15. Changing demand preferences fancying private schooling have been heavily reflected on the share of uneconomic schools. Even when there was a decline in uneconomic schools during 2016 to 2019, the share of private unaided schools in the Pathanamthitta has remained the highest and Malappuram has remained the lowest.

The changing demand preferences for quality education has resulted in rising private schooling in the state. With the Public Education Rejuvenation Campaign in 2016, the government and aided schools were revived to equip themselves to the demands of the state's populace. This resulted in an increase of share in enrolment in government schools: 29.9% (2016) to 32.0% (2020). There has also been a counteracting decrease in enrolment in private unaided schools and uneconomic schools in the state.

The share of enrolment in private unaided schools in Kerala has fallen from 16.7% in 2016-17 to 15.0% in 2019-20. Even the number of private unaided schools have dipped substantially. The percentage of private unaided recognised schools to the total number of schools have shown a decline: 14.1% (2016), 10.5% (2017), 9.8% (2018), and 9.8% (2019). The percentage of private unaided unrecognised schools to the total number of schools have also shown a decline: 9.9% (2015), 9.4% (2016), 6.8% (2017), 6.1% (2018) and 4.9% (2019). The decline in private unaided schools correlated to the decrease of uneconomic schools show that the populace identifies government and aided schools as a better option to satisfy their demand preferences. The state had also axed various private unaided unrecognised schools for quality concerns which had resulted in a decline in private schools since 2015.

5.4 Impact of Closure of Sections in Schools in Kerala

Research Question: What are the economic impacts of closure of sections on teachers and infrastructural facilities in the schools?
Research Objective: To analyse the economic impacts of closure of sections mainly on teachers and infrastructural facilities in schools

Impact on School Infrastructure: The impact of closure of sections in schools in Kerala is based on the fieldwork conducted in the district of Thiruvananthapuram. The district has shown relatively high number of private unaided schools and substantial increase of uneconomic schools, indicating a changing demand preference in education. The population of the study

includes uneconomic schools from the entire state- 378 in the government sector and 606 aided schools (2019-20). There are 34 uneconomic schools in the government sector and 15 schools in the aided sector respectively in 2019-20 in the district of Thiruvananthapuram.

This chapter is sub-divided into two sections wherein the first section deals with impact on school infrastructure and the second deal with impact on protected teachers. The impact on school infrastructure has been studied by case studies of nine uneconomic schools. LP and UP schools with enrolment less than 60 has been considered. Open ended interviews with headmaster/headmistress of the respective schools were done. The selected schools include five aided and four government schools from the educational sub districts of Kilimanoor, Neyyatinkara, Kattakada, Attingal and Kaniyapuram. The enrolment of four of the government schools have reached a plateau while that of five of the aided schools have sharply declined.

The sample schools have turned uneconomic over the years with the students from the catchment areas preferring other government, private aided and private unaided schools. Most of the students from the uneconomic schools have preferred bigger government schools with higher grades/levels and better quality of education (five prefer government schools, one prefer private unaided school, 4 prefer both private unaided and government/aided schools). The parental preference for quality education has shifted the students to better schools, be it government/ private aided or private unaided. The preference for English medium instruction has risen in Kerala from 55% (2014-15) to 65% (2019-20). Many schools have converted to English medium schools. The current preference for government schools is mainly because these schools have been revived with the Public Education Rejuvenation Campaign. The uneconomic schools have remained low in enrolment as they require a minimum enrolment to start English medium parallel section. This makes the uneconomic schools inept to deal with the changing needs. Distance is no longer a constraint to schooling as parents have shifted from neighbourhood schools to those ensuring quality. The bus facilities provided by the preferred schools pose even more threat to the uneconomic schools. Poor infrastructural facilities in the uneconomic schools further reduce its attractiveness.

Small sized schools pose diseconomies of scale in terms of increased per student expenditure, paucity of funds, increased mid-day meal expenditure and infrastructural wastage. Economies of scale is a cost advantage where fixed capital is optimally used by labour to attain equilibrium or even profits. When there is a shortage/ excess of labour, the fixed capital remains underused/overused bringing the cost up. Economies of scale can be computed for a school by

considering per student expenditure. A school is made keeping in mind a specific ratio for students. Inadequate/excess number of students can raise the cost, making it economically unviable.

Per student expenditure of uneconomic schools have been computed considering teacher salary as the main expenditure of the school. All the other expenditures had been kept constant. Each section is supposed to have a minimum of 30 students and 35 students in LP and UP school respectively. Thereby each LP school should have 120 students and 105 students respectively. For an uneconomic school, the total enrolment comes down to 60 and 45 respectively. The per student expenditure in LP school of 120 students is 10,080 rupees per student and that of UP school with 105 students is 18,514 rupees. In an uneconomic school, this value rises as number of students decreases. In a LP school of 60 students, the per student expenditure is 20,160 rupees. In a UP school of 45 students, the per student expenditure comes to 43,200 rupees. Further decline of students will only raise the expenditure. The percentage increase of per student expenditure in uneconomic LP and UP school is 100% and 133% respectively. The per student expenditure of Mid-Day Meal Scheme also goes up for uneconomic schools. Schools with enrolment of 150 students get eight rupees per head while the bigger schools get six or seven rupees per head. Uneconomic schools with enrolment of 60 find it difficult to make ends meet with the existing fund as per student food expenditure is higher. The teachers thereby spend from their own pockets to buy extra groceries. They also bring extra food from their homes to feed the children.

The existing fixed capital of the school includes classrooms and furniture. These are either wasted/ reused in uneconomic schools. Most of the schools have redesigned the classrooms to mini-auditorium, science labs, library, hall and computer lab. The classrooms are also given away for public programmes by the ward or adjacent temple. The infrastructure in one of the schools has been severely destroyed by the weather.

Uneconomic schools have lesser number of parents in the Parent Teacher Association thereby seriously creating a crunch on the fund. Even the existing students in the school hail from very disadvantaged communities thereby further restricting the amount procured. The enrolment also acts as a signal of quality of the school. Low enrolment puts the school in a blindspot for MLAs and local government. The bigger and revived government schools, due to higher enrolment, attracts various funds. For the private aided schools, donations procured during

teacher appointment is an important source of income for the management. Due to low enrolment, there are no new teacher appointments which affects the fund available for the private management to improve the school, leaving it with poor infrastructural facilities. Unable to sell off the school due to public resistance, the management is stuck with loss earning school.

The interviews with the school head reveal that declining enrolment affect the quality of class interactions. LP and UP schools depend on constructive methods of teaching involving multitude of group activities. Fewer students affect the quality of teaching with reduced class interactions. The group activities are meant for larger classes and the teachers are not trained to deal with small classes. The teacher student dynamics is affected by smaller classes and teachers are less motivated while teaching. Uneconomic schools provide more workload for the headmaster/headmistress as there is no extra teacher to take up the class work. A minimum of 150 students are required in a school inorder to relieve the HM. The administrative tasks along with the class work restrict the HM.

Impact on Protected teachers: The impact on protected teachers was studied by survey research with the aid of close ended questionnaires. The population includes Lower Primary School Teachers (LPST) and Upper Primary School Teachers (UPST) who have been protected due to decline in enrolment. There are 449 LPST and 458 UPST protected teachers in Kerala who are specified in the bank. There are 98 UPST and 56 LPST in the district of Thiruvananthapuram. The protected teachers were randomly chosen from various educational sub districts in Thiruvananthapuram. Open ended interviews of two Additional Education Officers were done to understand the process of closure of sections and the bigger picture in their respective sub districts.

The sections are closed in government and aided schools in Kerala through a detailed process. The total school enrolment is uploaded by the headmaster/headmistress in the government website Sampoorna by the sixth working day of the school. The details of the students are matched with their UIDs to avoid any miscalculation/manipulation. This is followed by a staff fixation exercise where the teacher pupil ratio is maintained at 1:30 in LP schools and 1:35 in UP schools. The process corrects shortage/ excess of teachers and is finished by July 15. Staff fixation is presided over by AEOs for LP and UP schools while DEO conducts the exercise in

high schools. Lack of adequate students can result in closure of sections and excess teachers are moved to vacancies in other government and aided schools by the month of September.

The process of staff fixation is based on a seniority list, maintained according to the date of appointment of the teacher. When a section is closed, the juniormost teacher in the list is rendered surplus. The surplus teachers from private aided schools are absorbed by the government into the teachers bank. Teachers bank is a list of teaching and non-teaching staff thrown out of employment from aided schools due to declining enrolment. Protected by the bank, these teachers are temporarily or permanently deployed in other government and aided schools. The redeployment is done to vacancies created by death, leave, resignation or voluntary retirement. The surplus government teachers are merely transferred to other government schools with vacancies.

28 teachers who have become surplus is considered for the study: 22 protected teachers, 2 formerly protected and two have faced the impact of closure of sections and aren't protected. There are 75% females and the rest are males. There are 17 UPST and 11 LPST. 18 of the teachers work under single management while 10 work under trusts. Out of the 24 currently deployed, 22 have been temporarily deployed and 2 have been permanently deployed.
Most of the deployments (84.6%) within the district are in government schools. From November 2021, protected teachers from Thiruvananthapuram have been deployed in aided schools in Malappuram and Idukki. Out of the total 26 protected teachers, 10 (38.5%) of them had been posted in Malappuram, four (15.4%) in Idukki and 12 (46.2%) within the district of Thiruvananthapuram.

The protected teachers are paid the same salary as that of the other LPSTs and UPSTs. Due to redeployment, the protected teachers have to move their homes, travel far and have greater expenses. This greatly reduces the money left in their hands to spend. Therefore, the real income of protected teachers greatly decreases putting them in a budget constraint. The protected teachers pay heavy donations during their appointment. These teachers mostly prefer private aided schools for proximity to their homes. The donations, paid by taking loans, ensure a sense of stable career near their homes. These loans are paid back from their salary and decrease in real income greatly affects the re-payment. Inter district deployments to Malappuram and Idukki put greater constraints on the teachers as extra expenses are incurred on travel, accommodation and food. Even the intra district deployments affect the protected

teachers as 50% of them report of greater travel expense. Real income further dips when the protected teachers have to move their families to new places or employ additional help at home. The decline in real income hits hardest on the only working member of the family. 13 of such teachers have no other source of income to support them and redeployment greatly affects their family budget. Two teachers who weren't covered by protection were greatly affected by their service break. These teachers had to cut down their expenses on food, transportation and luxury. Decline in real income risked payment of bills and loans. They also faced a loss of grade and increment. The two teachers who have been absorbed into the BRCs were paid basic salary with no increment. Their salary payment is still not regular with their payment channel not properly updated.

77% of the deployed teachers were employed in two to three schools, five (19.2%) of them in one school and one (3.8%) in more than four schools during the entire period of their protection. This created a sense of instability among private aided school teachers. 69.2% of the protected teachers feel safe in the redeployed schools/area and 30.8% don't. 57.7% of the total number of teachers are in a constant fear about the security of their job while 42.3% are quite sure about the safety net of the government. These teachers face mixed responses from their government counterparts. Some teachers report mistreatment while some sensed greater respect with government teachers, parents and students. The inter district redeployments with lots of travel poses safety and health concerns to the teachers. Far away deployment has affected the family life of the teachers- their sons/ daughters/ elderly uncared for, disruption of child's schooling, safety of daughters etc. It has also mentally affected the teachers who have faced anxiety in the deployment.

5.5 Bottomline of the study

Educational expansion in India and across the globe has taken place mainly due to the timely interference of the state. Its growth in the state of Kerala has also been spearheaded by the state and its public schools. Kerala has witnessed a saturation in terms of number and enrolment in government and private aided schools. The falling enrolment since 1970s resulted in the closure of sections and subsequent emergence of uneconomic schools in the state. The increasing trend continued till 2015. Along with demographic transitioning, the changing demand preferences of the people (for CBSE/ICSE syllabus under English instruction) has resulted in a growth in private unaided schools and a subsequent rise in the number of "schools with less number of students". The district wise changes further confirm the argument that

changing demand preferences in schooling catered to by private unaided schools have resulted in increasing uneconomic schools. After 2016, the trend has turned negative due to Public Education Rejuvenation Campaign. It has revived the public schools to keep abreast of the changing needs of the populace. This has resulted in a sharp decline in uneconomic schools from 2016 to 2019.

Declining enrolment is dealt by the state through closure of sections in schools. The economic impact of closure of sections in schools in Kerala is studied during the fieldwork. The first part of the fieldwork deals with the impact of closure of sections on school's infrastructure and resources. From the primary data, it is understood that preference for quality education, provided by other government/aided/private unaided schools, have resulted in the phenomenon of uneconomic schools. Bus facilities from preferred schools add to the woe. The poor infrastructural facilities further cripple the uneconomic schools. These uneconomic schools face increased per student expenditure, increased per student expenditure of mid-day meal scheme, decreased quality of class interactions, increased workload for headmaster, created a paucity for fund and created a wastage/repurposing of infrastructure. The "schools with less number of students" thereby create diseconomies of scale. The second part tackles the impact on protected teachers. The surplus teachers from aided schools, thrown out of employment due to declining enrolment, is protected by the government. These protected teachers face a decline in real income compared to the regular teachers. The inter and intra district redeployments increases expenses on travel, food and accommodation thereby reducing the real income left with the protected teachers. They also face personal issues, family problems and safety concerns.

5.6 Limitations and Future prospects of the study

The criteria of uneconomic schools have been lowered in the state from 25 per class to15 per class after 2018. The study has not considered this particular factor while understanding the trend of uneconomic schools in the state. The decline of uneconomic schools due to lowering of the bar needs to be looked into in future studies.

Kerala is a state with an increasing influx of migrant population. The state has considered projects like Roshni scheme to educate the children of this section of population. As a result, enrolment in government schools have seen an increase. The study has not considered these factors while understanding the increasing enrolment in government and aided schools in the state

The fieldwork has not been extended to check the quality of education in the preferred government/ private aided/ private unaided schools. Future studies on the quality, measured by learning outcomes, can reveal the factors promising higher enrolment.

During the fieldwork, the headmasters of some schools have reported the return of students to public schools from private unaided schools due to the pandemic. This factor of pandemic has not been taken into account as the study is limited to the trend of uneconomic schools till 2019. Future research can throw light on how the pandemic has made people prefer public schools over private unaided schools.

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Appendix

Appendix 1: Uneconomic LP Schools in Kerala from 2016-2019

District/Year	2016	2017	2018	2019	TOTAL
Thiruvananthapuram	301	-	50	46	397
Kollam	309	-	55	53	417
Pathanamthitta	361	-	177	190	728
Alappuzha	297	-	147	93	537
Kottayam	356	-	157	103	616
Idukki	152	-	46	44	242
Ernakulam	313	-	84	74	471
Thrissur	307	-	66	67	440
Palakkad	335	-	48	52	435
Malappuram	237	-	9	7	253
Kozhikode	526	-	49	54	629
Wayanad	84	-	7	7	98
Kannur	597	-	115	102	814
Kazargode	167	-	21	9	197
Total	4342	-	1031	901	6274

Source: Kerala Economic Review