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The Drift to Private Schools in Australia: Understanding its Features

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ABSTRACT

Government subsidies have provided a major source of funds to private schools in Australia for three decades. The increasing level of private school subsidies since the mid-1970s has contributed to a steady increase in the proportion of students enrolled in private schools. This growth in the private school share of enrolments was not inevitable, but has been the outcome of government policies. We use an economic framework that focuses jointly on the price and quality of schooling and find that private schools have used government subsidies to increase the quality of their services (ie. to reduce staff: student ratios) rather than to reduce their fees. This strategy has ensured that the 10 percentage point increase in the enrolment share of private schools since 1975 has not substantially altered the socio-economic composition of their student body. One consequence is that a higher proportion of government school students now come from low socio-economic status (SES) backgrounds than 30 years ago. Therefore, schools in the government sector now educate more students from lower SES backgrounds than in 1975. The implications for public policy of these phenomena are discussed and directions for future research identified.

1. __Introduction__

Since the late 1970s the proportion of school students who attend private schools in Australia has increased by just over 10 percentage points – from one in five students attending private schools in the late 1970s to almost one in three now.

There are many issues of policy and research interest in this development. Where in the social background and school achievement distributions have these new private school enrolees, to the extent that they can be identified, been drawn from? What has been the impact of their transfer on the government school system and the students who remain there? What have been the relative roles of policy, in the form of government per capita subsidies to private schools, and changes in student and parental preferences for private schooling in explaining this transfer? What types of private schools have accommodated the increased enrolments? That is, has the transfer of students also changed the private school sector? What impact has it had on government schools?

The determinants of the shift in enrolments to the private sector are complex. We offer a preliminary analysis based on what historical data reveal about trends in school fees and the change in the socio-economic composition of student populations, but we do not claim to offer a complete explanation. The paper is deliberately descriptive and aims to illustrate some of the factors that have contributed to the transfer of students from government to private schools in Australia. These factors include government funding policy and regulations, the strategic marketing decisions of private schools, and the relative quality of government schools. The interplay of these factors influences the context in which parents choose between private and government schools. To assume that the shift in enrolments from the government to private sector is purely the product of parental choice or that government funding for private schools is merely supporting the choice exercised by parents is simplistic. Such assumptions deny the critical role of government policy in influencing the environment (or "market") in which such choices are made. In this paper, we describe the transfer of students over the past three decades and the policy environment that supported it with the aim of informing and stimulating future work.

The framework we adopt is primarily an economic one. In using an economic framework, we acknowledge the role of non-market factors that affect public and private schooling choices, such as parents' ideological (including religious) preferences and the capacity of schools to meet individual student's needs. These

factors may have contributed to the drift from public to private schools, but their impact may also have been overstated in the public debate on this issue, compared with the role of economic incentives. This view is based on a number of factors. The first is the observation that private school enrolments were in decline in Australia during the decade before Commonwealth recurrent subsidies were introduced and then increased steadily as subsidies from both Commonwealth and State governments increased. The second factor is that the empirical "story" of the growth in private school enrolments can be told without any reference to changes in preferences – see section two below. Government subsidies may simply have allowed the revelation of pre-existing preferences for higher quality schooling among parents.

Under the economic framework we use, individuals and their parents are assumed to choose between government and private schools according to their financial resources and how they weigh up the costs of private schooling in terms of the fees they pay, with their estimates of the relative benefits it provides. These benefits may include the perceived superior quality of the learning process, the type and range of personal values developed or the nature of the personal contacts made through private schooling. We focus on changes in factors that influence this calculus of benefits against costs: that is, on factors that influence real fees in the private sector and on the relative resources going to schooling in the different sectors. Additional resources have the potential to improve the quality of the learning process, notably but not solely, through improved student: teacher ratios.

Increased payments via recurrent grants by Australian governments have provided a major source of funds to private schools since the late 1960s, but especially since 1973. Private schools may have chosen to use those funds in a number of ways that would have had quite different effects on the social composition of their student bodies. For example, private schools could have decided to reduce fees while maintaining their existing level of school quality *or* to maintain their fees at current levels while using the increased funding to improve school quality. The first strategy – to reduce fees and maintain quality – would be the one most likely to have opened up participation in private schools to students facing binding financial resource constraints from low socio-economic backgrounds.

Previous research has shown that attendance by individuals at private schools in Australia is positively associated with the student's parental educational and occupational background (Western 1983, Anderson and Vervoorn 1983, Vella 1999

and Le and Miller 2003), general neighbourhood socio-economic status (Mukerjee 1999), family wealth (Le and Miller 2003), family income (Preston 2003) and with the types of schools their parents' attended (Graetz 1990). Only Le and Miller (2003) aimed to identify how the relationship between school type and family background may have changed over time but they looked at two cohorts that were quite close together (in mid-secondary school in the mid-1970s and mid-1980s respectively). In this paper, we will examine changes in Australian schools between 1975 and 1998.

The purpose of this paper is three-fold. First, we describe trends in the school enrolment data in detail and set out the government policies that have supported those trends. This includes an analysis of changes in fees and student: teacher ratios in private schools since the introduction of government grants. Second, we analyse the socio-economic background of private school students in the mid-1970s and late 1990s to assess how widely-based the increased enrolment has been. Third, we analyse changes in the average socio-economic composition of schools in both the private and government sectors to assess any impact from the changed enrolment patterns.

The private school sector is not homogeneous and has itself been subject to changed enrolment patterns over the same period. Catholic schools accounted for more than 80 per cent of private school enrolments in the early 1960s but just over 60 per cent in 2002. Their share of primary enrolments is greater than of secondary enrolments. The social backgrounds of students who attend Catholic schools and those who attend schools described as 'Independent' differ substantially, as do levels of government subsidy. Therefore, the enrolment trends and policy parameters applicable to the Catholic and Independent sectors are distinguished throughout this paper.

To provide some context for the remainder of the paper, the next section sets out the analytical framework we consider most useful for understanding forces at work behind the growth in the private school enrolment share since the 1970s. The following section contains a description of government policy towards private schools from the early 1960s to the present. Section four sets out the trends in enrolment data from the 1960s and 1970s and the factors that have shaped enrolments over that period. Section five contains an analysis of data from two cohorts of school students in their middle years of secondary school. The cohorts were in school in 1975 and 1998, respectively. The pattern of private school enrolment by the social background

of the students in the two cohorts is compared to identify among which groups of students the transfer to private schools has taken place. Section six uses the same data to analyse the impact the growth in private school enrolments has had on government schools. Conclusions are drawn in section seven, along with planned directions for future research.

2. <u>A framework for understanding the market for private schooling</u>

We assume that the demand by students and their parents for private schooling is similar to that of other goods – for a given level of 'quality', it falls with increases in the associated price, in this case tuition fees. For schools, the cost of provision of places with a given technology increases with the number of places provided, so they are only prepared to offer more places at increased fee levels.

This situation is depicted in Figure 1, which shows the 'downward' sloping demand curve, D_1, and 'upward' sloping supply curve, S_1, just described. We assume that some initial situation is captured by those curves. The intersection of the demand and supply curves provides the equilibrium per student fee level, f_1, and number of students in private schools, q_1, which can also be interpreted here as the private school enrolment share. This is the equilibrium at the prevailing supply technology and for the relevant level of schooling 'quality'.

Figure 1: Market for private schooling
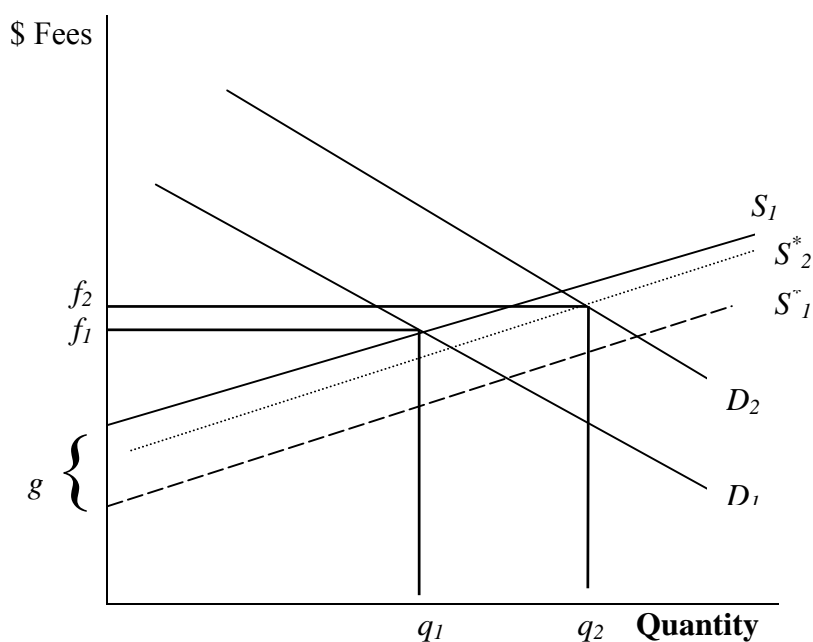
In fact, there are families of demand and supply curves, parallel to those depicted in Figure 1, representing alternative levels of schooling 'quality' and supply technologies. One way of characterising these alternatives is in terms of student: teacher ratios. We will assume that lower student: teacher ratio levels provide an improved schooling quality for students.[1] Lower ratios are associated with increased demand at any fee level, so demand curves characterising lower ratios lie to the right of D_1, such as D_2. At the same time, lower ratios are associated with increased school costs, for any given number of students. Hence supply curves depicting lower student: teacher ratios lie above S_1.

Now imagine that the government introduces a subsidy of g dollars per student (or increases the existing subsidy by g), which is paid to private schools. Private schools can now provide places at the existing student: teacher ratios more cheaply than before, so the supply curve could move to S^*_1. This would lower the equilibrium fee paid for private schooling, and would lead to an increase in the observed private school enrolment share.

As will become evident, this is not how private schools seem to have responded to changing levels of government subsidies since the 1970s. Instead, they have used these subsidies to improve the quality of the schooling they have offered. They have lowered student: teacher ratios, with a view to increasing the perceived quality of their schooling service. That is, rather than move to the supply schedule S^*_1, private schools moved to a supply schedule like S^*_2 in Figure 1. It includes the government subsidy and involves a higher level of costs and 'quality' than the original supply schedule. The demand curve associated with that higher level of quality is D_2 not D_1. Consequently, the point $\{q_2, f_2\}$ provides the new equilibrium.

As depicted in Figure 1, the new equilibrium involves both higher levels of per student fees and an increased private school enrolment share. The increased enrolment share from the first equilibrium to the second involved no trade off in fees for private schools and, as depicted, provided a greater increase in the private enrolment share than retaining the original student: teacher ratio. Note that in this

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[1] Student: teacher ratios will be related to average class sizes in the sectors. The international literature on the impact of additional resources and lower class sizes on student performance is contentious – see Hanushek (1986, 2003) and the re-analysis of his data by Kreuger (2003). Student: teacher ratios may be a poor measure of quality, but all key stakeholders – parents, teachers and governments – certainly act as though they reflect important dimensions of quality and allow improved student learning outcomes.

characterisation, the increase in the enrolment share did not involve any change in preferences towards private schools, but rather reflects the pre-existing demand for higher quality schooling.

It is worth focussing on how private schools might have used the recurrent grants they have received from government. Since most private schools are non-profit organizations, it follows that recurrent revenue is approximately equal to recurrent expenditure in the sector, or:

$$(1) \qquad (f+g) * s \qquad \approx \qquad A + t * w * (1-c) \qquad \text{or}$$

$$f \qquad \approx \qquad A/s + t/s * w * (1-c) - g$$

where f represents average per student fees in the sector, g is the average per student government grant, s is the number of students, A are fixed administrative costs, t is the number of full-time equivalent teachers, w is the teacher remuneration package and c are the contributed services provided by non-remunerated teachers (especially members of religious orders in the Catholic sector).

Using equation (1) and leaving aside fixed administrative costs, increased government grants might have been used for one of four purposes in the private sector: to reduce fees below what they would have been; to increase the number of staff per students above what it would have been (reduce student: teacher ratios); increase the remuneration of teachers above what it would have been; and cover the loss of contributed services. Of course, the additional resources from the grants could have been used towards all of these purposes.

However, any use will affect the composition of demand for private schooling. Strategies that reduce fees to their minimum would be likely to encourage demand from families who are the most resource-constrained. Those that focus on improving quality and leaving fees unchanged might induce demand from parents who are relatively indifferent to fee levels but concerned about the quality of the learning environment offered to their children. The balance between fee reduction and quality improvement strategies adopted in private schools will have determined the type of student who transferred between the sectors to cause the 10 percentage point increase in the private enrolment share since the 1970s.

Of course, the curves in Figure 1 could have been drawn differently, so that neither the fees nor the enrolment share increased. However, the description of the abstract 'market' just given corresponds in important ways with the 'story' of changes in the enrolment share of private schools. Since the late 1970s, the observed increase in the private school enrolment share has been associated with increasing levels of government subsidy, higher private school fees and lower student: teacher ratios in both absolute terms and relative to those of government schools. In addition to describing the trends in the enrolment share, later sections will also describe changes in real fees and student: teacher ratios since Australian governments began to provide recurrent funding for private schools.

3. Government policy towards private schools from 1960 to the present

In Australia, the Federal government is not responsible for education but is able to make specific purpose grants to States and Territories under Section 96 of the Constitution. Using this provision, the Commonwealth's funding role in education developed during the 20th Century to the extent that it now allocates some $6.6 billion towards funding schools, two-thirds of which is allocated to private schools. In 2004, $4 billion in Federal funding was expended on private schools and $2 billion on government schools (Department of Education, Science and Training 2004:180). The Commonwealth's contribution to schools funding is relatively small compared to State and Territory governments, which allocate over $16 billion per annum to government schools and $3 billion to private schools (Productivity Commission 2004).[2]

Commonwealth support for private schooling began in the early 1950s when the Prime Minister, Robert Menzies, provided taxation concessions for private school fees and donations to school building funds. In 1957, the Commonwealth government provided interest subsidies to assist the establishment of private schools in the Australian Capital Territory. In 1964, the Commonwealth introduced scholarships for senior secondary school students and capital grants for science facilities – which applied in both government and private schools.

The size of the private schools sector in Australia has always been relatively large due to the high proportion of schools – mainly at the primary level – supported

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[2] In 2004 prices, excluding user cost of capital.

by the Catholic church.[3] By the early 1960s, the impact of the post-war baby boom, increasing rates of secondary school participation and a decline in the educational contribution of religious orders meant that most Catholic private schools were struggling to provide education services to the standard of government schools. The Catholic sector's share of total enrolments declined from 19.5 per cent in 1965 to 17 per cent in 1973. The private sector's enrolment share as a whole fell from 23.3 per cent in 1966 to a trough of 21.1 per cent in 1977. To arrest the declining enrolment share of Catholic schools, a successful political campaign was waged for government recurrent subsidies to private schools (Albinski 1966, Hogan 1984). In 1967, the governments of Victoria and New South Wales introduced financial assistance to private schools for recurrent purposes and in 1969, recurrent grants for private schools were introduced in the remaining States (Smart 1978, Praetz 1982:13).

A major break in Commonwealth policy also occurred in 1969 when the Commonwealth government introduced direct annual subsidies to private schools in the form of a recurrent grant per student. Prior to 1969, Commonwealth support for private schooling had been largely indirect through personal income tax breaks. The tax deductibility of school tuition fees remained in place from 1952-53 until 1973-74 when it was replaced by a tax rebate. The rebate was initially worth about one third of the deductibility arrangements in real terms and then it fell over time and was abolished in the 1985-86 budget. Many State and Territory governments provided interest subsidies to private schools for capital purposes until well into the 1990s. Donations to school building funds are still tax deductible and the Commonwealth government also provides capital grants and targeted assistance to private schools.

Commonwealth recurrent funding per student saved the Catholic schools sector from further decline and the General Recurrent Grants (GRG) Program is the centrepiece of Commonwealth funding for private schools today – accounting for $3.8 billion (94 per cent) of total Commonwealth outlays on private schools (Department of Education, Science and Training, 2004). A comprehensive needs-based General Recurrent Grants Program was installed in 1974, on the advice of an Interim Committee for the Australian Schools Commission (chaired by Professor Peter Karmel) in 1973. The Karmel Committee measured the "need" of private schools in

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[3] In countries where there are no government operating subsidies to private schools, such as the USA and the UK, private schools usually enrol no more than 15 per cent of all students. In contrast, in 1965, 24 per cent of Australian school students were enrolled in the (then unfunded) private sector, of which 82 per cent were in Catholic schools (Australian Bureau of Statistics, Cat. No. 4221.0).

terms of their total level of expenditure using a Schools Recurrent Resources Index (SRRI) that placed schools in one of eight funding categories. (Interim Committee 1973). The system was revised in 1985, moving to a measure of school's income – the Education Resources Index (ERI) – and schools were grouped into twelve funding categories on the basis of their ERI score. Schools with an ERI rating of 88 or above (high income schools) were placed in Category 1 and received the lowest grant per student. Schools with an ERI rating of 0-10 were placed in Category 12 and received the highest level of government funding (Department of Education, Science and Training, 2000).

Figure 2: Commonwealth real per capita recurrent funding to private schools for secondary students: 1970 to 2002 ($ 2003)
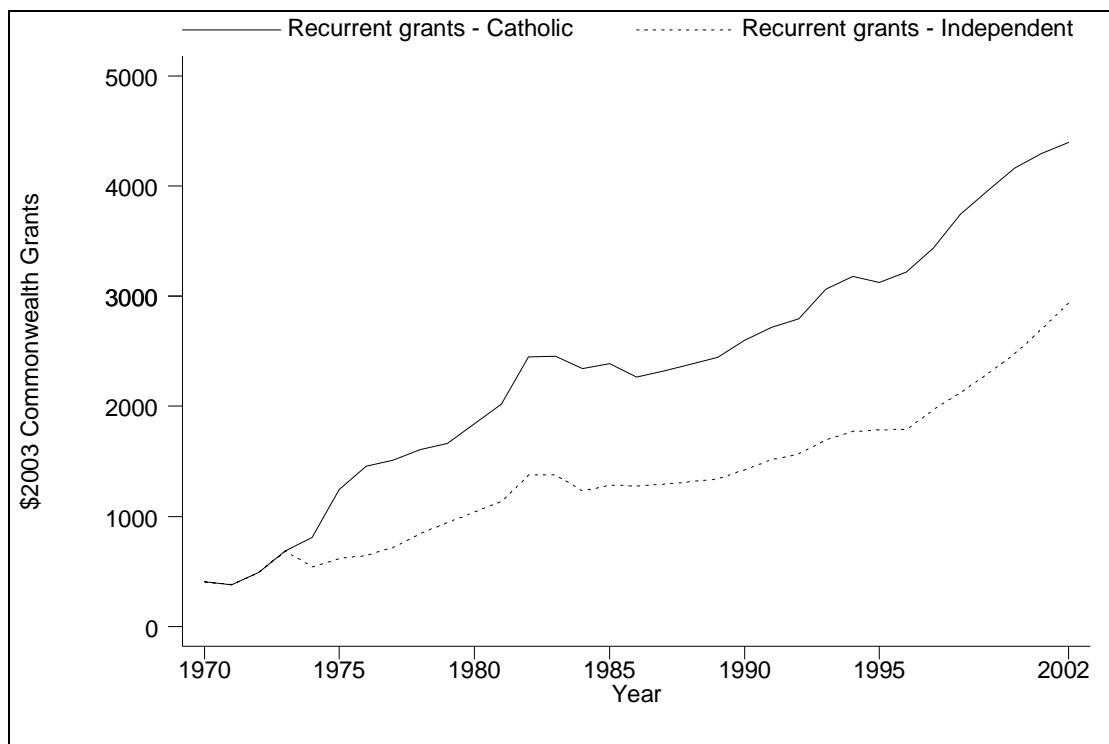
Commonwealth funding per student for private schools increased steadily in real terms from 1974, as illustrated in Figure 2. State and Territory governments also continued to subsidise private schools after 1974, providing about one-third of the total subsidy from both levels of government (ie. the average State grant per student is around half the Commonwealth rate). State and Territory grants generally increased in line with Commonwealth subsidies (Watson 1998).

During the 1980s, the Commonwealth government tried to close loopholes in the ERI system that allowed schools to obtain a more favourable funding category by

reducing their fees. In the mid-1980s, the Commonwealth introduced a "maintenance of effort" provision that required schools seeking a more favourable funding category to demonstrate that they had increased their private income (ie. tuition fees) over the past three years. This created a "Catch-22" situation where schools meeting the "maintenance of effort" criteria were effectively disqualified from demonstrating increased "need". These restrictions may have contributed to the observed increase in private school fees from the mid-1980s (see Figure 5 below).

In 1996, the Commonwealth government initiated a review of its General Recurrent Grants Program. As a result, in 2000 the ERI-based system was replaced with an SES-based system that estimated the capacity of schools to raise private income based on the socio-economic status of their students. Under the SES-based system, the socio-economic status of private school students is determined by the average SES of their census collection district, indicated by their home address. This information is aggregated to obtain an average SES for each school on a scale of 65 to 135. Schools are placed in a funding category according to their place on the funding scale. For a discussion of the relative merits of the SES-based model, see Watson (2003).

When the SES-funding scheme was introduced in 2000, the Commonwealth government provided further increases in funding to private schools, particularly to schools at the higher end of the SES distribution (ie. those with an SES score above 110). Many of these were high-fee schools previously in Funding Categories 1 − 3. The Commonwealth government also promised that schools disadvantaged by the new system would have their funding maintained at previous levels, so a quarter of private schools continued to be funded at their previous rate. The Catholic school system was awarded an SES ranking of 96 between 2000-2004 without reference to the home addresses of their students. From 2005, the Catholic system has been incorporated into the SES funding scheme with over 40 per cent of its schools having their funding maintained at SES 96, which is 56.25 per cent of Average Government School Recurrent Costs (AGSRC).

Annual increases in Commonwealth funding to private schools is also provided through the indexation mechanism chosen to adjust Commonwealth grants each year – the AGSRC Index – which in recent years has increased at more than three times the annual rate of the Consumer Prices Index (CPI). The combined impact of the AGSRC index and government funding policy is that average Commonwealth

recurrent funding per student to private schools increased by 6.3 per cent per annum between 1999-00 and 2003-04 (*Commonwealth Budget Papers*, ABS *Schools Australia* Cat. No. 4221.0).[4]

From 1985 to 1996, the Commonwealth government in partnership with State and Territory governments applied a set of guidelines called the "*New Schools Policy*" which acknowledged the potential adverse impact on the government school sector of untrammelled growth in private schools. The *New Schools Policy* guidelines were intended to promote the principle of "planned educational provision", to maximise the use of resources and to discourage the duplication of school services. Under the guidelines, prospective new private schools were required to demonstrate that their existence would not have an adverse impact on existing schools in their area – both government and private. If successful, Commonwealth recurrent funding was provided up to a maximum number of students. Existing schools seeking to increase their maximum enrolment level were required to re-apply under the *New Schools Policy*. A minimum enrolment level also applied to prospective new schools. In 1988, the Federal government introduced an additional measure to the *New Schools Policy*, limiting the funding of new independent private schools to the lower funding levels – Categories 1 to 6 (Department of Employment, Education and Training 1989:14).[5]

The *New Schools Policy* may have been effective in restraining growth of the private sector during the decade in which it was in place. Between 1986 and 1995, the proportion of total students enrolled in private schools increased by an average of 0.32 percentage points per year, compared with an annual average increase of 0.45 percentage points in the decade to 1985. Since the *New Schools Policy* was abolished in 1996, the private school sector's enrolment share has increased at a faster rate than during the previous decade – an average of 0.38 percentage points per year between 1995 and 2003 (Australian Bureau of Statistics, Cat. No.4221.0).

Figure 3 shows the private school sector's share of school enrolments from 1963 to 2002. In addition to its share of total enrolments, the sector's shares of primary and secondary enrolments are shown separately. A number of features are noteworthy. First, the private school sector's share of secondary school enrolments has exceeded its share of primary enrolments over the entire period covered by the graph. Second, the private enrolment share fell from the early 1960s through to the

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[4] Compared to an average annual increase of 3.7 per cent per student in government schools.
[5] This provision did not apply to schools that were part of systems, such as Catholic schools.

late 1970s, in fact until well after the introduction of recurrent funding from the Commonwealth. Third, since the late 1970s the private enrolment share has grown consistently, and was about 10 percentage points higher in 2002 than its low of the late 1970s. The increase in the secondary school share over this period was higher – closer to 13 percentage points. Fourth, the increase over the period was not uniform, with some 'pauses' in the growth in the private enrolment share. Growth in the secondary share stagnated twice, in the recessions of the early 1980s and 1990s – both periods associated with strong increases generally in Year 12 retention in Australia, which was concentrated in government schools. However the growth in the private share of primary enrolments also slowed in the latter period, which suggests some other factor may have been at work, such as the impact of the *New Schools Policy* between 1985 and 1996.

Figure 3: Private school enrolment share: 1963 to 2002
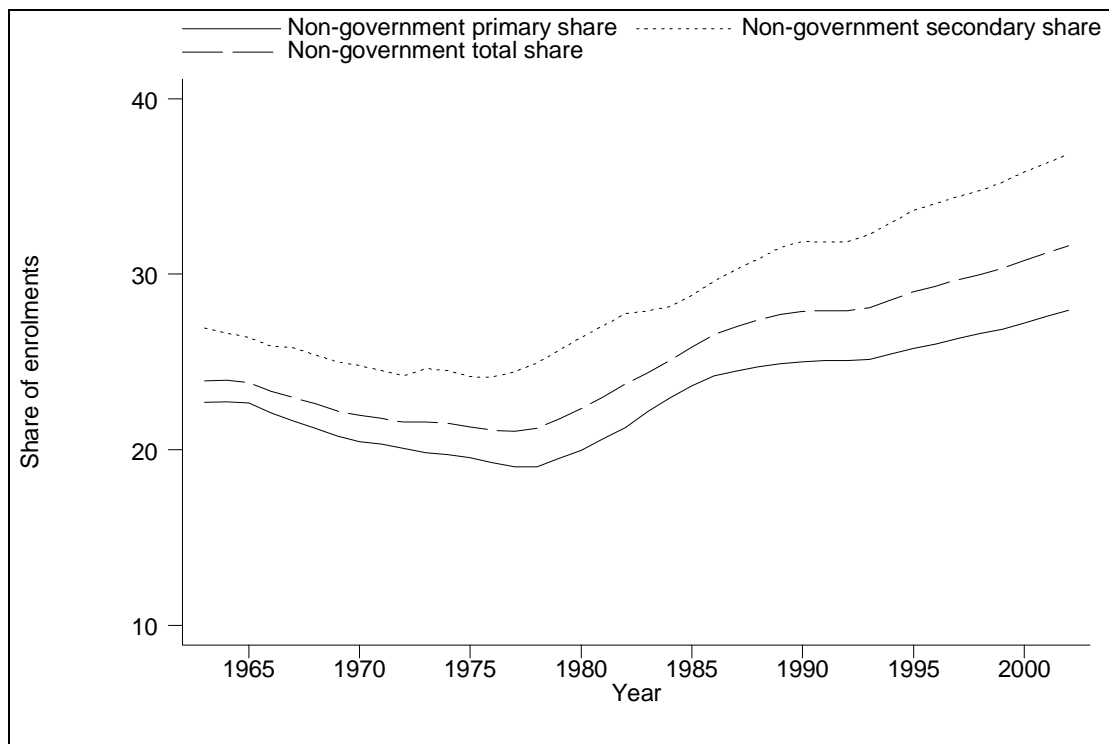
Williams (1985) analysed the determinants of the private enrolment share from 1963 to 1983. He found that student: teacher ratios in the private sector had a positive effect on the enrolment share, while increases in the government sector's student: teacher ratios had a negative impact on the private enrolment share. The enrolment share also rose with government grants and contributed services. Williams

found that improved student: teacher ratios in the private sector provided by government funding had a more positive impact on the enrolment share than improvements financed from private sources (increased fees).

In summary, Commonwealth government subsidies to private schools have increased steadily in real terms since 1974. From 1985 to 1996, government subsidies were provided within a regulatory framework that sought to restrain the growth of private schools and encouraged schools to maintain their fees in real terms. Since 1996, there have been no restrictions on the growth of private schools other than normal registration requirements. Since 2000, general recurrent subsidies are allocated within an SES-based funding scheme that does not take into account the fees charged by private schools. Thus private schools are no longer encouraged to maintain their fees, nor discouraged from reducing them. Private school enrolments have increased since 1977 with higher proportions at the secondary level. Secondary school enrolments stagnated twice, during the recessions of the early 1980s and early 1990s. The growth in primary school enrolments has slowed a little since 1985. Factors that appear to influence the pattern of enrolment growth include government regulations such as the *New Schools Policy*, and other factors, such as the level of government subsidies and changes in student: teacher ratios, that are explored in the next section.

4. <u>The relationship between school fees and enrolments</u>

While our earlier discussion dealt in aggregate with the private school sector, much of the discussion that follows will identify separately trends and developments in the Catholic and Independent school sectors. Moreover, from this point much of the analysis will focus on developments in secondary schools for a number of reasons. First, the private school enrolment share is highest there. Second, the data we use later to look at the social background of students relates to secondary school students. Third, the focus of community concern about differences in school operation and student performance and behaviour typically relates to secondary schools and their students. Ultimately, it is also the point where the 'success' and 'failure' of students and their schools are measured through public assessment in Australia.

Figure 4 shows the enrolment shares of the Catholic and Independent secondary school sectors separately over the period 1965 to 2002. The Catholic sector has the larger secondary enrolment share, 21.3 per cent compared with 15.6 in

2002, but has grown more slowly than the Independent sector since 1980 – by 3 percentage points compared with over 7 percentage points.

Figure 4: Private secondary school enrolment share: 1965 to 2002
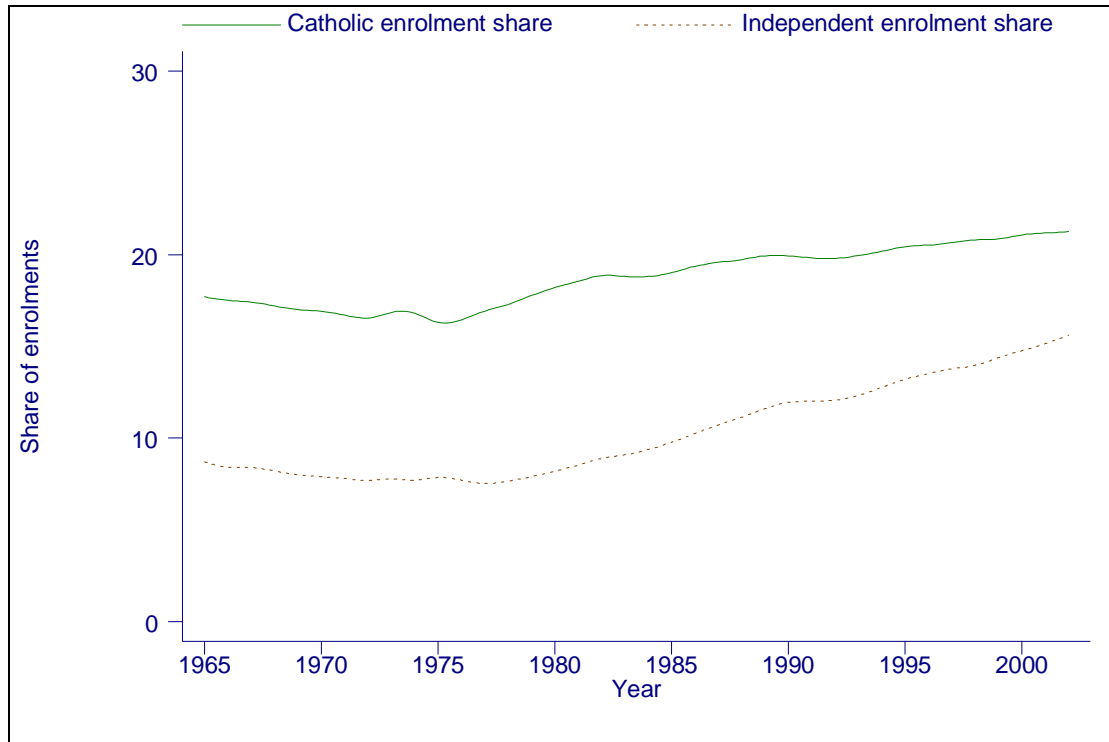
Fees in the Catholic system are substantially lower than in the Independent sector. These are shown in 2003 dollars in Figure 5. In 2002, average fees in the Catholic system were almost $2,500 per annum, compared with over $6,000 in the Independent sector. The fees in the Catholic system have more than doubled from the early 1970s in real terms, with smaller growth evident in school fees in the Independent sector (160 per cent increase in Catholic school fees compared with 70 per cent in Independent school fees).[6]

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[6] These increases in real fees exceed increases in real incomes over the same period. Per capita real household disposable income increased by 46 per cent between 1972 and 2002, while real male average weekly earnings increased by 26 per cent.

Figure 5: Private secondary school fees: 1971 to 2002
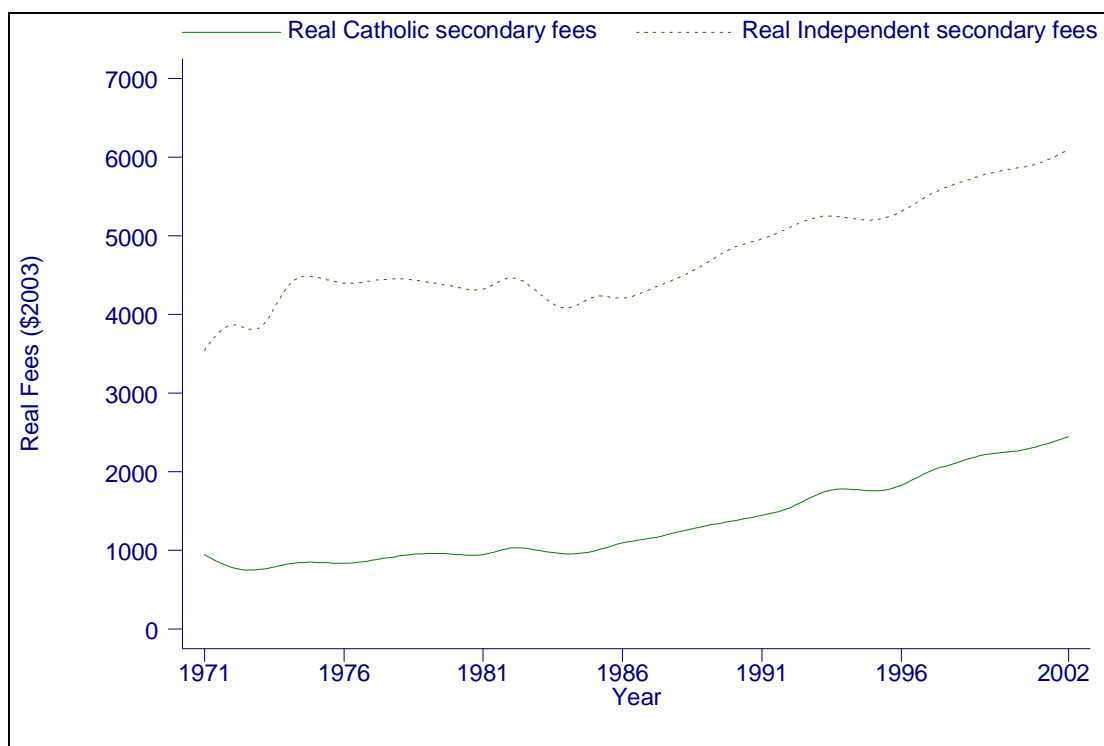
A feature of Figure 5 is that the growth in real fees in both the Catholic and Independent sectors took place from the mid-1980s.[7] The growth rates were substantial – around 5 per cent per annum in real terms in the Catholic sector and over 2 per cent in the Independent sector. The growth in real fees paused during the early 1990s, before returning the previous rates after 1995.

One consequence of the lower fees charged in the Catholic sector is that the resources available for the education of students are also lower there than in the Independent sector. Student: teacher ratios are, therefore, higher in the Catholic sector than in the Independent sector. These ratios are shown in Figure 6 for the Catholic, Independent and Government secondary sectors. The private sector figures relative to the ratios operative in government schools in the relevant years are shown in Figure 7. The increase in Commonwealth recurrent funding following the Karmel Report allowed private schools to lower their student: teacher ratios during the 1970s, but the ratios relative to the Government sector deteriorated in the private sector until about 1980 and improved thereafter.

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[7] Williams (1985) found that aggregate private sector fees fell initially after the increase in recurrent grants to the early 1980s. However, estimates attributed to him in Ruby, Wells and Wildermuth (1995) include the same increase in fees from the mid-1980s as found here.

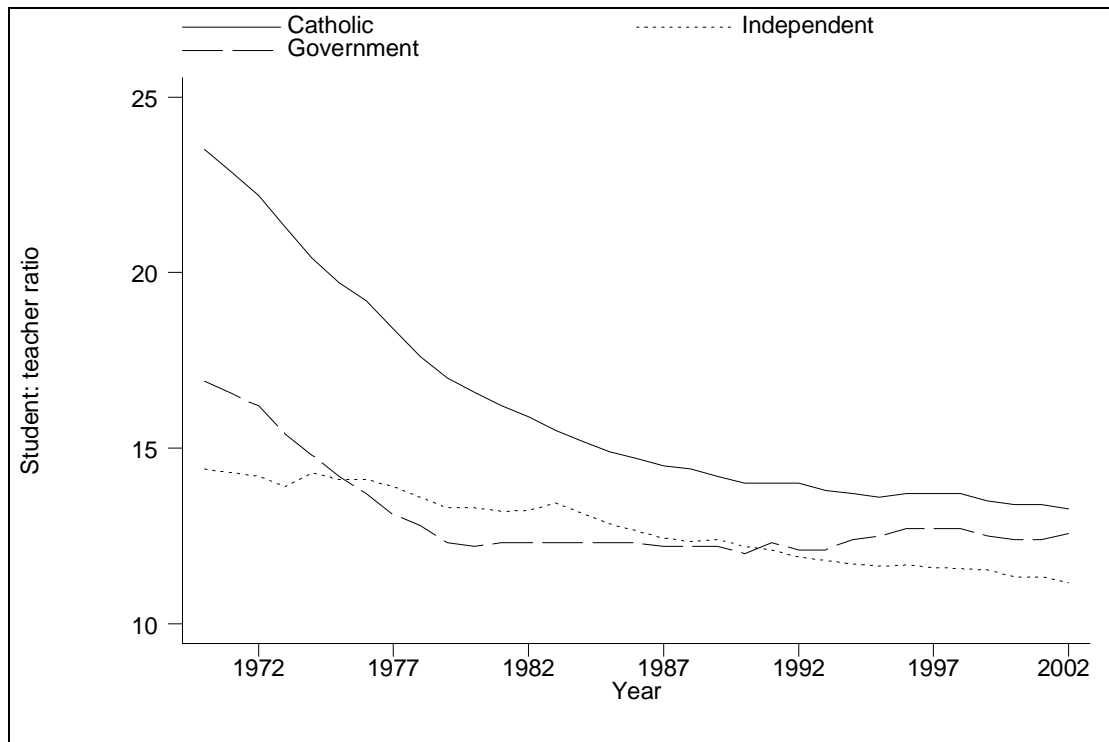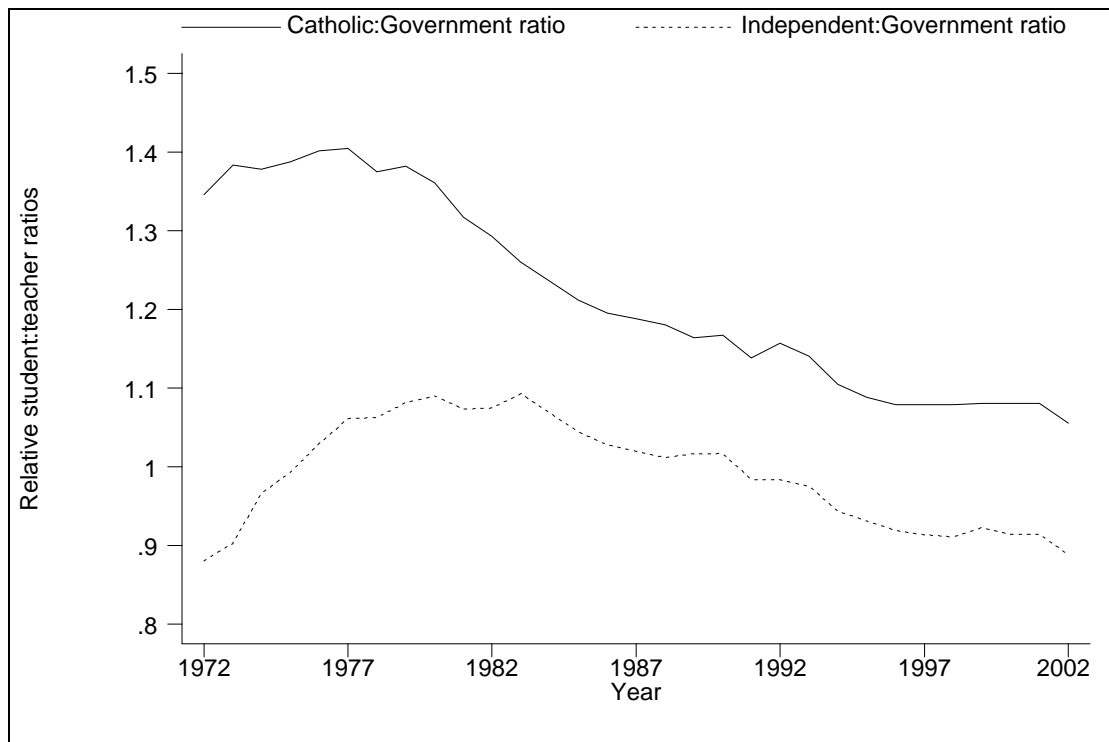**Figure 6: Student: teacher ratios in government and private secondary schools: 1970 to 2002**

Figure 7: Student: teacher ratios in private secondary schools compared to government secondary schools: 1972 to 2002

A number of factors contributed to the relative deterioration in private school student: teacher ratios in the 1970s. First, the decline in the membership of religious orders who taught in the Catholic system meant that the costs incurred in that system increased. Known as 'contributed services', their significance was that they accounted for about approximately half the recurrent costs of Catholic secondary school education in the early 1970s, but only a quarter by the end of the 1970s and less than 10 per cent by the late 1980s. The lay teachers who took the place of members of religious orders had to be paid, which limited the extent to which the sector could improve student: teacher ratios. Second, student: teacher ratios in Government secondary schools decreased substantially in the 1970s, remained constant over the 1980s and increased slightly during the 1990s. The improvement in the relative ratios for the Catholic and Independent sectors from the late 1970s and early 1980s reflects the fact that reductions took place in those sectors but not in government secondary schools. The increased fees charged by the Catholic and Independent sectors after 1996 appear to have bought little improvement in student: teacher ratios in those sectors to date.

Commonwealth and State government grants to private schools have provided substantial sources of resources to them. Their significance is highlighted in the following two figures. Figure 8 shows how the shares of total resources accounted for by government grants to the Catholic and Independent sectors have grown over time. By 2002, government grants constituted about two-thirds and one third of the total recurrent resources of the Catholic and Independent secondary school sectors respectively. Where governments contributed $1 to $1.50 for each dollar of fee income in the Catholic secondary system in the early 1970s, in 2002 this had increased to about $2.50.[8] In the Independent system, the increase was from about $0.25 to $0.70.

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[8] This estimate ignores the role of contributed services in the Catholic system in the early 1970s, but Figure 8 does not. Governments contributed about $0.50 for each dollar of "effective" services in the Catholic secondary system in the early 1970s.

Figure 8: Government and State government grants as a share of total private school recurrent resources: 1972 to 2002
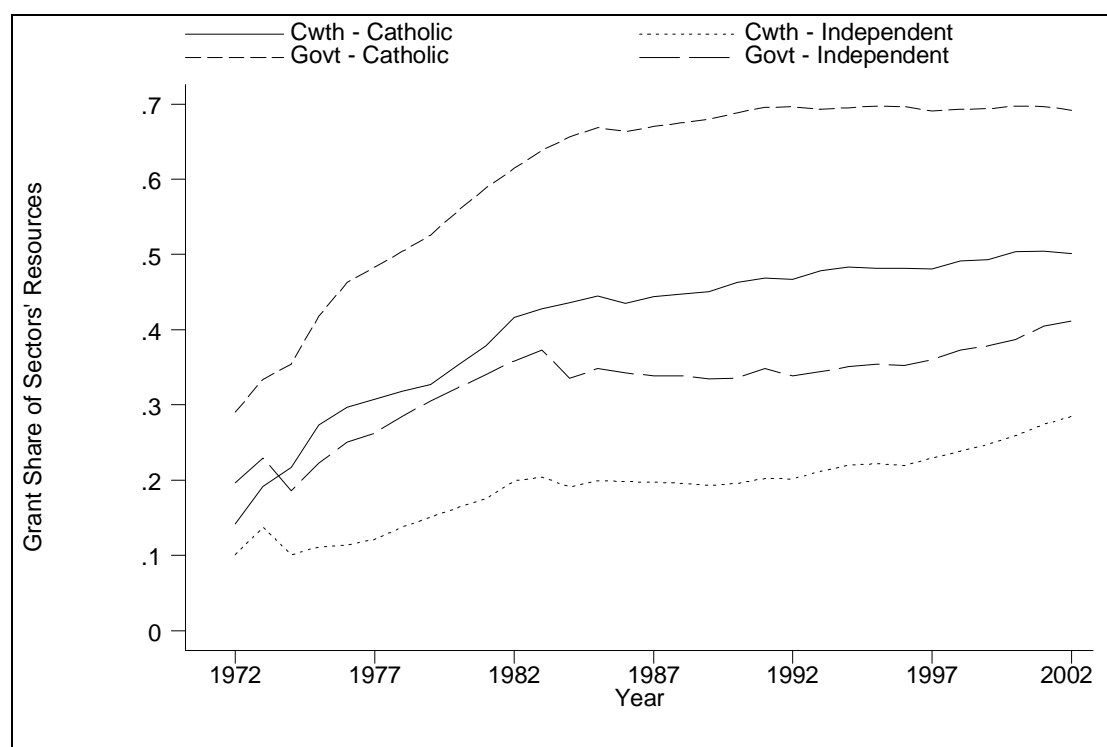
As noted earlier, private schools used the Commonwealth grants, at least in part, to reduce their student: teacher ratios. Figure 9 contains estimates of what the student: teacher ratios would have been in the Catholic and Independent sectors in the absence of Commonwealth funding. The estimated ratios would have been higher in the Independent sector than in the government sector in the absence of Commonwealth grants. The estimated ratios would have been substantially higher in the Catholic sector – in fact, more than double the observed rates since the start of the 1980s – in the absence of Commonwealth grants. In effect, these ratios would have been little changed from their 1970s levels in the absence of government grants. Had grants remained at their 1974 levels from the Karmel Report, the student: teacher ratios in the secondary Catholic and Independent sectors would have been about 21 and 14 respectively in 2002, lower than shown in Figure 9 in the absence of any funding, but still well the actual levels shown in Figure 6.

Figure 9: Student: teacher ratios in private secondary schools – actual and estimates without Commonwealth grants: 1972 to 2002
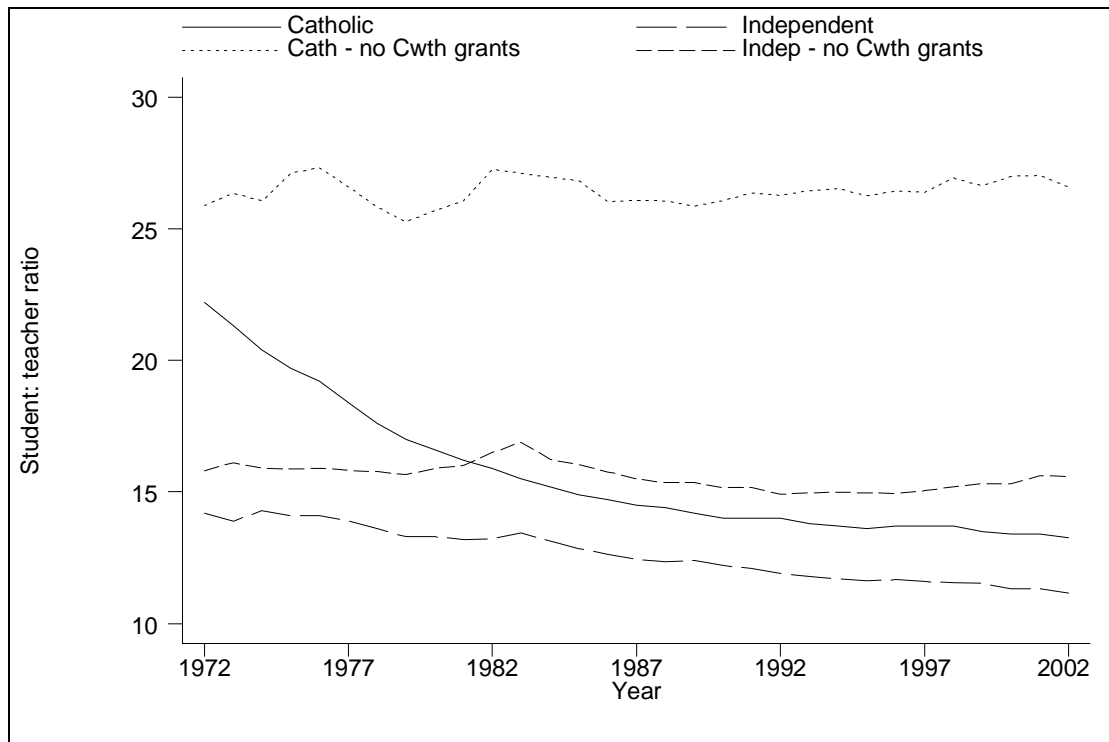
Alternatively, we could have shown how much the fees private schools charge would have had to increase, in the absence of government grants, to achieve the lower student: teacher ratios observed since the 1970s. These fee increases would have had to have been very substantial. Of course, these sets of estimates do not provide a "counter-factual" for what would have taken place in the absence of government grants – the private school share of students would not have increased so much had either, or both, private school fees or student: teacher ratios been substantially higher (consistent with Williams 1985). Rather, they are presented to highlight the significance of government subsidies as sources of funding for private schools since the 1970s.

We now depict some of these trends in fees, enrolment shares and student: teacher ratios in a somewhat different way. That is we look at the enrolment shares and real fees jointly through time, presenting the outcomes in a manner akin to Figure 1 for both the Catholic and Independent sectors. This appears in Figure 10.

Figure 10: Private secondary school enrolment shares and real fees: 1972 to 2002
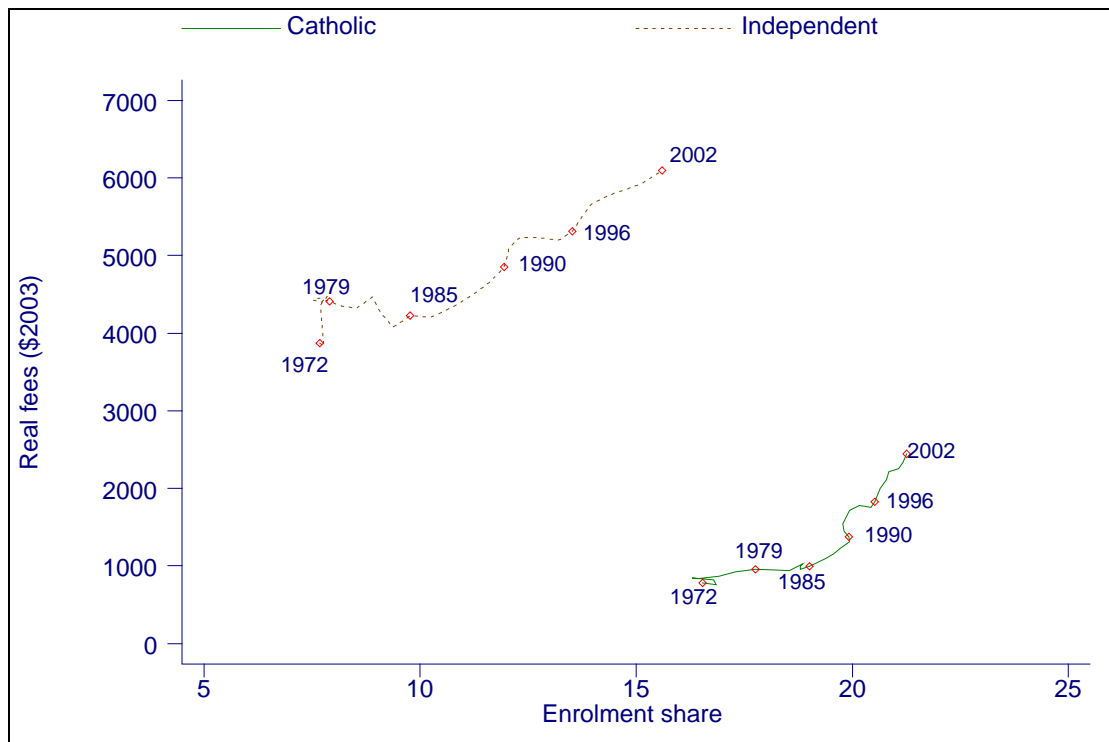
As evident from the earlier figures, in the Catholic and Independent sectors, both enrolment shares and real fees have increased through time. In the Independent sector, both fee increases and enrolment share increases were modest until the mid-1980s, but increased consistently thereafter. In the Catholic sector, enrolment shares increased most during the period of fee stability in the early 1980s, but their growth slowed once fees in that sector began to rise. From Figure 6, this period of fee stability and rising enrolment shares coincided with strong large absolute falls in student: teacher ratios in the Catholic sector (but not falls relative to the Government sector, where student: teacher ratios were also falling). From Figure 11, the increased enrolment shares after the mid-1980s in the Independent sector were associated with improved absolute and relative student: teacher ratios in that sector.

Figure 11: Private secondary school enrolment shares and student/teacher ratios relative to government schools: 1972 to 2002
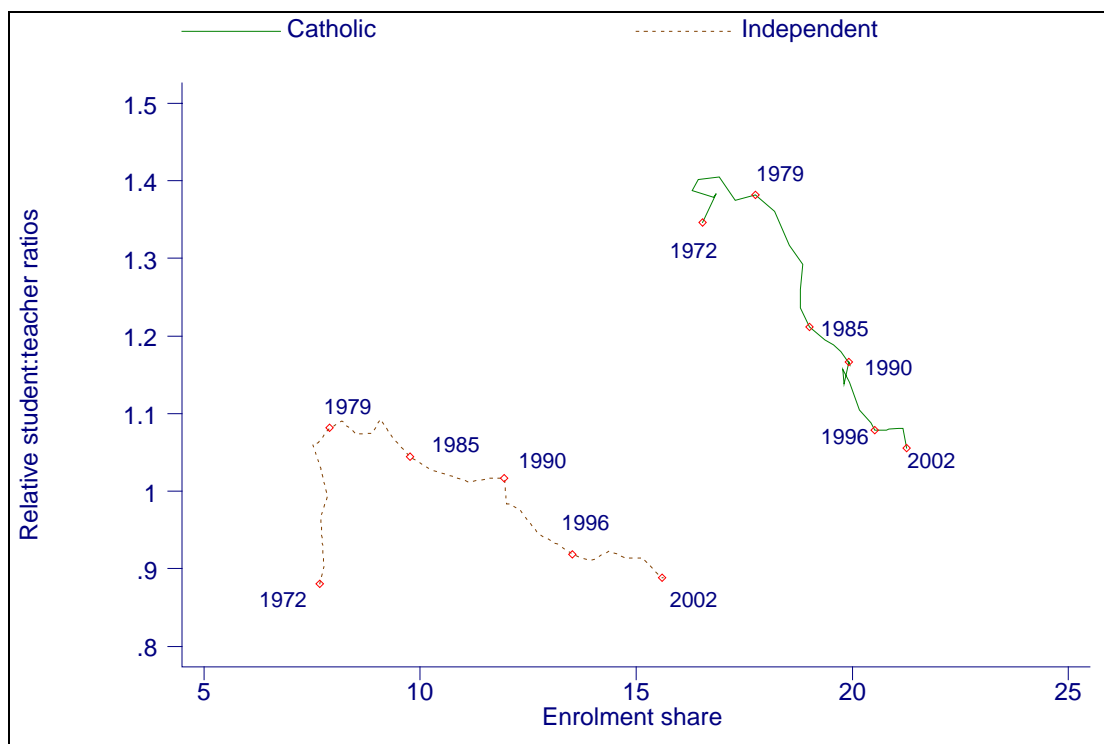
In summary, government subsidies enabled private schools to improve their student: teacher ratios substantially from 1975. As the student: teacher ratio in government schools also improved between 1972 and 1980, the private sector's ratio has improved relative to government schools only since the early 1980s. The student: teacher ratio in Catholic schools remains higher than government schools whereas in independent schools it is lower. The improvement in the student: teacher ratios of private schools (relative to government schools) since the 1970s has been associated with an increase in their enrolment share. Student fees in private schools also increased in real terms from 1972, but with no apparent negative impact on their enrolment share. It appears that improved student: teacher ratios in private schools, relative to government schools, have dominated any negative impact from real fee increases since the 1970s.

5. The social background of students: 1975 compared with 1998

In this section we use data from two cohorts of students to assess changes in the social background of students who attend private schools. The cohorts were in school in 1975 and 1998, respectively. The data are drawn from the *Youth in Transition* 1961 birth cohort (the 1975 school cohort) and the *Longitudinal Surveys of*

Australian Youth Year 9 cohorts of 1998 (the 1998 cohort). These data are collected under a program managed jointly by the Australian Council for Educational Research (ACER) and the Commonwealth Department of Education, Science and Training.

The 1975 cohort was an age-based cohort. When surveyed in 1975, the respondents were aged 14 years. The actual grades students were in across Australia when surveyed reflected differences in the structure of the schooling systems, school commencement procedures across Australian jurisdictions and the timing of the survey (or at least, the reference date for age in the survey of the beginning of October). Members of the cohort were drawn from Years 8, 9 and 10 when first surveyed in 1975. The 1998 cohort was a grade-based panel. Students were in Year 9 in 1998, but varied by age, again depending on differences in the institutional features of the Australian jurisdictions and the October reference date for age in the survey.

The data from these cohorts were drawn from two-stage cluster samples of Australian school children. In the first stage, schools were randomly selected. In the second stage, students from those schools were randomly selected. In the 1975 cohort, individual 14 year old students were randomly selected; in the 1998 cohort intact classes were randomly selected. The samples were stratified in the first stage by school sector (government, Catholic or independent private schools), and in the case of the first cohort by region within jurisdictions also. The 1975 cohort involved 6260 students from 264 schools; the 1998 cohort 14117 students from 296 schools. These sample sizes represented about 2.5 per cent of fourteen year olds at secondary school in Australia in 1975 and 5.5 per cent of Year 9 students in 1998. In both cohorts, approximately 12 per cent of schools with secondary school students were surveyed. All population means and other statistics estimated from these data in this paper are weighted to account for the relevant stratification, so that the estimated statistics are based on data that match national school enrolment aggregates.

Students in these cohorts completed questionnaires that elicited background information on the students and their parents. The students became subjects in longitudinal panels who were re-interviewed in later years. These later interviews provided the opportunity to obtain further background information from individuals. Because of panel attrition and differences across the cohorts in the sequencing and the nature of the information sought from individuals, the background information on individuals in the two panels is neither complete nor entirely comparable.

Nevertheless it is possible to construct socio-economic status (SES) scales from the two cohorts that do encompass satisfactorily the social background of individuals as it affects education-related phenomena. The procedure involves a number of steps. First, for each cohort separately, we use data on individuals with complete background information to explain their participation in some education-related phenomena (desired or anticipated future occupation in this case). Second, we use the estimated parameters from this equation and the actual background information on individuals to generate 'predicted' values for the relevant phenomena. We then rank individuals within their cohort according to their predicted values to give a first round SES ranking that lies between zero (lowest) and one (highest). We use these estimates to calculate school average SES scores. We then impute SES values for individuals with missing data using these school average SES scores and any relevant observed background data they did provide and then re-calculate the SES scales and school averages.[9] The resulting SES rankings are specific to each cohort. That is, they show relative rankings for individuals within their cohort.

The average SES scores of individuals who attended different school types in the two cohorts are presented in the lower panel of Table 1. The upper panel of Table 1 shows the enrolment shares of the different school types and the way they changed between the cohorts. The enrolment share of private secondary schools increased by 13.5 percentage points between the cohorts, with Catholic schools picking up just under half and Independent schools over half of that increase.

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[9] The analysis that follows uses data that includes individuals with imputed SES values. It was replicated using data only from those individuals who provided complete information. The results using all observations or the sub-sample of complete respondents do not differ in any substantial way.

Table 1: Secondary enrolment shares and average SES scores by school type in 1975 and 1998

School type	1975	1998	Change 1975 to 1998
	Enrolment shares (%)		
Government	77.7	64.2	-13.5
Private	22.3	35.8	13.5
Catholic	15.1	21.7	6.5
Independent	7.2	14.2	7.0
	Average SES		
Government	0.463	0.434	-0.029
Private	0.630	0.619	-0.011
Catholic	0.583	0.578	-0.005
Independent	0.729	0.681	-0.048

The average SES of students is highest in both cohorts for those who attend Independent schools, followed by Catholic schools and Government schools. The interpretation of these SES scores is as follows: in 1975, the average student at an Independent school had an SES background that was higher than 73 per cent of students. The pattern of school type enrolment share by SES is similar for the 1998 data as the analysis of enrolment shares by SES using the 1996 Census in Mukerjee (1999) and by family income using the 2001 Census in Preston (2003).[10, 11]

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[10] In Preston's analysis of secondary enrolments in low, middle and high family income groups (categories that split secondary school students into groups of roughly equal size), the proportion attending Government schools in these income groups were 76, 67 and 48 per cent. The proportions in the other sectors were: Catholic: 15, 22 and 27; Independent: 9, 12 and 25. Splitting Mukerjee's analysis into three groups (lowest three SES quartiles, middle four quartiles, top three quartiles) provided the following enrolment shares: Government: 78, 67 and 50; Catholic: 17, 22 and 24; Independent: 5, 11 and 27. If we split our data into three groups of equal size, consisting of low, middle and high SES groups, we obtain the following enrolment shares: Government: 79, 65 and 58; Catholic: 15, 24 and 22; Independent: 7, 11 and 20. The enrolment share patterns across the three different data sets using three different SES or income measures are similar at this level of aggregation, other than for the highest SES group.

[11] We have not found any directly comparable analyses for the patterns in the 1975 data. However, re-analysis of data contained in Radford and Wilkes (1975: 60) of the fathers' occupations of school leavers by school type suggest a similar pattern of school type enrolment share by SES in their data to the data we use here.

From Table 1, the average SES of students at government schools fell between the cohorts by 2.9 percentage points, while the average SES of students at private schools decreased by 1.1 percentage points. The private decrease was composed of a very small decrease in the average SES of students at Catholic schools and a larger decrease in the average SES of students at Independent schools. These changes suggest that the students who transferred from government schools were above average SES students for the government system (and hence tended to be from the top half of the SES distribution, given its 1975 average student SES of 0.463). In fact, the average SES of students who transferred from the government to the private sector can be estimated from Table 1 – it was 0.600. At the same time, those who entered private schools tended to have lower SES backgrounds than the typical private school student in the first cohort. The average SES of students who transferred to the Catholic and Independent sectors were 0.567 and 0.632 respectively.

These averages already tell us something about where in the SES distribution the transfer of students from the government to the private systems took place. In order to identify this a little more clearly, Table 2 shows the change in enrolment shares of the three sectors between the two cohorts by SES decile and Figure 12 provides a picture of the same data. The drift away from government schools to both the Catholic and Independent sectors is much more pronounced in deciles 5 to 10 than in the first four deciles. That is, the change in enrolment shares has been concentrated in the top half of the SES distribution.

More information on this is contained in Figures 13 and 14. These show non-parametric estimates of the probability individuals attended either an Independent or Catholic school in the two cohorts conditional on their SES background.[12]

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[12] These were estimated using the *lowess* procedure in the *STATA* package, with bandwidths of 0.4. Other nonparametric approaches to the estimation of the probability of attendance at a particular type of school given individuals SES rankings, for example local polynomial regression, provided similar pictures to those presented.

Table 2: Changes in secondary enrolment shares by sector and SES decile between 1975 and 1998

SES Decile	Government		Catholic		Independent	
1	-0.043	***	0.015		0.028	***
2	-0.084	***	0.023		0.061	***
3	-0.132	***	0.081	***	0.050	***
4	-0.064	***	0.037	**	0.026	**
5	-0.147	***	0.108	***	0.039	***
6	-0.239	***	0.157	***	0.082	***
7	-0.251	***	0.100	***	0.151	***
8	-0.116	***	0.026		0.090	***
9	-0.195	***	0.126	***	0.070	***
10	-0.120	***	-0.003		0.123	***
Total	-0.135	***	0.065	***	0.070	***

'*', '**' and '***' indicate significance at the 10, 5 and 1 per cent levels respectively.

Figure 12: Changes in enrolment share by sector and SES decile between 1975 and 1998
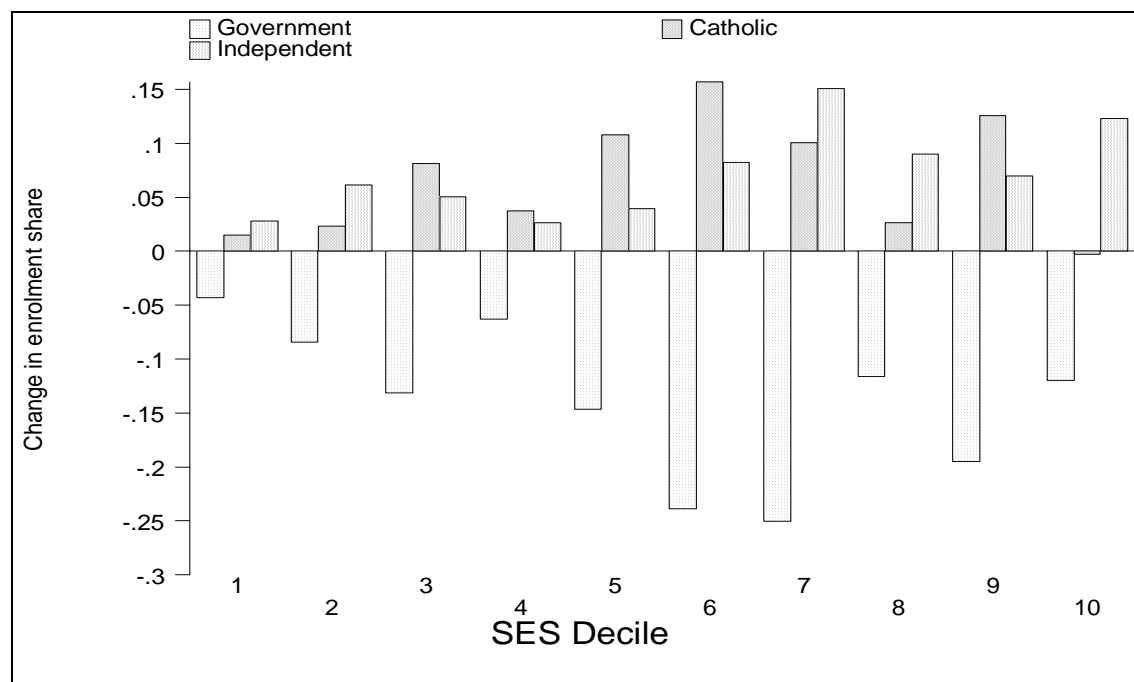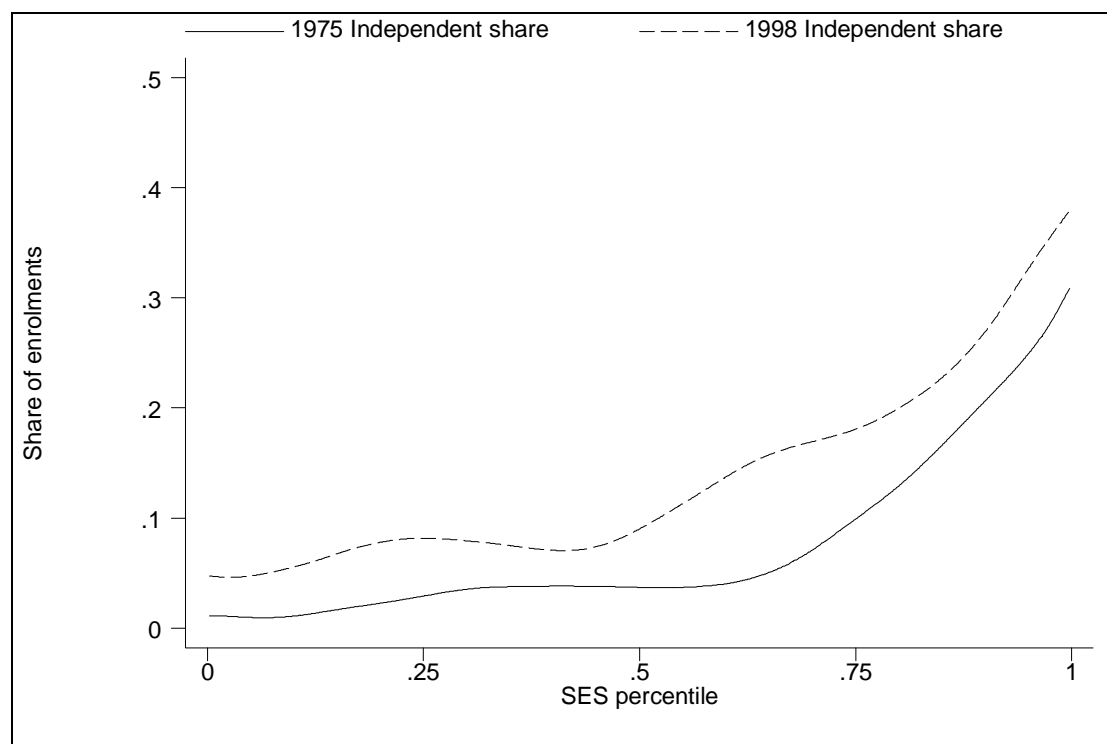
Figure 13: Probability of Independent school enrolment by SES: 1975 and 1998


Figures 13 and 14 show very different enrolment patterns in Independent and Catholic schools across the SES distribution. We focus first on the 1975 curves. In 1975 just 7.3 per cent of students attended Independent schools (in the smoothed data). The main feature of the estimated proportion who attended Independent schools in 1975 is the sharp spike beyond the 70th SES percentile. At the top of the distribution, over 20 per cent of students attended Independent schools in 1975. In the lower half of the distribution, the enrolment share was below the 7.3 per cent average. The 1975 Catholic enrolment curve in Figure 14 also shows higher shares in the top quarter of the SES distribution, but the increase is much less pronounced than the Independent enrolment spike. Throughout the rest of the distribution, the Catholic enrolment share increases modestly with student SES.

By 1998, the Independent and Catholic enrolment shares had increased compared with 1975 across much of the SES distribution. For Independent schools, the increase occurred across the entire distribution (the 1998 curve is always above the 1975 curve in Figure 13), but is most pronounced in the top half of the SES distribution. The largest estimated increase occurred between the 50th and 80th percentiles (about 9 percentage points). For Catholic schools, the increased enrolment

share was little changed in the lowest and highest quartiles of the SES distribution, but increased substantially in the middle. The increase was most pronounced between the 40th and 80th percentiles (also 9 percentage points).

Figure 14: Probability of Catholic school enrolment by SES: 1975 and 1998
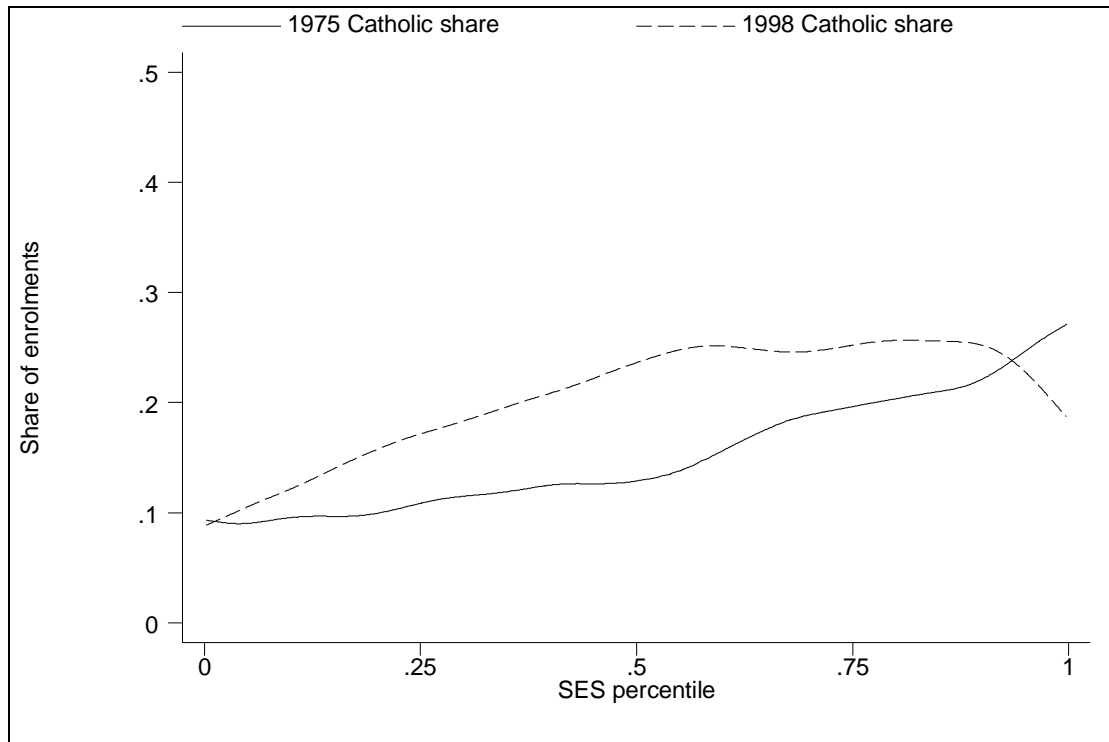
What have these increases meant for government school enrolments across the SES distribution? Figure 15 shows the change in the enrolment share between the cohorts by individual SES ranking. Between 1975 and 1998, the enrolment share of government schools fell by 11.3 percentage points in the (smoothed) data. About 60 percent of that decline took place in the top half of the distribution in the smoothed data in Figure 15 and 70 percent in the actual data in Table 2. The government school enrolment share fell by about 20 percentage points between the 50th and 70th percentiles and in excess of 10 percentage points between the 70th and 90th percentiles. These estimates and Figures 12 and 15 highlight the point made already in Table 2: that the students who were lost from government schools tended to come from the top half of the SES distribution.

Figure 15: Probability of Government school enrolment by SES: 1975 and 1998
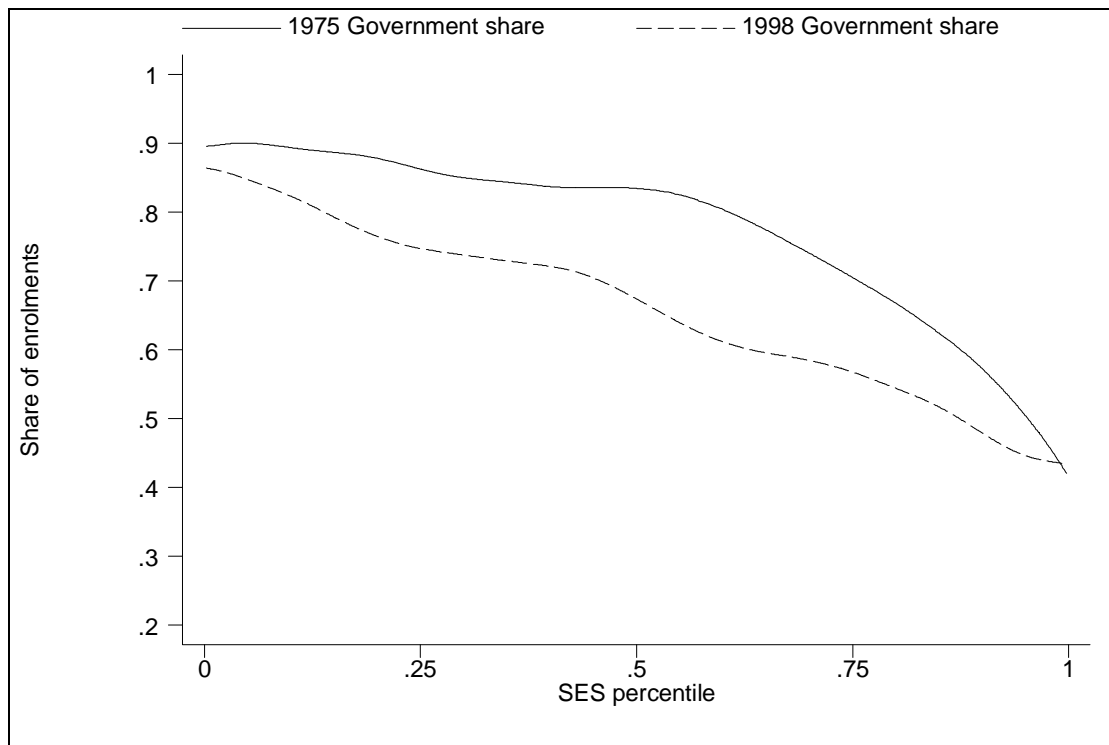
To summarise, the average SES of students in government schools fell by 2.9 per cent between 1975 and 1998 while the average SES of students in private schools decreased by 1.1 percentage points. Thus although the estimated secondary enrolment share of private schools increased by 13.5 per cent over the period, the relative average SES of their students did not change compared with those of government schools. The average SES of private school students was about 17.5 percentage points higher than government school students in both 1975 and 1998. However, these figures mask important shifts in the compositions of the student bodies. The students who transferred from government schools to private schools over the period tended to be from the top half of the SES distribution. They were from above average SES backgrounds relative to the 1975 government school population, but below the average SES of the 1975 private school population. Around two thirds of the decline in government school enrolments between 1975 and 1998 occurred in the top half of the SES distribution.

6. Changes in average school SES between 1975 and 1998

 In this section we look at how the changes in the average social background of the students of the various school sectors discussed in the previous section have influenced the social composition of the sectors' schools. We use the same data as in the previous section to look at this issue, though now we use aggregate data averaged over students at the same school. In other words, the average SES of a school is estimated from the individual students' SES scores.

 One point should be immediately apparent – any change in the average SES of students in a school sector will carry over to a change in the average SES of schools in that sector. In line with Table 1, the average school SES fell in the Government, Catholic and Independent sectors between the 1975 and 1998 cohorts in the data we use. As we noted in the previous section, the Government school sector lost students from the top end of its SES distribution to private schools during the period, but these students were generally of a lower SES than the private school students of 1975. Thus the drift of students from government to private schools also had the effect of lowering the average SES of the private school sector, from 0.642 in 1975 to 0.604 in 1998 (compared to 0.466 in 1975 and 0.430 in 1998 for government schools).

 Various approaches have been used in Australia to estimate the social background of students who attend schools. One approach used to assess the degree of social disadvantage of student populations at specific schools has been to assign features of the region in which the school is located to the school (for example, Ross, Farish and French 1985). A related approach has been to assign area-based SES measures to schools based on the Census Collection Districts where the schools' student populations live (for example, the Australian Bureau of Statistics Census based socio-economic status indexes are used in the funding arrangements for Independent schools introduced in 2000 – see DEST 1998). The validity of both approaches, compared with student-based measures, remains an open question. Batten (1995) reported that most Australian jurisdictions supplemented the Ross *et al.* (1985) approach with additional information to identify schools with large numbers of disadvantaged students for the allocation of additional funding. Ainley and Long (1995) found that the correlation between the ABS SES indexes and student-based indexes constructed for schools was always less than 0.5. More recently, DEST (1999) reported that the correlation between the ABS SES indexes and student-based

indexes constructed from LSAY data for private schools was as high as 0.85. These area-based indexes may be more reliable for private schools than government schools.

We use student-based school SES measures and diagrams similar to those of the previous section to address the following question: what is the average SES of the school students at various levels of the individual SES distribution attended in each of the sectors? How much does it vary with an individual's own SES level? How much does it differ between the sectors? And has the relationships between individual SES and average school SES changed over time in the sectors?

The first three questions are addressed with the aid of Figure 16. It shows the (smoothed) average SES of the school students attended in each sector in 1998 at each level of the SES distribution. Generally, there is a positive relationship in all three sectors: in 1998 students tended to go to schools with other individuals from similar social backgrounds. That relationship appears to be similar across the sectors. In all sectors, an individual at the top of the SES distribution attends a school with an average SES level about 30 percentage points higher than an individual at the bottom of the SES distribution. Of some note for later discussion, only individuals at the very top of the SES distribution in the government systems tended to go to schools whose average SES was greater 0.5 in 1998. That is, all but individuals from the top SES quartile in the government system tend to go to schools with students predominantly from below average SES backgrounds.

The last question above was whether the relationships in the sectors between individual SES and average school SES have changed over time. The changes in the position of the average school SES curves between 1975 and 1998 in the Catholic and Independent sectors are similar across the SES distribution. Essentially, the curves in both sectors in 1975 are similar to those shown for 1998 in Figure 16, except that they moved down between 1975 and 1998.

Figure 16: Average SES in secondary schools by sector by SES ranking in 1998
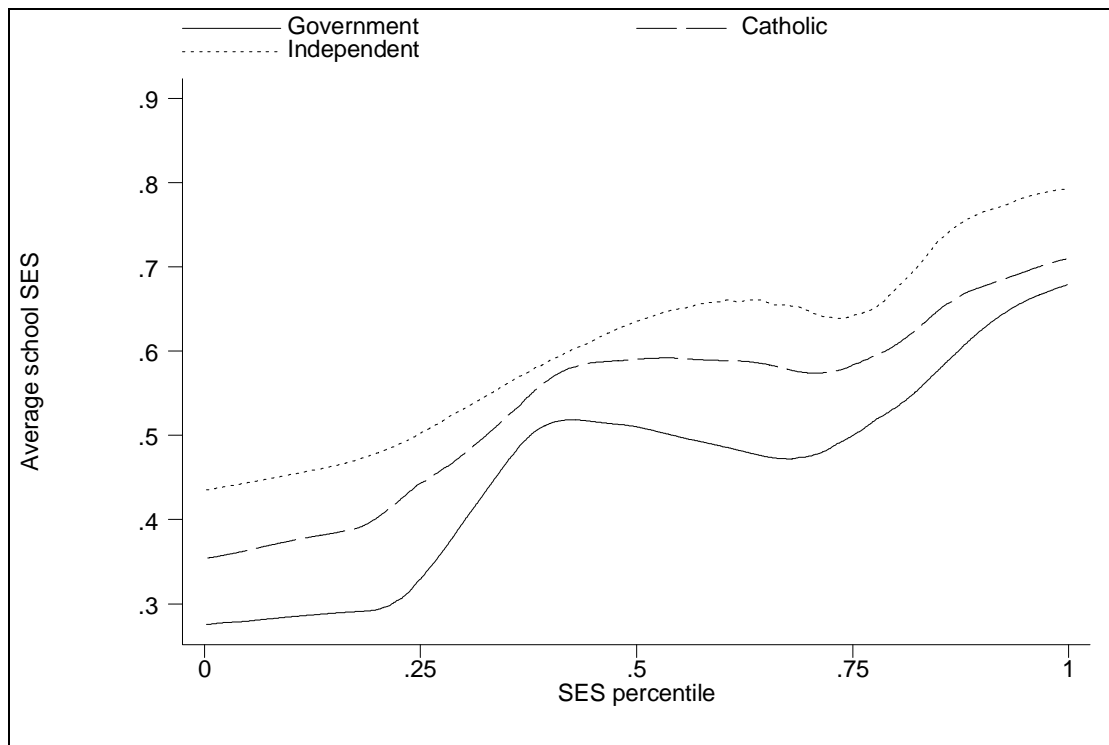
We focus however, on what happened in the government sector. There are two reasons for this. First, the number of Government schools with students in the data is much larger than for schools from the other sectors (see Table 3), especially for the earlier cohort, so the data on changes relating to schools over time are likely to be substantially more reliable for that sector than the others. Second, the data show a more concentrated change in average school SES in that sector than in the others. This is shown in Figure 17.

For most government school students in the lower half of the individual SES distribution, the average SES of their school changed little between 1975 and 1998. The same was true for government school students at the very top of the SES distribution. However, for government school students between the 50th and the 80th percentiles, the average SES of their school fell by up to 15 percentage points between 1975 and 1998. In 1975, students from the 60th percentile in the government system tended to go to schools with students with similar average SES backgrounds to other students in the top half of the distribution, other than those at the very top of the SES distribution. However, by 1998 that was no longer the case.

Figure 17: 1975 and 1998 average SES in government secondary schools by SES ranking
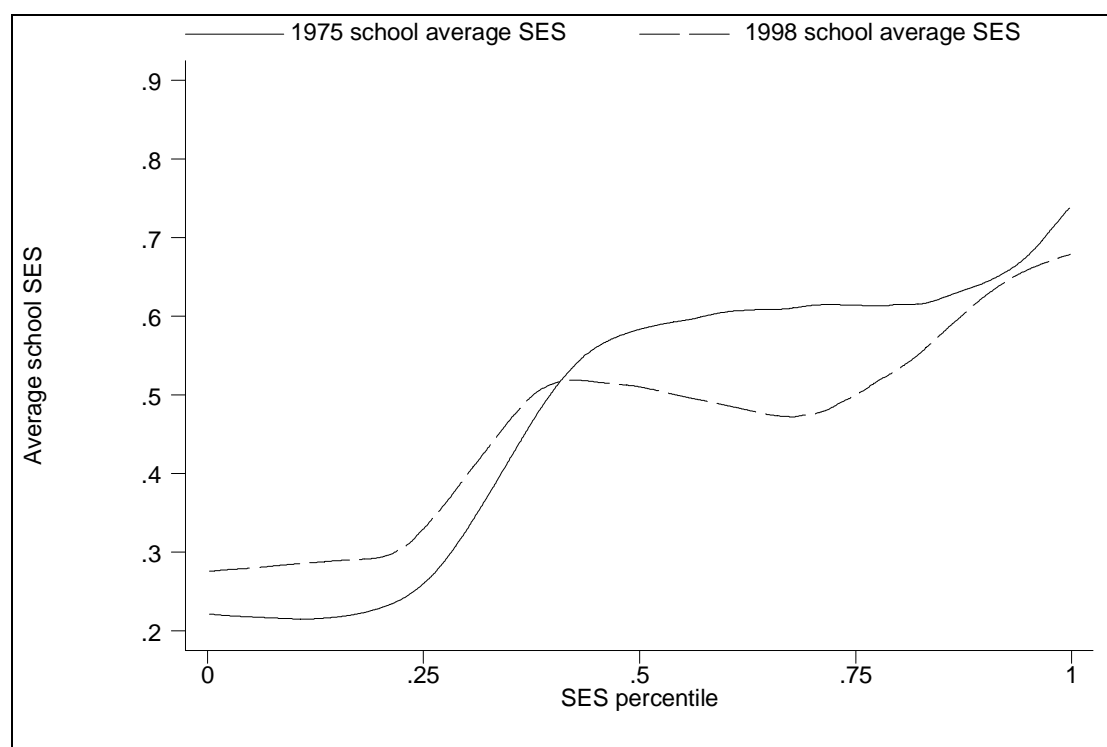
Table 3: Number of schools by school type in 1975 and 1998

School type	1975	1998	Change 1975 to 1998
		Number of schools	
Government	203	190	-13
Private	52	106	54
Catholic	34	61	27
Independent	18	45	27

Just why that occurred is apparent from Figure 18. It shows the distributions of government schools in 1975 and 1998 in terms of average student SES backgrounds. The 1975 distribution is clearly bi-modal (has two peaks). There were two common 'types' of government schools in 1975 – one with students with average SES backgrounds substantially below the average in the community and one just above the average. By 1998, a shift had taken place in the distribution of schools by their average SES background. The type of government schools with students with above average SES backgrounds had become less common and the common 'high'

SES government school was now only an average SES school. Consequently, students from the top half of the SES distribution, if they were to remain within the government sector, tended to go to schools with students who were predominantly from the lower half of the SES distribution. This had the effect of increasing the average SES of the now more common, 'low' SES type of government school.

Figure 18: Distribution of government secondary schools by average SES: 1975 and 1998
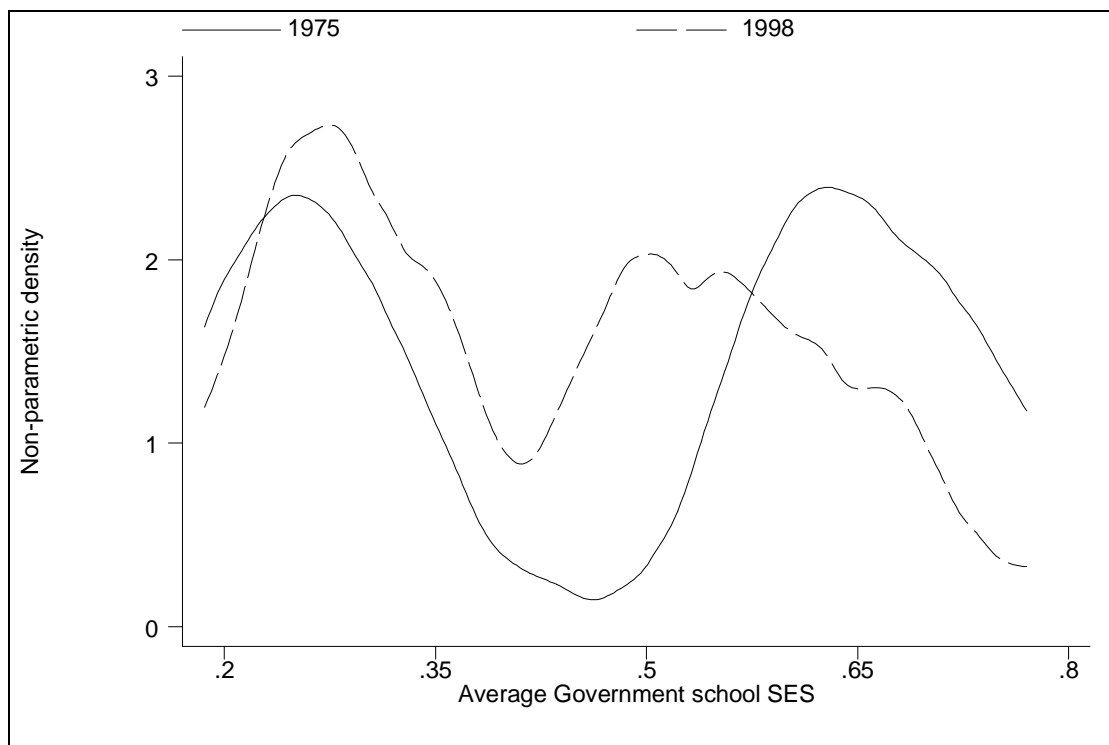
What this means is that for government schools, the lower average student SES in schools and lost enrolment share appear to coincide in the same part of the individual SES background distribution. The two curves are shown in Figure 19. The correlation between the two curves is 0.69. It appears that the loss of students from between the 50th and 80th percentile of the SES distribution has had a profound impact on the average SES of many government schools.

What are the implications of a decline in the average SES of government schools? In the previous section, we reported that there are fewer high-SES students in government schools today than there were in 1975, and Figure 18 illustrates that the share of government schools with above-average SES students has declined while the number of government schools with a concentration of low-SES students has

increased since 1975. Should this trend be of interest to policy makers? In the remainder of this section we summarise the research on these issues and make some suggestions about their implications for policy.

The first issue is the influence of socio-economic status on educational attainment. It is well established that individual students' socio-economic background has a significant impact on their educational attainment (see Rothman and McMillan 2003, for example). As low-SES students make up a higher proportion of government schools enrolments, observed educational attainment levels in government schools may fall. When "league tables" of results are published comparing government and private schools, the increasingly lower overall SES of students in the government school sector – and its impact on student attainment – should be acknowledged.

Figure 19: Changes between 1975 and 1998 in average government school secondary SES and the government school enrolment share by individual SES
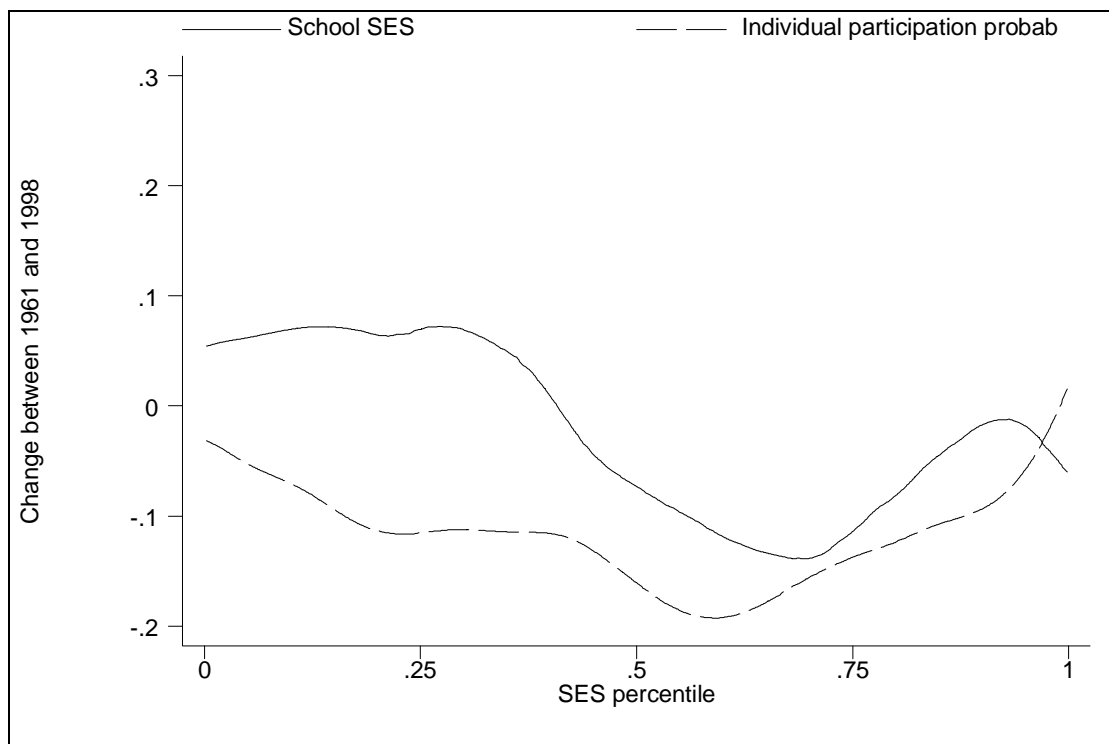
Second, the average cost of educating a student in a government school to some desired standard or benchmark should be higher than in a private school because of the higher proportion of low-SES students. Other factors, such as the community service obligation to provide schools in rural areas and to take all students – regardless of their physical attributes, the circumstances of their families or their

location – contribute to the higher cost of government schooling (Watson 2004:6-7). These differences should be taken into account when governments determine funding "benchmarks" for government and private schools. In other words, we should expect private schools to operate effectively at a lower level of resources than the average resources per student in government schools. So long as the private school sector enrols a lower proportion of low-SES students and has fewer schools in remote locations, its cost profile should be lower than the government system.

A third issue is the impact of peer effects on student performance in government schools. Several overseas studies suggest that the socio-economic composition of a student's peers influences individual student performance. The main assumption in the literature on peer group studies is that the aggregate of student characteristics such as ability, motivation and aspirations produces a dominant ethos that impacts on individual student achievement (Adler, Petch and Tweedie 1989, Fuchs, Fuchs, Hamlett and Karns 1998, Hanushek, Kain, Markman, and Rivkin 2001, Henderson, Mieszkowski and Sauvageau 1978, McDill and Rigsby 1973, Murnane 1990, Summers and Wolfe 1977). On the other hand, as for any school input, peer group characteristics do not offer a complete explanation of differences in school quality. Evidence that schools with similar socio-economic profiles can have different educational outcomes (see Lamb 1997) suggests that other inputs (such as high quality teaching) can override peer effects. But if we accept that peer group effects play some role in student attainment, the observed decline in the average socio-economic status of government schools suggests that positive peer group characteristics there may also have diminished. The loss of positive peer group effects could be expected to have a negative impact on student academic achievement in affected government schools.

In summary, the transfer of high-SES students from government to private schools since 1975 has changed the average socio-economic composition of government schools. The majority of students in government schools now attend schools where the average socio-economic status of students is below average. The proportion of government schools with concentrations of low-SES students (between the 20th and 40th SES percentiles) increased between 1975 and 1998. These trends have implications for both the costs and educational outcomes of government schooling.

7. Conclusion

In this paper we have described and analysed changed government, principally Commonwealth government, policy arrangements that have affected the level and type of grants to private schools in Australia since the 1970s.

We concluded that the increased government funding for private schools has been used primarily to improve the quality of the learning experiences of students, measured here through improved student: teacher ratios. This means that families most sensitive to changes in relative quality have been attracted to private schools, a group which might be expected to be more concentrated in the top half of the SES background distribution. Not surprisingly, we found that the top half of the SES distribution was where most of the shift in students from the government sector to the private sector had taken place.

The loss of these students appears to have affected schools in the government sector substantially, with a relative fall in schools with students from above-average socio-economic backgrounds in that sector. To the extent that the peers of students have an impact on their achievement and other outcomes, this matters for two reasons. First for retaining other above average SES students in the government sector. Second, in terms of the educational implications for lower SES students who remain in the government sector. These changes are likely to contribute to higher costs in the provision of government schooling.

In documenting changes in the government policy framework for private schools over the past three decades, we found consequences that were never explicitly stated as either the objectives or the anticipated outcomes of government policy. These included the rise in private school fees from the mid-1980s and the actions of private schools to use government subsidies to improve quality while maintaining fee levels, rather than to reduce fees. This latter phenomenon, an outcome principally of the subsidies of one level of government, influenced directly the social composition of the student bodies at schools run by another level of government and the effective costs of educating students at those schools.

It is curious that government funding for private schools has been provided on the basis of "need" (variously defined) with little explicit consideration of the impact of private school subsidies on the government school system and the "needs" of the students who attend those schools. With the exception of the Commonwealth *New Schools Policy* between 1985 and 1995, there has been no interest at the state or

federal level in properly defining the role and purpose of private schools in a subsidised system, nor in regulating the private sector to maximise student outcomes overall. This inadequate policy framework has permitted – and possibly encouraged – private schools to use public subsidies to position themselves in the market for high-SES students. A better-designed framework may have fashioned the subsidies to contribute to the public policy goal of achieving higher quality schooling for all.

If this situation continues, we are likely to see a continuing drift of above average SES students into the private school sector with the support of government subsidies. The problems posed for government secondary schooling of catering predominantly for students from lower-SES backgrounds will need to be addressed. The future viability of government secondary schooling, especially in relatively affluent metropolitan areas, must be questionable in these circumstances.

The problems raised by our analysis are not those solely for supporters of government schooling. Proponents of greater school choice advocate explicit use of student vouchers, sometimes to allow greater participation in private schools by students from disadvantaged backgrounds (Buckingham 2000). Further, the value of these vouchers should be set at the level of resources provided to government schools for their enrolments. Among the questions supporters of vouchers need to address is what would happen to school fees in such circumstances. Unless very restrictive regulations were placed on private school fee regimes, there seems no reason to anticipate that private schools will not respond to increased subsidies as they have done over the past thirty years – they will leave their fees relatively unchanged and move to improve further the quality of the schooling they provide. This would leave unaffected their affordability for students from low SES backgrounds.

We commenced by saying that this was a preliminary analysis aimed to inform the direction of further research on Australian schools. The history of funding for private schools and the impact this has had on government schools over the past 30 years has been informative for a number of contemporary research and policy issues. Further research is necessary to fully understand the features of the public/private school division in Australia and to underpin evidence-based policy development by government.

There is a clear need for more explicit modelling of the role of government policies (including subsidies and interventions such as the *New Schools Policy*), private school fees and student: teacher ratios on the private school enrolment share.

This may enable the effect of changing preferences over time to be identified. Research on the determinants of individual school sector choice through time would complement this work. Information on the wage differentials between teachers in government and private schools would be useful to analyse other ways in which private schools have attempted to influence the quality of the education they have provided over the last 30 years. We also need a better understanding of the role of peer group effects in Australian schools, since most of the peer effects literature emanates from overseas and may be of limited relevance to Australia. Finally, studies that exploit external sources of variation in school sector choice to measure the sectoral impact on a range of educational outcomes would be of great value in informing future policy development. The current authors intend to address at least some of these issues in the future.

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Appendix: Data Sources

National school student numbers, enrolment shares, student teacher ratios

Australian Bureau of Statistics, *Schools, Australia*, Cat No. 4221.0, various years and predecessor series: *Schools, Australia*, Cat No. 4202.0, *National Schools Collection: Government Schools, Australia*, Cat No. 4215.0 and *Non-government Schools, Australia*, Cat No. 4216.0, various years.

Private school fees

Data for 1975, 1978, 1980 and 1982 were interpolated from adjoining years. Other data were taken from:

Commonwealth Schools Commission (1975), *Report for the Triennium 1976-78*, Canberra.

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Unpublished data from 1993 to 2002 on which the *National Report* estimates are produced, provided by the Commonwealth Department of Education, Science and Training.

Government grants

As for private school fees (including interpolation of 1975, 1978, 1980 and 1982) and:

Interim Committee, (1973), *Schools in Australia: Report of the Interim Committee for the Australian Schools Commission.* (Peter Karmel, Chair) Australian Government Publishing Service, Canberra.

Department of Employment, Education and Training (1989), *Schooling in Australia - Statistical Profile # 2*, 1989, AGPS

Real fees and grant estimates

All deflated by the Consumer Price Index published by the Australian Bureau of Statistics, *Consumer Price Index, Australia*, Cat No. 6401.0 and accessed via Austats.

Student Level data

Youth in Transition 1961 birth cohort and the

Longitudinal Surveys of Australian Youth 1998Year 9.

Both data sets provided to the first named author by the Australian Council for Educational Research.