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Government Subsidies for Private Community Services: The Case of School Education

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Government Subsidies for Private Community Services:  
The Case of School Education

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Abstract
Governments confront potentially competing demands for increased provision of community services, prudent budgetary management and no expansion in taxes. In the areas of primary and secondary education, the federal government has attempted to deal with these pressures by using government subsidies for private schools to expand the size of the private school system and free up more resources for those who remain in the public education system. This initiative will be most successful when the demand for private education is highly responsive to private school fees and the subsidies are targeted at those segments of the school and student population that are most responsive to reductions in private school fees. The current system based on the overall Socio-Economic Status of each school’s student population is probably an improvement over previous schemes, but it is still potentially inefficient because it does not target funds at the most fee-responsive groups.

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1. Introduction

Public policy makers in Australia face an economic and political environment full of actual and potential conflicts that make policy formulation difficult. For example, there is a strong commitment on both sides of Parliament to surplus, or at least, balanced budgets. At the same time the actions of policy makers in the major parties are consistent with the notion that they believe that the median voters in the marginal electorates are opposed to higher income taxes. These factors are coupled with wider community concern about the level of provision of government services in key areas such as education, hospitals and transport. As a consequence governments are in a policy dilemma: they are constantly under pressure to improve the provision of public services, while there are also strong expectations that they will manage the macro economy in such a way as to show budgetary restraint without raising taxes. In effect, they are being asked to provide more services without raising more revenue.

The only avenue open to governments to achieve these potentially competing goals is to be more efficient in the use of the existing government revenue base. One of the more controversial policy initiatives to deal with these competing demands has been the use of government subsidies to encourage the growth of private sector provision of community services. In this regard the Federal Government encourages people to use the private rather than public hospital systems by subsidising private health insurance. Similarly, significant Commonwealth funding is made available to non-government schools. These policies are designed, at least in part, to use some public funds to leverage greater private contributions into the provision of community services.

Both health and education subsidies have been the subject of considerable debate. While there are a number of issues and principles that are disputed in these debates, a key issue relates to how to ensure adequate funding for the public sector. Opponents argue that governments should ensure that scarce public funds are directed towards the public systems and not diverted to encourage growth of a competing system. Supporters have
contended that in a political environment where higher taxes are not feasible, the growth of the private sectors is necessary to ensure that the demand on the public sector does not outstrip the supply of public sector resources.

In this paper we examine the economics of public funding of private sector provision of community services by examining the case of Commonwealth funding of the non-government school system.

Public schools are funded principally by state governments, while government funding of non-government schools is a Commonwealth initiative.¹ Non-government schools have received Commonwealth subsidies in one form or another since 1964 with formal recurrent grants commencing in 1970. Although the magnitude of the funding involved is not substantial in a national budgetary sense, the level of the funding is growing and, most importantly, this funding has always been significant in a wider public policy sense. The upward trend in funding over time reflects trends in student enrolments in private schools and changes in government policy. (See Table 1.)

In 1977 a total of $1051 million (adjusted to year 2000 dollars) of Commonwealth and State funds were allocated to non-government schools. This represented $1,666 per student in non-government schools and was equivalent to 41% of the average cost of educating a student at a government school. By the year 2000, total public funding to non-government schools had grown to just over $4,000 million, with $2,900 million provided by the Commonwealth. Total government funding was equivalent to $4139 per student enrolled outside the government system or 59% of the cost of educating a student in a government secondary school.

¹ State governments do provide some public funding to non-government schools but it is relatively small (about 25% of total public funding) compared to federal funding. Public schools also receive some funding from the Commonwealth.
The aim of this paper is to explore some of the economic issues associated with this funding strategy. This analysis is essentially positive in perspective. We do not address the normative issues surrounding the debate such as desirability of potentially transferring tax revenue to middle and high income voters. Rather, we focus on the effectiveness of the current regime of subsidies for private schooling as a means of making increasingly scarce public funding available for the public school system or other government services.

The effectiveness of any market based policy instrument, such as a set of subsidies, rests on the nature of the economic environment in which the scheme operates and the appropriateness of the actual policy parameters of the program. That is, a necessary but not sufficient condition for a market-based policy to be effective is that the general thrust of the program is consistent with the operation of the market in which it is placed. For example, policies that aim to achieve their objectives by changing price signals rely on the sensitivity of market participants to price changes. The other necessary condition is that the policy is well designed.

Given the controversy surrounding recent changes in the Commonwealth funding mechanism for non-government schools, (for example see Maslen (2000), Donnelly (2001) and Sydney Morning Herald (2002)) we outline the previous and existing Commonwealth funding arrangements in the next section. We then move to identify the conditions that need to exist for public subsidies of private schools to potentially result in more public resources for students at government schools and consider if these conditions are likely to be met in the current Australian education sector. In Section 4 the current subsidy program is evaluated in terms of its effectiveness in providing choice and improving resources in both public and private schools. The policy implications of the analysis are highlighted in the subsequent section, followed by a summary of conclusions.
2. Government Subsidies for Non-Government Schools

The two most recent schemes of allocating commonwealth funds to non-government schools are the Education Resources Index (ERI) funding scheme, which was commenced in 1985 and applied until 2001 when the Socio-Economic Status (SES) funding scheme was introduced.

The ERI funding scheme was intended to measure a schools private income and compare it to “The Community Standard”, or later, the Average Government School Recurrent Costs (AGSRC), and to subsidise schools in a way that would bring them closer to the relevant standard, thereby providing students with similar funding resources independent of schooling system. The scheme was based on a 12 category rating system which was determined at the outset of the scheme, 1985. Ratings were not recalculated regularly and it was difficult to move down the rating table, entitling a school greater funding. If the intention was to assist needy students attending private schools, the scheme seems to have been flawed in that it was based on school income rather than a student’s family income. In any case, after a Commonwealth government review of schools funding, started in 1997, the ERI was abandoned in 2000. (For more details, see DEETYA (1997) and DETYA (1998).)

Currently, non-government schools receive recurrent Commonwealth funding based on the SES of their respective school communities. A school’s SES score is based on the places of residence of students and their families and draws on Australian Bureau of Statistics Census data. The SES index used by DETYA comprises three dimensions: occupation, education and household income, with extra weight given to households with school age children (family income). An individual family’s occupation, education levels and income cannot be extracted from the national Census. Instead, the student is attributed with average occupation, education and income values for the Census Collection District (CD) in which they reside. These values take the form of a standardised index. A CD comprises on average 200 dwellings and there are 34,410 in
Australia.\textsuperscript{2} To calculate a school’s SES index, the various attribute indices of each individual in the school community are averaged and then weighted into an aggregate SES index value for the school.

For example, the occupation indices for every student in the school are averaged providing the school’s average occupation index. This is also carried out for education levels and income. In order to place more weight on households with children in CD’s, the income dimension is split into overall average income and average income of households with school age children. Once these average school dimension indices are calculated, they are aggregated using the following formula:

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\text{School SES Score} = \frac{\text{Occupation Dimension}}{3} + \frac{\text{Education Dimension}}{3} + \frac{\text{Household Income Dimension}}{6} + \frac{\text{Income of Families with Children Dimension}}{6}
\]

These school SES scores are then used to determine Commonwealth General Recurrent Grants per student for Non-government schools. Recurrent grants are based on Average Government School Recurrent Costs (AGSRC). The higher a school’s SES score the lower will be their Commonwealth General Recurrent Grant per student. For example, schools with a SES of 130 or greater will receive 13.7% of AGSRC, the lowest level of funding. The Commonwealth General Recurrent Grant per student rises at a constant rate of 2.5% for every 2 point decrease in SES score. The highest Commonwealth General Recurrent Grant per student is 70% of AGSRC for schools with a SES score of 85 or less. (For more details, see Commonwealth Programmes for Schools: Quadrennial Administrative Guidelines 2001 to 2004, DETYA (2000) and Commonwealth of Australia Gazette, No. 1, 19 November 2001.)

\textsuperscript{2} This compares with up to 2639 postcode areas nationwide in the 1996 National Census.
3. Determinants of the Efficacy of Government Subsidies for Non-Government Schooling

A budgetary motivation underpinning government subsidies for private schooling is that by offering the individual a subsidy for private education, the individual may contribute to private education such that the sum of the public and the private contributions exceeds the sum that would be spent if education was provided completely from public resources. Whether this is the case or not depends critically on the nature of both the subsidy arrangements implemented and the competitive market relationships that exist in the educational sector. In this section we consider how these market relationships influence the efficacy of this type of subsidy arrangement.

The competitive market relationships that drive this sort of subsidy program have both supply and demand elements. The key aspects of the demand relationships in the educational sector relate to how responsive parents are to changes in the cost of private education and to changes in the quality of public education. First, an underlying premise of the current funding arrangement is that reduced private school fees will shift substantial numbers of enrolments from the public sector to the private sector. This responsiveness to private school charges is the price elasticity of demand for private school education. If this elasticity is relatively low, subsidies will result in few students leaving the public sector to move to the private sector.

If a private education subsidy is less than what would be spent on the child in the public sector, a subsidy scheme may operate to increase per student expenditures on the students remaining in the public sector. As a result, the cost effective diversion of students to the private sector can, as far as higher per student spending permits, enhance the quality of the services on offer in the public sector.

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3 This of course is based on the assumption that the cost savings are not used for some other public expenditure or used to reduce taxes. Burke (1996) points out that the Howard governments objective is to appropriate some of the savings for other budgetary areas.
The enrolment decisions of the parents of school children are not only determined by the relative level of fees. While fees will be important to many parents, the perception of the quality of the educational experiences offered to students in the two sectors is also likely to have a strong influence on decisions. As students switch into the private system, the marginal (in terms of willingness to switch) public education student will consider the improved public education quality as well as lower private school fees when deciding which system to attend. The extent to which an improvement in the perceived quality of the government sector induces higher enrolments in the government sector, away from the private sector, is referred to as the quality elasticity of demand for government education.

The higher this quality elasticity is, the less effective the subsidy program will be. In effect, the program has two competing and counterbalancing demand drivers. The subsidy program is based on a high price elasticity of demand for private schooling shifting substantial numbers into the private sector, but to the extent that the private education subsidy may enhance the quality of the now smaller public sector, the public sector will tend to attract students back from the private sector. Therefore there are three key questions on the demand side of the problem:
What is the price elasticity of demand for private education?;
What will the resultant improvement in the public sector be?, and;
What is the quality elasticity of demand for the government sector?

Any serious education policy proposing increased private education subsidies in an attempt to improve both public and private education expenditures and outcomes needs to be based on judgments about the magnitudes of these elasticities. However, an issue often ignored when discussing education finance policy is the response of providers of private education to changes in subsidies and demand for their educational services. This is typically referred to as the supply side.

On the supply side, the main issue relates to the willingness and ability of the private system to expand to take up substantial numbers of former government sector students at
any given level of private school fees. This is measured by the price elasticity of supply of private school places. The existing subsidy program, with its emphasis on parental choice, relies on this being relatively high. That is, there is an implicit assumption that the private school system can and will take up substantial numbers without marked increases in cost structures and therefore fees. A low price elasticity of supply for private education would reduce the efficacy of the program. In such a case, any substantial attempt by students to shift into the private sector induced by an increased subsidy would result in private school fee increases of a similar magnitude to the change in the subsidy, resulting in no changes in enrollments and large government transfers to private schools. These transfers may be captured by teachers in the form of higher wages or lower student staff ratios, or may be used for capital improvements by private schools, thereby enhancing their competitive edge over public schools. To the extent that any shift in enrolments to the private sector results in higher private school fees, the net impact of the subsidy program is reduced.

The values of these three critical elasticities and the extent to which they offset each other in the educational market place is an empirical issue. There has been no research published in Australia that has integrated all of these three relationships to address the subsidy issue. Williams (1984, 1985) does consider the issue of public funding of non-government schools in Australia and does provide demand elasticity estimates (based on aggregate data and relationships) while assuming the supply side is perfectly elastic. In the US, Martinello and West (1988, 1991) and Frey (1991) addressed the simpler, but related question of whether government subsidies of private education, in the form of a tax credit, could reduce the public education budget without making any students worse off in terms of spending. That is, they studied a subsidy scheme that was aimed purely at reducing the overall government contribution to education with all net savings from shifting students out of the public sector into the private system being returned to

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4 This behavior of capitalizing increases in government funding by non-government schools is confirmed in an empirical study by Williams (1984). The problem here is that subsidies may not reduce fees, choice may not enhanced in a meaningful way and the only beneficiaries may be the students and families originally using non-government schools.

5 Hoyt and Lee (1998) investigate a similar issue, assuming perfectly elastic private education supply while accounting for endogenous quality of public education effects.
consolidated revenue, in order to reduce taxes, rather than being used to enhance the public education system. This body of work emphasised how the conclusions that can be drawn on the net impact of subsidy programs are highly sensitive to relative values of the price elasticities of supply and demand for private education.

The implications can be interpreted in two ways. The first is that the net saving that can be expected for any given subsidy will vary depending on the set of elasticities ruling at the time. The second is that for any given set of elasticities, the magnitude of the net saving will depend on the size of the subsidy. The optimal size of the subsidy (optimal in terms of maximising the net savings to the government) is positively related to the size of the elasticities of demand and supply. That is, when parents are highly responsive to reductions in fees and the private school system is willing and able to absorb large numbers of students without major increases in their fee structures, government savings will be maximised by subsidies that are set at relatively high levels. With very low elasticities the optimal initiative from a government aiming to save funds would be to tax students attending private schools or at least offer a zero subsidy. This is because with low elasticities any subsidy does little in terms of inducing students to leave the public sector for private schools and any that do, tend to drive up school fees in the private sector substantially. The results of Frey’s (1991) sensitivity analysis are summarised in Table 2 below.

Table 2 about here

The elasticity values represent the percentage change in quantity demanded or supplied relative to a given percentage change in fees. For example, price elasticities of demand for private schooling of 0.5 or 1.5 indicate that demand for student places in the private sector would rise by 5% or 15% respectively in response to a 10% reduction in private school fees. Similarly, a price elasticity of supply of 2 is consistent with a 20% increase in the number of places offered in the private sector in response to a 10% increase in private fees. Under general conditions in a competitive market this is also equivalent to

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saying that a 20% increase in enrolments would result in a 10% increase in costs and charges.

The symbol $\infty$ in the price elasticity of supply column indicates that under this scenario the supply of education places in the private sector is assumed to be infinitely responsive to fees charged. This means that the private sector is able to absorb all new students without an increase in student fees. Under this condition governments can always save if they select the right subsidy level. With an infinitely responsive supply side the optimal subsidy ranges from 27% (with a price elasticity of demand of 0.5) up to 113% (with a price elasticity of demand of 3.5). The corresponding benefit cost ratios (shown in the last column) range from 1.12 up to 1.80.

Where the subsequent growth of the private sector would increase private school fees (a price elasticity of supply of less than infinity) the optimal subsidy is lower, as is the benefit cost ratio. For example, with a price elasticity of demand of 1, a variation the in the supply elasticity from infinity down to 2 would reduce the optimal subsidy from 78% to 52% and reduce the benefit cost ratio from 1.44 to 1.26.

In terms of the Australian debate, the savings measured by Frey (1991) offer us some measure of the funds that may be redirected to the remaining public education students, offering potential improvements in public education. However, most of these studies not considered how the expenditure of these budgetary savings on enhancing the now smaller private sector would change the analysis. This was discussed above as the quality elasticity of public education. Williams (1984 and 1985) acknowledges the response of private school enrollments to improvements in public schools and estimates, using Australian data, the elasticity of private school enrollments to public education expenditure to be $-0.045$, implying a 10% increase in public education quality (measured by dollars of expenditure) would lead to a reduction of 0.45% in private school enrollments. Thus the improved public education system will reduce migration to the private system, albeit a small response, thereby reducing the potential improvements in the public system. This is why the savings suggested by Frey (1991) should be viewed as
an upper bound for the potential benefits to the public education system of private education subsidies.

Frey’s (1991) results offer some support to the existing subsidy regime in Australia at the aggregate level. Average subsidies of just over $4,000 per student (in the year 2000) could be expected to represent a subsidy on private school fees in the order of 30% to 60% (for private school fees of $14,000 and $7,000 respectively). Subsidies in this range are consistent with market conditions characterized by values of 1 or greater for both the price elasticity of demand and the price elasticity of supply. This means that the current subsidies could be expected to be effective as long as:

- a 10% reduction in private fees resulted in at least a 10% expansion in the demand for private schooling; and
- a 10% increase in enrollments in private schools caused private school fees to increase by no more than 10%.

While one could speculate that elasticity values of at least 1 seem plausible for the Australian system on average, it is important to recall that the SES funding scheme provides markedly different subsidies to different private schools. For example, schools with an SES of at least 130 receive a grant equivalent to 13.7% of AGSRC. If these high SES schools are high fee schools with fees of the order of $14,000, this payment could represent 6% or 7% subsidy on actual school fees. On the other hand schools with an SES of no more than 85 could receive a subsidy of around 70% of actual fees if they were relatively low fee schools with charges approximating the AGSRC.

Imposing an inverse relationship between the magnitude of the subsidy and the level of a school’s SES would only be consistent with maximizing the financial effectiveness of the program if the values of the price elasticities of supply and demand were also both

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7 Williams (1985) finds that private school demand elasticity with respect to government subsidies is -0.13. This is very low, suggesting very small responses of private school enrollments to subsidies. This low estimate may be arising from the model estimated where contributed services are combined with government subsidies, ignoring the possible use of subsidies to pay for contributed services rather than lower tuition. Such a low elasticity estimate implies that government grants have almost no effects on enrollments.
inversely related the value of the SES. That is, the current funding formula would only optimize the education funding “surplus” if low SES schools had higher elasticities of demand and supply than high SES schools. It is not clear that this relationship would hold in Australia.

It is not unreasonable to assume that relatively exclusive private schools are likely to have high elasticities of demand (a substantial number of parents would be very willing to move children into these schools if fees were lower) and low elasticities of supply (schools are unwilling to increase enrollments and thereby reduce exclusivity in return for higher fees or schools are at physical capacity, as waiting lists employed by many schools may suggest). From Table 2 it would appear that this scenario of high elasticities of demand (say 2 to 3.5) coupled with low elasticities of supply (say 0.5) would be consistent with small optimal subsidies of 2% to 13%. The current subsidies for many wealthy schools probably lie in this range. However, the benefit cost ratios associated with these optimal subsidies are very low, between 1.01 and 1.05. This implies that the existing range of subsidies to wealthy schools could well be optimal but of doubtful value as projects with a benefit cost ratio of 1.05 would rank below many other unfunded public projects on financial grounds.

Complicating the issue further is the fact that private schools are quite diverse, as are their student bodies, giving rise to a wide range of elasticities even for schools with similar SES scores. For example, some religious schools may differ markedly from other schools with a similar SES. They may have a high supply elasticity where they are very willing to take on new students in order to achieve secondary goals such as the promotion of a particular religion, while demand may be very inelastic because religious education is important to parents who send their children such schools, implying there are few parents who would decide to send their children to such schools if price was to fall.\(^8\) In terms of the sensitivity analysis in Table 2, this case could imply optimal subsidies in the range of 27% to 78% (assuming the price elasticity of supply is infinity and the price elasticity of demand lies in the range of 0.5 to 1). Once again, these subsidy levels are

\(^8\) These claims are relatively consistent with the analysis of non-government schools in Anderson (1992).
probably broadly consistent with the level of subsidies offered to many poorer religious based schools. Importantly, the benefit cost ratios of 1.12 to 1.44 associated with these subsidies would appear to justify these subsidies on financial grounds.

On the issue of the quality elasticity of public education demand, one could speculate that this would be relatively low if the alternative was an exclusive private school. That is, improvements in public schools would not easily entice private school students back into the public system, the exclusivity may be very important to these parents. These claims are focused purely on the higher and more exclusive end of the private school market and are speculative. Further empirical investigation is required.

Given the great change in public and private schools since the early 1980’s (with respect to enrollments and funding), a critical direction for future research on education financing in Australia is to develop relatively recent estimates, Williams (1984, 1985) applies to pre-1980 data, for the elasticity of demand and supply of private education and the quality elasticity of public education demand in Australia, particularly estimates based on micro-level data, as in Rubinfeld and Shapiro (1989). The diverse nature of the non-government school sector in Australia implies aggregate estimation of education demand relationships, as in Williams (1984, 1985), will struggle to reflect the true nature of the demand relationships for the various types of non-government schools.

There appear to be few financial barriers to the expansion of the private education market in the longer term, especially with federal government start-up grants available to new private schools. However, whether parents are willing to switch students into private schools with no track record is questionable. In order to better design and implement education policy, it is critical that research in education finance be targeted at the micro-based estimation of demand and supply elasticities for private education, while estimates of the quality elasticity of the demand for public education would also be helpful. Taken together, such data would be useful in determining equilibrium responses to policy changes in public and private education systems.
4. Program Design Problems

Several features of the SES funding program potentially impinge on its effectiveness as a means of improving the resourcing of public schools include the lack of targeting of potentially mobile enrolments, and the differential rates for identical students at different schools which is related to the reliance on average school SES rankings.

An inevitable problem with any program aimed at enhancing choice and mobility is the inability and or unwillingness of policy makers to target the specific people who make decisions on switching their children’s enrolments between sectors. Not all parents are typically willing to consider changing educational sectors. Importantly, there are a large number of parents committed to the private education sector who have the incomes to sustain their educational choice. These educational decisions are not influenced by the subsidy, so any government funding directed at such students under the program is potential wastage in terms of providing choice or facilitating the switching of such students into private schools. It would be difficult if not impossible to ascertain who the marginal public education families are, (those that would switch from public to private schools for a relatively small subsidy), in order to target subsidies exclusively to this group. To the extent that ability to pay is the key demand factor, means testing is likely to be the most practical method of identifying these marginal families and students.

The means testing characteristics of the program implied by the use of SES go some way to dealing with the issue of targeting. However, the reliance on average school SES scores rather than individual family characteristics is a shortcoming of the program. For example, all students who attend schools with high SES scores are funded at relatively low rates. This means that while parent’s choices are enhanced by the subsidy scheme, high SES schools are likely to be out of reach for students and families with low SES. A truly means tested scheme would not generate such an outcome.\(^9\) There is scope however for schools to recognize that enrolling students with low SES will lower the school’s average SES and increase the subsidy paid for every student. In order for a high SES

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\(^9\) Bearse, Glomm and Ravikumar (2000) show that means testing for education subsidies (vouchers) can increase total education expenditures and reduce inequality in the allocation of education expenditures.
school to increase its government funding, it may be beneficial to offer scholarships to students with low SES. In this sense, the SES funding scheme may offer more mobility and choice than initially thought.10

A presumably unintended aspect of the differential funding between schools is that there are stronger incentives for parents of students in government schools to shift their children to low SES (and high subsidy) schools rather than high SES (and low subsidy) schools. If the major factor constraining parents to public schools is a low ability to pay for private schooling, the outcome of this incentive structure could be to reinforce the segmentation of schools on the basis of SES with relatively low SES parents in the public sector shifting their children to relatively low SES schools in the private sector. There do not appear to be any economic grounds for the government to bias subsidies and enrolments in this way. It could be argued that this is likely to have serious social implications, stratifying students by SES, operating to strengthen the exclusivity of high SES schools, embed a class structure and potentially reduce social and earnings mobility.

5. Policy Implications

The use of subsidies of private sector activities to save public funds and or provide greater resources for public sector activities is both widely practised and highly controversial. These programs can be cost effective or they can be expensive policy failures. Their success depends on the nature of the market environment in which they operate and the nature of the specific policy parameters that have been set in place.

A number of problems with the specification of the existing policy have been identified. An important issue is the lack of a strong link between the provision of subsidies and the potential willingness of students to shift between sectors. This general lack of targeting implies a large portion of private education subsidies are going to private school users

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10 It would be important to study average SES of each year level in a school, as it may be possible for schools to enroll low SES students in early years to attract extra funding and exclude them in the final year in order to boost university entrance outcomes (assuming they are poor performers), an important determinant of fees charged by higher SES schools; see Anderson (1992), pg 233.
that would never switch to the public system, implying unnecessary subsidies and a wastage of public funds, if the objective of subsidies is to enhance choice or improve the government school system.

Simple solutions to the targeting issue are not apparent as the identification of potentially mobile groups of students is problematic. If one accepts that lower income families have a greater latent demand for private education than higher income families, the payment of subsidies to individuals on the basis of means-testing of students rather than assessing the average SES for schools may be one way to improve targeting of subsidies.

The current SES funding approach is an attempt to measure a school community’s ability to pay for private schooling. It is in fact a measure of the ability of the average student in the school community to pay for their schooling and is a kind of means test. Judging from the approach of the funding policy, the intention is to provide assistance based on the need of the student. This would be better achieved if students were to receive funding based on their individual SES. The scheme as it is, benefits the higher than average SES students in a school community to the detriment of the lower than average SES students in that school community.

While the current subsidy arrangement is obviously less than perfect, an important consideration is what the outcome would be of removing the program and moving to a situation of no public funding for non-government schools? A move to zero public funding for non-government schools would obviously have serious resource consequences for many schools, both public and private. This would amount, in 2001, to a cut of $693 (primary) to $908 (secondary) per student in schools with SES scores of 130 and above and of $3540 (primary) to $4636 (secondary) per student in schools with SES scores of 85 or lower. Schools could either absorb the cut in funding or pass it on to students through higher school fees. The likely outcome is some combination of these outcomes, where some portion of the funding cut would be absorbed and the rest passed on. The change would amount to a shift up in the supply curve of the individual schools, with low SES schools experiencing a larger absolute (and likely relative) shift up than
high SES schools. Depending on the price elasticity of demand for these schooling places, enrolments in private schools would drop and these dropouts would be forced into either cheaper private or public schools. It appears likely that the poorest students would be forced out of private schools.

Such a move would increase the burden on state government budgets as there would be increased demand for public school places, which are funded by state governments. Depending on the values of the price elasticity of supply and demand, it could also raise the tax burden on society if per student AGSRC are maintained.

On the other hand, it is often argued that the better students self select into private schools, with a large migration into public schools, positive peer effects might be enhanced, operating to improve the educational experiences and outcomes of public education students; see for example Zimmer and Toma (2000). With respect to peer effects, however, it is a common belief that parents often choose private schools to escape negative peer effects, so the net peer effect in public schools would be far from certain. (See Gaviria and Raphael (2001) for evidence on negative peer effects.)

An important point to remember about the current system of government funding to non-government education is that this subsidy scheme resembles a means tested voucher scheme. People typically expect a voucher to be a piece of pretend money given to a parent who can use it at the school of their choice. This is not the case with the SES funding scheme. However, non-government school funding is provided on a per student basis and if a student switches from one private school to another, the old school loses the subsidy that the switching student entitled them to and the new school gains a subsidy for enrolling the student. This is a voucher in character if not in name.

The interpretation of means testing is not as clear-cut. Means testing is typically understood as granting aid based on need, with people on low incomes receiving more aid than those on higher incomes. In the SES funding scheme, the means of an individual are measured by the school’s average SES. A student with low SES (low income and
occupation score) will receive a higher subsidy in as much as they may lower the average SES of the school they attend, thereby entitling themselves (along with the whole student body) to a higher per student subsidy or voucher. Clearly this is not what we expect from means testing. It makes it very hard for a family with low SES to have their child attend an expensive private school because the family’s voucher will be the same as the voucher given to a family with the highest SES sending their child to the same school. This does not appear consistent with the governments stated objective of increasing choices available to parents. Of course, the school has the discretion to reduce fees for low SES students (offering scholarships is one possible way) if the candidate is deemed worthy, either on academic merit or some other criteria.

While we have focused on the possibility that a key objective of the SES funding scheme is the improvement of the funding position of public schools, it is clearly not the only objective of this subsidy program. Government may have also been driven by motives such as improving the range of choices open to families and returning some tax dollars to those families that use the private education system. The use of one policy to achieve multiple objectives is likely to result in sub-optimal outcomes especially in this case where the objectives are potentially conflicting. For example, returning more tax dollars to private school parents and expanding funding to the public school sector are typically conflicting policy objectives. In cases where related but conflicting objectives are targeted, the Tinbergen Principle provides useful guidance (Tinbergen 1952). It may be more effective to provide increased public funding directly to public schools to achieve the goal of improving public schools along with subsidies to private schools to achieve the objective of enhancing choice and returning some taxes to private school, thereby reducing their double payment for schooling.

6. Conclusion
Commonwealth government subsidies for private schools have bipartisan support in Australia, due at least in part to the wide range of private schools that exist, making it politically difficult to oppose subsidies. It seems the public funding of non-government education is here to stay. Given this fact, the policy approach should be to clearly identify
the objectives of subsidizing non-government education. Once these objectives are clearly defined, the policy of subsidization can be refined and improved in order to achieve the defined objectives.

We have assumed that these objectives include the improvement of educational outcomes in both government and non-government schools, through the enhancement of choice for parents and students. If market based approaches, which include subsidies, are to be successfully implemented, it is important that policymakers have a clear understanding of the demand and supply relationships for both private and public education. This amounts to having improved estimates of demand and supply elasticities for private education, something that does not exist in Australia. This would be a fruitful direction for further empirical research and could only act to improve education funding policies.

Given our assumptions about policy objectives, the existing framework clearly exhibits shortcomings. The poor targeting of existing subsidies, through the use of average school SES rather than individual means tests, makes for relatively ineffective policy. While the existing subsidy rates to private schools are of the broad order of magnitude that would be expected given the responsiveness of parents, on average, to changes in fees and the impact of higher enrolments of fees, the likely benefit cost ratios from subsidizing schools with high SES scores implies that the relatively small subsidies that are given to these schools are difficult to justify on financial grounds.

However, it should be emphasized that the scrapping of government funding for private schools could have serious financial implications for many families currently using the private education sector.
References


Commonwealth Schools Commission and Australian Bureau of Statistics, (1979), Australian Students and Their Schools, Canberra.


Table 1: Government Expenditure on Government and Non-Government Schools, 1977 and 2000.

<table>
<thead>
<tr>
<th></th>
<th>Government Schools</th>
<th>Non-Government Schools</th>
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<tr>
<td></td>
<td>1977(a) 2000</td>
<td>1977(a) 2000</td>
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<tr>
<td>Commonwealth Expenditure $m</td>
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<td>State Expenditure $m</td>
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<td>Total Public Expenditure $m</td>
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<td>1051.117(b) 4095.569</td>
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Enrollments

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<td>Per Primary Student $</td>
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<td>Per Secondary Student $</td>
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(a) Values for 1977 have been indexed to 2000 dollar terms using the CPI.
(b) Education expenditure data for 1977 is not by source (Commonwealth or State Government) in the Commonwealth Schools Commission publication “Australian Students and Their Schools”.

na – not available.

Commonwealth Schools Commission and Australian Bureau of Statistics (1979), Australian Students and Their Schools, Canberra.
Table 2: The Sensitivity of Government Savings to Values for the Elasticity of Demand and the Elasticity of Supply

<table>
<thead>
<tr>
<th>Price Elasticity of Demand</th>
<th>Price Elasticity of Supply</th>
<th>Optimal Subsidy Relative To Base Private Fees %</th>
<th>Increase in Private School Fees %</th>
<th>Increase in Private School Enrolments %</th>
<th>Benefit Cost Ratio (a)</th>
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Source: Derived from Frey (1991) Table 1 p351.

na : with elasticities of these values there is no positive subsidy will yield a saving for government.

(a) Ratio of Reduction in Public Education Cost to Gross Subsidy Cost