CAN VOUCHERS DELIVER BETTER EDUCATION?

A REVIEW OF THE LITERATURE, WITH SPECIAL REFERENCE TO NEW ZEALAND

Cathy Wylie

NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH

WELLINGTON
1998

NEW ZEALAND COUNCIL FOR EDUCATIONAL RESEARCH
PO Box 3237, Wellington, New Zealand

ISBN 1–877140–49–X

Distributed by NZCER Distribution Services
PO Box 3237, Wellington, New Zealand

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

This review was made possible by Ministry of Education funding received by the NZ Council for Educational Research, and the infrastructure that funding supports, particularly NZCER's library and library staff. I am very grateful to Beverley Thomson, Alys Tichener, and Leigh Montford for their searches of the databases, and indefatigable interloaning and retrieval of material. I am also grateful for fellow researchers' willingness to share with me unpublished material (Jo Diorio, Arthur Grimes, David Hughes, Rosalind Levacic, Helen Ladd and Ted Fiske), to Peter Corrigan for giving me an understanding of the Catholic school situation in New Zealand, and for Ministry of Education officials help with statistics and the funding framework for private schools. Helen Ladd improved my understanding of some core economic concepts, and Rosalind Levacic challenged me to define quasi-voucher systems. Anne Meade, Ruth Mansell, and Martin Thrupp provided valuable feedback on the first draft of this review, and Anne Else has edited it to make what is sometimes complex and technical material more accessible.

SUMMARY

This review brings together the findings of research about the key premises underpinning advocacy of educational vouchers, in order to weigh up the likely benefits and costs of vouchers, and to explore the impact they would have on New Zealand education.

The term "vouchers" refers to various different forms of funding education. These range from individual scholarships for private school attendance, and/or systems of open enrolment, school self-management and per-capita funding formulae in public schools only, to systems which use public money to fund public and private schools alike. Voucher approaches to education are concerned mainly with funding and structure as the means to improve education, rather than with the content of education.

The key premises underpinning advocacy of vouchers are as follows:

- Educational provision would benefit from being cast in a market model, because competition between schools for students would sharpen schools' responsiveness to students; foster diversity, innovation, and efficiency of resource allocation; and improve the quality of education.
- Parental choice of school should be increased, because it results in sound educational decisions.
- Low income students would have better access to good schools in a system where there was free choice of school.

This review examines the empirical research on the nature and impact of competition in education, on the nature and impact of different forms of vouchers, and on whether private schools offer better education.

Little support is found in empirical research for the key premises behind vouchers. Instead, the research strongly indicates the following conclusions:

- Institutional competition on its own does not play the dominant role in educational quality, achievement, or access. It does not increase innovation, diversity, or the access of low income students to schools with high intakes of higher income students.
- Increasing competition among schools for students and funding can benefit only a small minority of students, at the expense of the majority.
- Increasing competition among schools can lead to lower student achievement in schools serving students from low income homes, thus depressing overall achievement levels.

The main losers in those existing voucher systems which include private schools (in Chile, Sweden, Belgium, the Netherlands, and France) are shown to be children

from low income homes, and minority ethnic backgrounds. A similar pattern is evident for open enrolment systems, or quasi-voucher systems, such as those in New Zealand and England.

This is because voucher systems increase social segregation—that is, the concentration of children from low income families in schools with no or few children from other income bands—and school selectiveness of students. Schools which can select, do select. Parents try to avoid those schools which serve low income neighbourhoods. However, parental choice is exercised unevenly. It is difficult for low income families to exercise the degree of choice available to middle and high income families. The outcome is increased concentration and isolation of low income students.

This makes it even more difficult to narrow existing access and achievement gaps which reflect social inequalities. These social inequalities are not of schools' making, but they pose education with its biggest challenge. The empirical research on school choice and differences in school socioeconomic mix, or intake, strongly suggests that a school system which can offer a balanced social intake in its schools will have a much better chance of closing the gaps than a system which concentrates and isolates students from low income homes. Education's other role of promoting social cohesion is also made easier and more effective in schools with balanced socioeconomic intakes.

Individual scholarship vouchers for low income children, such as New Zealand's Targeted Individual Entitlement scheme, do offer a small number of low income children better educational resources than they could access in schools in their own neighbourhoods, provided that the schools they access are of good quality, and serve a higher socioeconomic group. It is these factors, not the ownership of the school, which make the difference.

Vouchers and competition do not lead to lower costs for educational provision. Indeed, vouchers add substantially to these costs where they:

- include private schools
- take account of the transport and cost barriers facing low income children who wish to access middle class or specialist schools
- recognize that system support and spare capacity is required in order to allow parents to exercise choice, and for less popular schools to make effective changes.

Effective voucher systems also need to support balanced school intakes. This can be achieved only by removing schools' ability to select students, and to charge additional fees. These conditions are largely unacceptable to private schools.

It is only by recognizing and funding the extra costs and regulation involved in making a voucher system as fair as possible that it can be made to yield some benefits, such as an increased diversity of approaches.

1 VOUCHERS IN EDUCATION—PREMISES, PROMISES AND CRITIQUES

Education vouchers are controversial. Some advocates call them a "panacea" (Chubb and Moe 1990) for educational problems of uneven access, quality, and achievement. Critics say they will do little to improve the quality of education, and will simply exacerbate existing inequalities of educational opportunity (Carnoy 1997, Cookson 1996).

The term "vouchers" is a short-hand way of referring to a market approach to education. In their pure form, vouchers would entail a set amount of government funding per student being given directly to parents to spend on the education of their choice. No country offers vouchers of this type. What countries do offer are various forms of parental choice, combined with per-student funding formulae, and self-managing schools.

The core assumptions behind these forms of voucher systems are that choice and competition—that is, a market approach—will improve education. This review looks at these core assumptions and the research evidence related to them, in order to judge the validity of the claims made by voucher advocates.

The relevant research literature is wide-ranging. As well as studies of the impact of different voucher systems, as outlined below, it encompasses studies of the nature and impact of competition in education, the nature and impact of parental choice of school, the social and school-based constraints on the exercise of parental choice, and the role which social and economic factors play in educational provision and educational achievement.

What are "education vouchers"?

Vouchers focus on the **funding** of education, rather than its **content**. The core ingredients of voucher systems in relation to schools[1] are:

- funding formulae which set certain amounts per student, and give funds to individual schools on the basis of their roll to cover all student needs at the school.[2]

[1] This literature review focuses on school level data, and not early childhood education or tertiary provision, though the principles and the general trends found in this review are also applicable to all levels of education. In early childhood education and tertiary education, vouchers are more likely to take the form of a defined dollar or time amount available to individuals to use for accredited educational courses.

[2] Table 1 in the Appendix sets out the categories of school operational funding in New Zealand which are now calculated on a per capita basis, rather than children's individual need, additional staffing, or access to common services, e.g. advisory services, or a pool of relief teachers.

A school which has more students than another school serving an equivalent group of students generally receives more funds.

- Individual school responsibility for managing and allocating its government funding.
- school enrolment based on family choice, rather than on family location or on right of entry to the neighbourhood school.

Vouchers currently exist in three main forms. These are outlined below.

1. Individual scholarships or subsidies for private school attendance

These are generally limited to low income children. Examples are New Zealand's Targeted Individual Entitlement scheme, introduced as a pilot in 1996, and recently extended in the 1998 Budget; the English Assisted Places Scheme, recently abolished; the Milwaukee and Cleveland voucher schemes; Colombia's subsidies for low income students in private secondary schools; and a range of privately funded voucher programmes in the United States.

2. Open-enrolment systems including both private and public schools

These can be termed *full* voucher systems, because Government funding goes to both public and private schools. Students can theoretically choose to attend any school. In some systems of this type, such as France and Sweden, students are initially assigned to a school, but can choose another. Others, e.g. in the Netherlands, Belgium, and Chile, do not give students initial assignments. Some systems give additional funding to schools serving low socioeconomic communities. Sweden funds private schools to a lesser amount, to take account of the greater obligations placed on public schools to serve the full community.

3. Open-enrolment systems limited to state schools

These can be termed *quasi* voucher systems. Students are generally not assigned to schools, and can theoretically choose to attend any state school. These may include schools with religious affiliation which meet certain criteria, for example, following a national curriculum. Private school attendance may be subsidised, but at less than half the per-student funding amount given to state schools. Additional funding per student is likely to be given to schools serving low socioeconomic communities. These systems exist in New Zealand (since 1989), England (since 1988), and some districts in the United States, most notably Cambridge, Massachusetts, and East Harlem.

There are substantial variations within these forms. The spectrum runs from schools existing as stand-alone entities, exercising their own selection of students, with

private schools able to charge additional fees on top of their public funding, to constraints placed on public school selection and the charging of additional fees by both public and private schools. Some systems provide more infrastructural support; some actively encourage diversity; others "steer" schools within national systems of curriculum, assessment, and accountability, with some systems more prescribed than others. Some require equal accountability of public and private schools; others ask less of private schools.

What is the theory behind vouchers?

The concept of education vouchers[3] originated with and now has its main academic advocates[4] among economists and political scientists, rather than educators. This difference reflects the nature of vouchers. They are based on a formal or structural approach to education, rather than on theories of learning and teaching. They arise out of theories of markets, choice, and institutions. There is also a libertarian strand in the advocacy of vouchers, based on the assumption that state provision of education infringes parental freedom, because governments are assumed to constrain citizens unfairly, rather than represent and support them.

The central premise of those who advocate full application of vouchers in education is that market theory is as applicable to education as it is to cars and cafes. Parents and students are consumers of education, and markets are the best way to ensure that consumer needs are met. Competition between suppliers is the lifeblood of markets. Competition also ensures efficiency. In this framework, government provision of education appears to be a monopoly. By definition, it is therefore unresponsive to consumers and unconstrained by competition. This means that it must be inefficient, with no incentive to innovate or keep costs down.

If consumers—usually meaning parents—cannot choose for themselves, and their choice has no impact on suppliers (schools), education lacks the "discipline" of the market, and its incentives. The theory is that vouchers allow parents to choose, and therefore force schools to compete with each other. This change should alter the balance of power between consumers and suppliers of education. Demand should then drive supply.

However, advocates of vouchers also make some assumptions about the advantages of private rather than public suppliers. One highly influential book

---

[3] Tom Paine is usually cited as a founding father, and Milton Friedman as the catalyst for contemporary interest in vouchers. John Chubb and Terry Moe are often cited as providing the research basis for vouchers.

[4] The main enthusiasts for vouchers are found among politicians, business leaders, private school advocates, and policy analysts following a market-based model of the role of government.

(Politics, Markets, and America's Schools, Chubb and Moe 1990) argues that it is the democratic nature of public provision of education which makes public schools inefficient and ineffective. Public schools lack the autonomy of private schools, which is asserted to be the key to their effectiveness.

Critical Analysis of the Theory

There are several major strands to the critical analysis of the theory behind vouchers. First is the issue of whether education should be treated as a commodity, whose main benefits accrue to individual consumers (in this case, students and perhaps their families).

Linked to this is the complexity of education. Seen in terms of production, it involves "co-production" rather than a mechanical process. Students are not only the consumers of education; they are also its "raw material" and part of its labour supply. Parry (1996), in her study of the Chilean voucher system, notes that virtually all studies of education production "find that student background factors are overwhelmingly the major contributors to student achievement":

> *Theoretically, by selecting the best co-producers, a school can achieve higher output with the same level of inputs. Under a voucher system schools are expected to try to improve their quality of education in order to attract or maintain students, and one means of promoting quality especially in terms of higher achievement test scores is to increase the amount of co-production. (p. 823)*

Her analysis of the way this has exacerbated school segregation and the concentration and isolation of low income students in Chile is given in Chapter 5.

Student experiences of school and learning, and their achievements, are affected by their own home resources, and the experiences and expectations of education they bring from home. Schools serving middle-class students work with "raw material" which is well matched to education; schools serving students from low socioeconomic homes work with less well matched "raw material" (Thrupp 1995; 1998).

Gibson and Asthana (1998) cite a number of studies showing that 53 to 87 percent of the variation in examination performance among English schools is due to social factors reflecting socioeconomic status:

> *While there is nothing deterministic about this link between the socio-economic characteristics of school populations and school-level examination performance, it is a simple fact that the more socially disadvantaged the community served by a school the very much more likely it is that the school will appear to underachieve.* (p. 204)

This is comparable to research findings in New Zealand. Harker and Nash (1995) found that two-thirds of the variance among secondary schools in mathematics,

science and English examination results was explained by the socioeconomic characteristics of the school intake.

Yet the pattern of school choice in open-enrolment systems favours schools with high socioeconomic intake, and children from middle and high income homes (see Chapters 5 and 6). It is difficult for schools in low socioeconomic areas to reverse this trend. This leads to increased segregation of low income children in low income schools, and thus to a widening, rather than closing, of achievement gaps.

Willms and Echol (1997), in their work on the impact of open enrolment in Scotland, concluded that parents choose on the basis of reputation, rather than school effectiveness. Fowler (1994) comes to a similar conclusion about New Zealand parents. He found that the most important factors affecting parental choice were social, rather than educational; they included "the socio-economic status of the [school's] suburb, the type of children who lived there, and the impressions created". Put more bluntly, the schools which are avoided (by those parents able to do so) are those with high proportions of low income children, and high proportions of ethnic minorities.

Judging school effectiveness is no easy matter even for researchers. But if parents are basing their choices on reputation and others' previous experiences, using student socioeconomic status as their main indicator, then "the conditions necessary for healthy competition are difficult to achieve" (Willms and Echol 1997, p.440).

In the USA[5] the use of government funds for education provided by religious schools has sparked deep controversy, because of the constitutional separation of state and church. This is not such a major concern in other countries. However, the issues which underlie this controversy are important. They include the potential loss of common cultural and social ground, the use of public funds to support what may be intolerant and divisive views, and the need for common standards of accountability for the use of public money.

Education and Markets

Critical analysis also examines whether education does conform to market theory. The main structural features of a market are: the availability of alternatives among which consumers can choose, the degree of product differentiation, the availability and cost of information to consumers, the ease of exit and entry to the market, and the funding or pricing rules. Brown (1997) offers some reasons, based on economic theory, for the "education market" being at best imperfect:

[5] As formerly in New Zealand

- Schools are unlikely to compete by offering diversity, or matching individual children's needs, since schooling is a joint, group-based enterprise. Even more importantly, schools offer "comprehensive uniformity", allowing individual students to spread their risks in terms of labour market opportunities by offering some diversity of particular subjects, but not complete specialization. Private schools differentiate themselves from public schools (in the US) by offering religious instruction, or (at a higher price) more of what public schools already provide, with a higher level of co-production or peer-effects through the use of selection.
- Market transactions work best, especially where the funder is not the direct consumer, where transaction costs are minimal. Brown notes (p.83) that minimizing transaction costs is easiest where results can be specified in advance. However, it is difficult to specify precise results in education, because the "complexity of production", due to its "jointness" [or "co-production"] and "the inherent uncertainty of the production process", make the task of monitoring output "somewhere between expensive and impossible".
- Consumers cannot police providers easily, since they lack reliable information to make comparisons. They cannot switch providers quickly and at low cost,[6] partly because this involves being able to transport children to a different school and/or moving house, which may not suit other needs of the family related to employment and support. Children may be adversely affected by changing schools, particularly if this happens frequently. Moreover, consumers do not "purchase" schooling very often, so they lack experience. Unlike buying a loaf of bread, the schooling transaction also carries a high risk.

Manski (1997) notes also that:

> *Classical economics does not say that markets always optimize social welfare. It says only that a market system can achieve a social optimum if production technology, consumer preferences, social objectives, and the information available to the relevant economic actors satisfy certain conditions....The merits of markets relative to other allocation mechanisms are not clear-cut if consumers have less information than do firms. Then competition does not ensure that firms produce the goods that consumers want.* (p.103–105)

The relationship of school autonomy to effectiveness is also not clear-cut. Studies of school-based management show no advantages for children's learning (Hannaway 1995, Townsend 1998). Students in centralised systems where indi-

[6] Riley (Tweedie and Riley 1990: p. 558) also notes that the multidimensional nature of schooling makes exit decisions more difficult than those based on a single factor, and that non-academic aspects of schooling are likely to play a part in decisions to stay in schools even when dissatisfaction is felt.

vidual schools have less autonomy often perform better than others in international assessments.

Kelley (1994) finds that the market model has only limited application to public schools, in terms of two theories of the relation of organizations to their environment. First, competition between firms increases productivity often through the introduction of new technologies. The "technology" of teaching and learning is, for a variety of reasons, common across schools, whether public or private.[7] In addition, "the market model relies on ... ease of entry and exit [to and from the market]." This is not the case for public schools. Not only would this be expensive to provide; it would not provide the stable learning environment students require.

In a choice system, she says, "Some parents and students may feel better, but it will not effect a major change in the technology or efficiency of schools." (p. 19). Indeed a seemingly rational choice for an individual child may often be unnecessary (because many children from middle-class homes would have made much the same progress in their neighbourhood school). Yet such choices can have deleterious effects on the quality of the education system as a whole, by increasing school stratification and making it harder to provide schools offering a balanced socioeconomic mix (e.g. Willms and Echols 1997).

Second, the difficulty of assessing school productivity and success makes it difficult to tie funding (purchases) to performance. If funding were tied to performance, poorly performing schools which remain open to provide a neighbourhood school option would become under-resourced, and increasingly unable to serve their students effectively.

Third, unlike private business, education has multiple aims, and multiple "clients", not just the obvious consumers.

Fourth, schools in difficulty cannot use the strategies available to private business: they are unable to relocate, to shed business not regarded as core, to change suppliers of raw materials [students] in order to improve the quality of output,[8] or

---

[7] Nelson (1998) notes that education, whether private or public, fits Baumol's cost disease model, i.e. that labour intensive industries with a limited ability to benefit from technological advances inevitably experience increases in real costs. They cannot become more efficient to the extent of reducing real costs, since unlike industry, they cannot take advantage of new forms of productivity, yet they need to remain competitive for employees with sectors that can do so.

Baumol's model was developed in the 1960s, and reflects a more redistributive era. It is perhaps optimistic now to assume that productivity gains will be shared with employees rather than returned to shareholders or owners. Rising productivity in the US in the last two decades has not generally increased wages in real terms (Hout et al 1996).

[8] Though, as we shall see, schools in market situations do endeavour to improve the quality of their student intake, and gain an edge over other schools. As with other forms of competition, this strategy allows success for some providers, and their students, to the cost of other providers— and their students.

to undertake radical reorganisation (because they are unable to fund the high initial costs for retraining and re-equipping).

The final major strand of criticism is that even if schools and school systems were shaped to fit a market mould, a school market cannot provide a fresh level playing field, with each provider entering on new terms which take no account of previous reputations or perceptions of what education should be like. An education market will be skewed towards those students and schools which already enjoy advantages. It will reinforce existing hierarchies of curricula and schools, rather than break new ground and offer wider opportunities for individuals and their societies. Education will become even more of a "positional good", with parents and students competing with each other to attend the prestigious schools, which are available to middle-class and high income families only, and whose value lies precisely in the limited number of places they offer (Marginson 1997). This is why prestigious schools have shown little interest in expanding or, as some suggest, franchising themselves.

The empirical research with which this review is chiefly concerned provides information that enables the main assumptions behind vouchers, and these criticisms of them, to be tested. Chapter 2 looks at the way competition among educational suppliers or systems has been conceptualised, and the resulting analyses of its impact. Chapter 3 looks at the evidence relating to school ownership and autonomy, in terms of Chubb and Moe's hypothesis that there is a private school advantage with regard to student achievement and costs.

Chapter 4 discusses vouchers in the form of individual scholarships to private schools. Chapter 5 examines evidence relating to the impact of competition in full voucher systems of open enrolment, covering both public and private schools. Chapter 6 looks at limited or quasi-voucher systems of open enrolment for public schools only.

Chapter 7 analyses the extent to which a move to a full voucher system would open access to private schools for a wider social group. It looks at the supply of New Zealand private schools, their funding, and relevant material on the TIE individual scholarship scheme.

In conclusion, Chapter 8 sums up the benefits and costs of vouchers, in the light of the consistent trends emerging from the research.

2 THE IMPACT OF COMPETITION ON EDUCATIONAL QUALITY AND STUDENT ACHIEVEMENT

A key plank in the theory supporting vouchers is that competition between providers will have a positive effect on educational quality, providing higher quality at the same cost, or a lower cost. Educational quality is usually measured by student achievement on standardised tests. Although this is an imperfect measure, it is the most affordable one. Most studies use average achievement data, rather than looking at whether the impact might be different for different groups of students. Most studies looking at the impact of competition among different educational providers have not gathered new data, but draw on existing data-bases. This means that some of the indicators used are indirect or proxy.

Defining competition in education is also not clear-cut. In the US, most studies have focused on **structural** competition, using as an indicator the degree of concentration of suppliers in a given unit. There is an assumption in a number of these studies that supply is homogeneous within the unit of analysis (district, state, or sector). More closely focused studies find considerable variation. However, studies are now becoming increasingly sophisticated.

This chapter shows the range of methods used to analyse educational competition, and analyses their findings.

Structural Competition within the Public Sector

In a number of studies by US economists and political scientists, concentration of suppliers is taken to mean competition. The analyses which measure competition in terms of concentration of suppliers are cross-sectional, showing correlations. A better test of the power of structural competition would be an analysis of what happens to quality after an increase (or decrease) in concentration.

For some studies, the unit of analysis is a county, and the number of districts in a county. Zanzig (1997, p.432) refers to three studies showing varying achievement advantages for students in counties with a greater concentration of districts. No information is given as to whether the districts were also competitive in terms of open enrolment. The premise is that parents can compare the quality of schooling in their own district with that in adjacent districts. They will then use this knowledge to seek improvements in their own system, or will move out of one district to

another offering better quality. Parental awareness therefore puts pressure on districts to at least match their neighbours.

Zanzig draws on the analysis of competition in the private sector for his concept that a completely competitive education market has a threshold point, beyond which any additional suppliers make no impact on student performance. He cites studies showing that the threshold point in reaching a competitive price for roading contracts is 6–8 tenderers. In retail and professional services, it is 3-5 tenderers. Zanzig's own research aimed to find the number of districts required to make a "completely competitive educational market among school districts" (p.434). His model yields 3–5 districts, whereas Borland and Howsen (1993) in a similar study give 2 districts. Both studies were mainly cross-sectional.

Hoxby (1994) found that the degree of district concentration within a set of standard metropolitan statistical areas explained differences in educational attainment (highest school grade completed by age 24), hourly wages, and, marginally, test scores on the Armed Forces Qualification test. But Vandenberghe (1996: p. 59–60) argues that hourly wages are a poor proxy for human capital and school effects (otherwise individual wages would differ according to the school attended). He says wages are set by other considerations, such as the dynamism of the local economy. He suggests that the degree of district concentration may simply reflect urban and rural differences, rather than being a universal or reliable indicator of the existence of competition in education.

This point is also made by Blair and Staley (1995), who looked at interdistrict competition in 6 US metropolitan areas in relation to the quality of education offered, rather than the structure of the market as measured by the concentration of suppliers. They explained why they did this:

> *The urban counties have the highest concentration ratios due to the dominance of the central city district, and urban counties have lower performance scores for a variety of socio-economic reasons that are probably unrelated to the level of concentration* (p. 194).

They found that student achievement was related to the educational performance of nearby districts. The size of this effect was about the same as the effect of the amount of money spent on teacher salaries. However, the proportion of families receiving one-parent family benefits in a district had a much larger effect on student achievement. The average family income in a district also made a difference.

There are other limits on the usefulness of using supplier concentration as an indicator of competition in education. The number of schools in a given area or sector cannot in itself be a guide to the existence of actual competition if parental

preferences, e.g. for single-sex schools, rule out some schools which are in the same geographic neighbourhood.

Differences also exist between education and the tendering situation which inspired Zanzig's and Borland and Howsen's studies. The tender situation is much more restricted: tenderers meet common specifications, and have control over their choice of materials in relation to the specified outcome. By contrast, it is difficult to specify precise outcomes in education. The raw material is not fully controllable. Students are co-producers, and, as we shall see, student composition plays a marked role in competition among schools. The ability of the supplier to choose, rather than the consumer, also plays an important role.

Competition in structural terms should also lead to **increased efficiency, or lower spending**. Marlow (1997) cites one study showing that per-student spending increases with the number of districts in a county; but another, based on the number of districts per state, reaches the opposite conclusion. His own study used state level data. He found that the higher the number of districts and schools per state, the higher the student scores for mathematics and reading for school-leavers and grade 8, and the lower the high school drop-out rate.

But greater competition, in the form of numbers of districts and schools, did not lead to lower per-student public spending.[9] Marlow links this with a possibility his data did not allow him to test: that states with higher numbers of schools may have smaller schools than states with fewer schools. This fits with research showing higher per-student costs in small schools, and also with research showing a link between school size and student achievement.[10] So Marlow's finding about the positive value of structural competition, at least for student achievement, may in fact be a finding about the positive value of smaller school size.

---

[9] Nechbya (1996: p. 1) cites an unpublished study which finds no relationship between the degree of competition and efficiencies (all income spent on student achievement) in Texan public schools: Grosskopf, S., Hayes, K., Taylor, L. and Weber, W. (1995), "On Competition and School Efficiency".

[10] Marlow cites Eberts, R.W., Schwartz, E.K. and Stone, J. A. (1990), School reform, school size, and student achievement *Economic Review of Federal Reserve Bank of Cleveland* 26, p. 2–15. This found, in a study of elementary student maths achievement in 287 schools, that schools with fewer than 200 students had higher maths scores than schools with more than 800 students. A recent New York study (Viadero 1998a) found that high schools with less than 600 students graduated more of their students without repetition, and though they cost US$1,410 more per student, their cost per graduate was only US$25 higher. Darling-Hammond (1998) gives this summary of the US research on small schools: *"A substantial body of research shows that, all else equal, smaller [secondary] schools and school units (in the range of 300–600 students) are associated with higher achievement, better attendance and graduation rates, and lower levels of student misbehaviour than are larger schools. Small schools are also more effective in creating good interpersonal relationships and in providing opportunities for students to participate in extracurricular activities and to take leadership roles."*

Impact of Private School Supply

Another strand of research on the effects of competition among educational providers focuses on whether private school supply and enrolment are related to public school supply and quality.

Couch, Shughart and Williams (1993) found that student performance on an algebra test (1988–89) was higher in North Carolina counties which had a higher proportion of school-age children enrolled in private schools. These districts also showed evidence of white flight and higher income flight (in relation to the proportion of families below the poverty level in a county) to the private schools. Counties with higher proportions of college-educated people, higher personal incomes, and higher population density had higher proportions of private school enrolments. There was less use of private schools where public spending per student was higher.

Structural competition within the public school system, measured by numbers of districts and schools, was not related to either public school spending per student, or student achievement. Poverty and educational levels in a county had greater effects on public student scores than did the proportion of children in private school enrolment.

Newmark (1995) used this model to cover 7 other school subjects as well as algebra using 1989–90 North Carolina data. He found much the same effect for the algebra test (algebra I) used by Couch et al, but no significant relationship for the other 7 subjects: English, history, biology, chemistry, physics, geometry, and algebra II. Averaging all the scores, including the algebra I test, also showed no significant relationship between private school enrolment proportions and student achievement.

On the basis that competitive pressure would be exerted on public schools by the proportion of *all* county students not attending them, not just those attending schools located in the county, Newmark then re-analysed the data using Census material on private school enrolment. This included students attending private schools outside the county as well as within it. The Census material shows that in fact, children in 11 counties which had no private schools were attending private schools in other counties. Including all students attending private schools showed no relationship between the proportion of private school enrolment and public school student performance on the algebra I test.

Newmark then went on to distinguish between secular and religious private school enrolment, on the basis that the latter reflects religious affiliation rather than academic quality per se. Using only the proportion of students attending secular private schools reduced the private school effect on public school stu-

dents' algebra performance, to a marginal level of statistical significance. When Newmark allowed for the elective nature of the North Carolina tests by taking into account the proportion of public school students taking the algebra I test in each county, the results showed that the higher the proportion of students attending private schools, the lower the county score.

Newmark noted that the range of private school enrolment across the North Carolina counties was small, from 0 percent to 11 percent, with an average of 4 percent. He suggested that the proportion of private school enrolment would have to be much larger, or growing, before it might exert the competitive pressure which could theoretically have an impact on public school quality. This raises the question of whether the positive benefits thought to stem from competition would in fact be benefits related to the absence of a "monopoly" provider, rather than the nature of the schools' "owners".

One test of this[11] might be offered by the high proportions of private schools (or the absence of a dominant public sector) within the Netherlands system. Roeleveld and Dronkers (1993) cite one study showing that "public" schools perform better in a region where the Catholic schools are the "normal" schools (p. 2–3). Their own Netherlands study focuses on the impact on student achievement of differences in "market share" for different providers (Catholic, Protestant, and public). This study developed from seemingly conflicting findings of a Catholic school advantage for student achievement in the 1970s and 1980s, but not for the 1950s, when the Catholic church was a "significant community". Their hypothesis was that this was because schools were not competing with one another on educational quality grounds in the 1950s, since choice was based on religious affiliation. Their own study assumed that schools were competing on educational quality grounds in the 1980s.

Students in their third year of secondary education enrolled in a school belonging to a provider which had the largest share of a district's educational "market" showed slightly lower achievement than students going to the same provider's school in an area where the provider had no dominance. However, students attending schools whose providers had only a small market share, in districts with a dominant provider, did not show any advantages. It was students in districts where there was no dominant provider who showed higher achievement. Market share was more important than ownership. Roeleveld and Dronkers interpret these findings as showing on the one hand, the benefits of not having a monopoly provider within a given district; and on the other hand, the role of non-academic grounds (such as religion) for school choice, in dampening down competition. They conclude:

[11] Ignoring contextual differences (see Chapter 5).

we found some indications that a reasonable degree of competition between schools [providers] without large or small sectors [market share] and without specialized segment of pupils promotes the educational effectiveness of schools. (p. 7).

The findings point to the degree of competition as the critical factor in school effectiveness, not whether the competition is between private and public schools. But they also raise questions about the value of competition. The achievement of most students (those whose provider's market share in a given district was either dominant, or a small minority) would appear to be negatively rather than positively affected by the degree of competition.

The finding with regard to the majority sector is particularly interesting. The assumption behind per-student funding in choice systems is that popularity itself is a good gauge of quality. Yet this study indicates that popularity can be misleading.

It would also be helpful to test the use of provider, rather than individual school, as the unit of competition. To do so would require more information on school selection processes, family choice of school, whether the schools belonging to different providers had similar socioeconomic mixes, and the range of variation in school socioeconomic mix and student achievement among schools belonging to the same provider, in areas with different degrees of competition. However, most studies on the impact of private and public schooling are concerned with the market share of each sector or provider, rather than with individual schools.

Hoxby (1996), echoing Blair and Straley, observes that private school enrolment rises if public school quality is poor. The analysis of competition in structural terms, through a straight comparison of proportions of private school enrolment in given areas, may therefore be misleading. Hoxby's own analysis was centred on a factor that should increase the supply of private schools regardless of public school quality, namely the proportion of Catholics in a given area. This reason for private school preference is based on religious affiliation rather than educational quality.

Hoxby estimated the impact of a voucher system by comparing private school enrolment in a set of US metropolitan areas with different public subsidies for Catholic schools, against changes in the Catholic proportion of the population between 1950 and 1980. She found that a public voucher of US$1,000 would increase Catholic school enrolment by 40 percent, taking it from around 10 percent to 14 percent of the total enrolment. It would also increase public student achievement in mathematics, reading, high school graduation and tertiary qualifications.

Kane (1996) re-examined Hoxby's model and calculations, and found the reverse. He concluded: "All we know is that increases in the Catholic population were associated with higher spending per pupil at Catholic schools, and higher private school enrolment" (p. 216). In order to use Hoxby's data as a form of natu-

ral experiment on the impact of vouchers, Kane notes that one would need to know more about the form of the public subsidy for private schools—whether it was in the form of fixed grants, matching grants for money raised by the Catholic system, or per-student amounts; and whether it applied to students already in the private schools, or only for students moving across from the public sector, with public school funding reduced accordingly. Each of these forms of funding would have a different impact on the public schools. This is an important point to make in the analysis of the effects of competition within education.

Hoxby found that increased competition, either public/private or public/public, constrains salary increases won for unionized teachers. Yet she also found that private school competition partially subsidised through vouchers would not lower public school spending per student. This finding is based on the assumption that overall public funding for public schools would not be reduced, even though there were fewer students in public schools. It therefore assumes that public school spending is not on a per-student basis.

Hoxby estimated that increasing public subsidies for private schools would slightly decrease the social segregation in private schools, and slightly increase it in public schools. One reason given for this low estimate was that schools in the US are already highly socially segregated. She warned, however, that it was difficult to work out the long-term impact of full-subsidy vouchers on the supply of private education from her analysis of existing and past partial subsidies of private education (1998: p. 56).

Hill (1996) notes that if vouchers were introduced, existing private school supply in the US could not take large numbers of new students. "During the 1993 debate over the California voucher initiative, a survey of existing private schools indicated that they would be able, even with dramatic expansion of some facilities and staffs, to serve only 4 percent of the current public school population" (p.96). Setting up new schools is costly and time-consuming, as those involved in charter schools[12] have found. Forty percent of charter schools were pre-existing public schools (US Department of Education 1997). Hill, who supports systems of contracted schools, observes that "choice...in terms of demand for better schools has little meaning in the absence of a supply response" (p. 97). He gives the example

[12] Charter schools are a recent and rapid development in the US, where they are publicly funded schools which are free of district and most state (but not federal) regulations. There are some 900 charter schools (around 1 percent of all schools). They are a vehicle for widening parental choice, but are also looked to as spurs for innovation. A recent study of whether charter schools had in fact had an innovative impact on their districts found that the 6 out of 25 districts studied which did respond with reforms were those which had reforms already in the pipeline. The districts which were hardest hit in terms of loss of funding and decline of staff morale were more likely to make only small changes (Viadero 1998b).

of 10–30 applicants for every non-selective magnet school place in the open enrolment system in New York.

Kappel et al (1995) surveyed private schools in large urban areas in the US on their capacity and willingness to take voucher students. They found that these schools had little spare capacity, and wanted to retain their ability to select their students. Special needs students would probably be rejected. Elite private schools did not take part in the Milwaukee voucher scheme, precisely because of its random selection of students.

Modelling the Impact of Vouchers

Manski (1997) set up a simulation of the impact of introducing vouchers which offer partial subsidies of private education. He assumes a dominant public school sector, with some of its funding spent in ways "that may have social value but are not valued by students"; individual private schools which act competitively; differences in student motivation, and differences in individual achievement, which reflect peer-effects (through the proportion of highly motivated students in a given school sector); fully informed students; no impact on public willingness to pay taxes to support public schools if vouchers are introduced; differences in family income; preference for private schooling in relation to religious values and transport; and the continuing ability of private schools to set their own fees and costs. He then modelled likely outcomes in poor, average, and wealthy communities.

The assumptions that students are fully informed and that public spending on "social" values is inefficient[13] bias the model towards vouchers. Even so, Manski found that the impact of vouchers varies according to the community, and according to the reaction of the public sector in terms of changes to its spending patterns. In poor communities where the voucher amount equals public school spending, 30 percent of the intake of private schools would consist of low income students (compared to none in the absence of vouchers for private schools). Of course, this assumes that private schools already exist or start up in low income communities.

In average communities, low income children would continue to be absent from the private schools, but would make up a larger proportion of public school stu-

[13] This also assumes that only public school spending can be inefficient, in the sense of being on things that students may not value. New Zealand data on private school costs show a lower proportion going to direct educational uses (though a higher amount than public schools, since private school spending per student is higher). It also assumes that what students value is what is most effective in terms of learning outcomes; and that what suits individual students best enables the most efficient and effective provision of education overall, given the multiple goals of education.

dents. In wealthy communities, there would be no change to private school enrolments. Nor would the proportions of low income students attending private schools increase in average and high income communities if public schools responded to competition by spending less on "social" aspects. In low income communities, both public and private schools would have higher proportions of their enrolments coming from low income students. Low income students would make up a higher proportion of public school enrolments because middle income students would go to private schools. Thus competitive behaviour increases social segregation, with negative effects from clustering low motivated students together.

Manski also notes that vouchers do not address inequalities in school resourcing which arise from differences in local funding (and local fundraising). These in turn reflect differences in the socioeconomic composition of communities.

Moe and Shotts (1996) used Manski's simulation to analyse the extent of voucher effects for low income children. They looked at effects in terms of "utiles", which are not specified, but appear to mean the monetary benefit or loss to families. They found that in these terms, the losses would be small if public schools behaved competitively; but the gains would be substantial if public schools behaved "wastefully" (i.e. spent money on social aspects). The authors' interpretation of their result is that vouchers for private schooling would improve education for low income children in poor communities. However, it is not clear whether Manski treats the public school behaviour he includes in his modelling as a reaction to the introduction of vouchers, or a description of the situation in which they are introduced. Thus Moe and Shotts' analysis is open to a range of conflicting interpretations.

Nechbya (1996) takes another tack. His simulation is based on Teibout's theoretical work that people decide where to live according to how much of education and other public services they want to pay for. This theory emerges from the substantial role local taxes play in funding education and other public services in the US. Nechbya's simulation has limited application in systems such as New Zealand where education is not funded through local taxes[14]. He also assumes that all students are assigned to public schools by location, rather than through open-enrolment.

---

[14] It ignores all other reasons for housing choice, such as type of housing, proximity to employment, to family support, to amenities, and perceptions of personal safety. It also ignores interest rate movements and assumes large differences in local rates. In NZ, local rates do not vary in line with socioeconomic status. Porirua city rates, for example, are little different from those in some middle-class areas of Wellington. Neighbourhood segregation by income seems more pronounced in the US: for example, Nechbya (1998) notes that low-cost housing is prohibited in some exclusionary zones in high income districts in the USA.

Like Manski, Nechbya assumes that vouchers will result in private schools opening in low income areas. This will attract middle income parents. They will move to low income areas[15] because, as well as being able to send their children to the new private schools, they will benefit financially from selling housing in better areas, or reducing mortgage payments by shifting to cheaper housing, and paying reduced local taxes.

The simulation also assumes that in the low income area, the newcomers will buy the houses of other families (with children) who are better off, and therefore higher achievers, than their neighbours. Nechbya concludes that this displacement may contribute to a lower social mix in the public schools of the low income neighbourhood.[16] Moreover, the newcomers' shift may reduce the positive peer effects for students in the middle income areas they are leaving. So residential stratification is reduced, but school stratification is increased.

However, Nechbya sees this negative impact counterbalanced by a likely increase in the money available for public schools since they would have to serve fewer students, since the middle-income students would not attend public schools in the neighbourhood.[17]

This model, like Hoxby's, assumes that public schools are not funded on a per-student basis. Yet voucher systems pivot on per-capita funding. If public system numbers go down, both overall funding and school level funding is reduced.

Nebchya's most recent work (1998), using the same approach, concludes that his results would broadly hold in systems with more central funding. He assumes that intellectual ability rises in line with socioeconomic status—that is, that children from low income homes are innately less intelligent than children from high income homes. He continues to assume that private schools would open first in low income areas, to service the new vouchers (rather than the vouchers being used by parents in existing private schools). Moreover, he now assumes that private schools will move swiftly to offer more differentiated curricula based on student ability, so that would-be economists and carpenters (his examples) will not attend the same school. Public schools will follow this private-sector lead to specialize as their own rolls shrink, and they become more socially homogeneous.

These assumptions ignore the adverse effects of school stratification, especially

---

[15] This model depends on assumptions about easy family mobility, and about closer schools being seen as more attractive, even in the private sector, than those further away. Yet data on the comparative proximity of home to school for private and public school students is not included in the modelling.

[16] However, this assumes that the newcomers displace families, not retired people, or houses rented out to young adults.

[17] This conclusion depends on the validity of the assumption that the newcomers would displace families, i.e. replace children with children.

for children from poor neighbourhoods; the real barriers to school specialization noted by Brown (see Chapter 1); and the status aspects associated with different curricula, which make it extremely unlikely that students from middle or high income homes would attend vocational private schools. Private schools are just as likely as public schools to be affected by the conservatism of parents and funders, especially in times of economic uncertainty.

Nechbya himself notes that simulation models such as his can include only a limited number of assumptions and parameters. For example, he assumes no variation among public schools, other than socioeconomic mix. He also takes no account of the large role of religion in private school preferences. But the soundness of his underlying assumptions is also questionable, in the light of the empirical data relating to school choice, school socioeconomic mix and segregation, and the actual nature and impact of competition between schools—to say nothing of the complexities of residential location.

The most sophisticated simulation study done so far on the impact of vouchers is by Epple and Romano (1998). It includes open enrolment, school selectivity, peer-effects, and impact on adult income for different students.

Private schools, they note, already offer scholarships to high ability, low income students, in order for their full fee-paying high income students to benefit. They included private school selection, giving a premium to high ability students, in their modelling of various voucher levels in relation to public and private school enrolment and school quality (measured as student ability distribution).

They found that while there are gains from vouchers, these are unevenly distributed. Vouchers give large gains to just a few students, while the majority have small losses. The majority are those who remain in the public sector, where school quality deteriorates. Other losers are those using vouchers covering only partial costs at private schools. For them, achievement gains are outweighed by the cost:

> *The largest gains as a proportion of income accrue to high-ability, low-income households. As the voucher increases the demand for private education, it increases competition for high-ability students and the financial aid they receive.* (p.52)

High ability students gain, but not the very highest in ability:

> *Lower-ability students comprising approximately 70 percent of the population are made worse off because they are likely either to remain in the public sector when the voucher is introduced (a public sector of diminished quality) or to enter a low-quality private school. The top 2–3 percent of the ability distribution have lower expected income because the very top schools they will attend decline somewhat in quality.* (p. 54–55)

Thus vouchers appear to have significant drawbacks in terms of raising educa-

tional achievement or widening economic opportunity for students at all ability levels.

Epple and Romano's inclusive model makes more sense than Hoxby's. The sociological research covered in the next three chapters shows the importance of school socioeconomic mix for student achievement. It also shows the increased social segregation which comes with uncontrolled open enrolment in the public schools, the importance for private schools of their ability to select students, and the role of school socioeconomic mix in giving private schools their apparent advantage.

Grimes (1998) points out that Epple and Romano's assumptions about private schools are unrealistic in one respect: they assume that all private schools have equal status at the time vouchers are introduced, and there is free-entry (low start-up costs) for new private schools wishing to take advantage of the availability of public funds. His own mathematical model acknowledges the existing reality of a hierarchy of demand within private schools, and the existence of a limited number of elite schools (for which demand exceeds supply). He finds that:

> *Apart from one extreme case (in which all individuals equally own elite schools), the introduction of a voucher system is shown generally to increase the welfare of wealthy families which have children at elite schools, and to decrease the welfare of poor families which have children at state schools (p.12).*

Competition and Institutional Responsiveness

Chubb and Moe's hypotheses about the value of competition, private schools, and school autonomy, have been subject to a thorough empirical testing by Smith and Meier (1995). The next table sets out their summary of Chubb and Moe's hypotheses, drawn from the institutional theory which has arisen in economics and political science, and their own counter-hypotheses. Both hypotheses and counter-hypotheses are tested in their work.

Smith and Meier criticise Chubb and Moe for using individual performance (micro level) to judge system performance (macro level).[18] Their own approach uses macro level data, at the district and state levels, and looks at changes over time. The district level data is from Florida, a "large state with a diverse group of schools and students...[and] consistent measures over the years" (1995: p. 44).

Their model of the impact of competition between public and private schools on the quality of public schools takes into account district economic resources, and organizational characteristics such as bureaucracy (defined by the number of school

[18] Other methodological criticisms have been made of Chubb and Moe's study. Those relating to their conclusion that private schools are inherently better are covered in the next chapter.

Empirical Propositions Drawn from the Institutional Theory	
Hypothesis	**Counter hypothesis**
1. The primary demand made by parents and students on schools is for quality education, and given the opportunity, they will seek to satisfy the demand.	2. Quality education is only one of several competing demands parents and students place on schools. Others include questions of race, geography, and religion.
2. Democratic control suppresses education performance by limiting autonomy and effective organization.	2. Democratic control is an appropriate mechanism to run education and does not suppress performance.
3. There is little variation among the institutions of public education, and lack of variation limits the ability to affect education performance.	3. There is considerable variation among the public institutions governing education, and this variation affects performance.
4. Bureaucracy is a function of democratic control.	4. Bureaucracy is a function of need.
5. Competition will promote education performance.	5. Competition will promote elitism and de facto segregation.
6. The existing system is incapable of reforms to improve education performance significantly.	6. The existing system can and has made reforms that improve education performance.

officials per student),[19] democratic control (defined by whether the district superintendent is elected or appointed), and ineffective organization (measured by "surrogates"—the proportion of school staff resigning, and the proportion of students receiving disciplinary action). Competition is measured by the proportion of a district's students enrolled in private schools.

> *Controlling for economic resources, this variable is used to indicate the viability of the exit option. The greater the viability, the greater the competitive pressure on the public school system to prevent enrolment erosion. If competition works, private school enrolment should be positively associated with public school performance, once appropriate socioeconomic control variables are included. A negative relationship would indicate that competition produces a cream-skimming effect.* (p. 53)

[19] They note that "bureaucracy" is a difficult concept to define and operationalize for statistical modelling. They criticise Chubb and Moe for using data based on perceptions to derive their measure of bureaucracy: "What constitutes bureaucratic meddling to one person may be welcome administrative help to another." (p. 52)

The proportion of a district's students enrolled in gifted classes was also used to measure competitive response.

> *If parents have a realistic exit option, public schools should come under greater pressure to offer programs aimed at boosting the quality of education. Gifted classes are the best education offered by a district, and parents covet such classes for their children.* (p. 54)[20]

Average family income within the district, and the cohort's previous score on the state tests, were used as controls for family resources and students' cognitive capacities (though it could be argued that the cohort's previous score also reflects to some degree their previous schooling).

The results of separate regressions for each of these variables on communication and maths tests at grades 5, 8, and 10 showed:

- a negative relationship with student performance for the measure of *bureaucracy;*
- a positive relationship with student performance for the measure of *democratic control;*
- no relationship with student performance and the measures of *ineffective organization;*
- a negative relationship with student performance and the measure of *private school enrolment;*
- a positive relationship with student performance and *gifted class enrolments.*

Previous test performance was the most powerful predictor of student performance, though more for grade 10 than lower grades, suggesting that "school impact on performance is highest at the beginning of a student's career and then wanes" (Smith and Meier 1995: p. 57).

Smith and Meier then explored the composition of bureaucracy to test whether it is a function of democratic control (as Chubb and Moe assume), or a function of need: "a useful and appropriate tool to tackle difficult problems" (1995: p. 59). Measures of need were the number of schools per capita, and the proportion of students receiving free lunches (a measure of poverty). Both were positively related to the size of the bureaucracy. They note an irony: increased school choice might cut back hierarchical bureaucracy, but require each school to hire more administrative staff.[21]

Districts with an elected superintendent had fewer bureaucrats than districts with an appointed superintendent. Using average teacher salary as a surrogate measure for

---

[20] Offering "gifted" classes may not be a secure indicator of enhanced quality, however, but rather a marketing strategy in a competitive situation.

[21] This has certainly been the case in public choice systems such as New Zealand.

union strength, they tested the assumption of institutional theorists that "teacher unions constitute a primary client for the education bureaucracy" (1995: p.60). However, average teacher salaries were higher in districts with fewer bureaucrats. Per student expenditure, as a measure of available resources in a district, shows that the greater the money spent on students, the higher the number of bureaucrats. Smith and Meier conclude that it is the need variables that drive the numbers of bureaucrats.

To look at the impact of private school enrolments in sharper relief, they took into account mean family income and the proportion of Catholics in the district, since most US private schools are Catholic. Public school performance was measured as the proportion of students passing standardised tests, taking into account a cohort's previous pass rate, the proportion of students in gifted classes, and the proportion of disciplined students. They found that the private and public sectors were in competition, and there was some evidence for a cream-skimming effect. The higher the public school performance, the lower the private school enrolment. Conversely, private school attendance was higher where public school performance was lower.

The private-sector cream-skimming effect was also found when they looked at public school students' performance over 4 years in relation to private school enrolment.

> *While public school performance showed no sign of influencing private school enrolment, private school enrolment shows definite signs of influencing public school performance [adversely].* (p.73)

Smith and Meier suggest that, unlike shops or firms, most poorly performing schools are unlikely to close, because the remaining supply of school places would simply not be enough to cater for all students. They predict a two-tier system:

> *certain elite schools benefiting from competition and others hurt as their student populations are hollowed out along with their budgets.* (p. 50)

This is a robust study which shows little empirical support for Chubb and Moe's hypotheses and their findings. This indicates that their findings may be unique to their particular conceptualization of the major premises behind vouchers, their approach to the data, and the data available to them.[22]

The Impact of Competition

Arum (1996) notes that the organizational theory leading to Chubb and Moe's hypotheses leads to two different outcomes related to competition: "Free market advocates predict that as the private school market share increases, public schools

[22] Bryk and Lee (1992) and Witte (1996) provide important critical reviews of the weaknesses of Chubb and Moe's analysis and interpretation of results from the perspective of statistical researchers familiar with the databases and student tests they use.

will become more 'efficient' and improve performance using existing organizational resources" (p. 32). Others believe that public schools would respond passively on the basis of either "organizational inertia" or their inherent nature as (democratically run) bureaucratic institutions. Arum argues that a more dynamic application of institutional theory would predict an active response, with schools seeking "additional support from government sources to ensure survival" (p. 31), since government has a key role in "maintaining organizational and market stability", including defining the rules of competition.

To test these different assumptions about the effect of private school competition on public schools, Arum compared US states with private school sectors of different size. He found that the larger the private school sector in a state, the better the teacher:student ratio in public schools, and the smaller the gap between private and public schools, though private schools had smaller classes. The public school teacher:student ratios did not reflect greater efficiency in school spending (defined as spending more on teachers, and less on administrative and other school staff). Per-student expenditures were larger in states with larger private school sectors.[23] Expenditure was not affected by changes in the private school sector size of any given state between 1950–1980.

Looking at student scores, Arum found that while public school students' achievement (using High School and Beyond tests in maths, reading and vocabulary) was positively affected by the size of the private school sector, the reason for the positive relationship was the better teacher:student ratio, or the greater resources provided to public schools. Even so, other factors had much stronger and larger relations with student achievement. These factors were: prior student achievement, student and school socioeconomic status, gender, ethnicity, and educational expectations.

Vandenberghe's (1996) analysis of the impact of competition in the Belgian full voucher system focused on concentration of schools in an area, and statistical data on school intake and the proportion of students who have to repeat a year. It showed that the greater the competition, the more marked the social segregation, and the greater the ability segregation. Analysing the impact of this segregation in terms of its creation of an uneven distribution of peer-effects, he suggests that this makes choice inefficient, because teachers in schools with favourable peer-groups do not have to exert themselves. The system cannot use the peer-group effect favourably in all schools to boost student achievement "at minimal cost" (p.193).

[23] States with larger private school sectors tended to have higher income levels, be more urban, have higher union membership, and have higher proportions of African-Americans in the public schools. The greatest rate of growth between 1950–1980 of private schools was in the Southern states, "where fundamentalist schools have served as a refuge for White students leaving integrated public schools." (p. 36).

Levacic, Hardman and Woods (1998) take a somewhat different approach in their analysis of the impact of competition on student achievement within local markets. They note that there are two different conceptions of competition in the industrial economics literature. One centres on *the competitive behaviour of buyers and sellers*, or rivalry; the other centres on *the competitive structure of the market*. The market model assumes that a more competitive structure will induce a higher degree of competitive behaviour on the part of both buyers and sellers.

Structural competition in education depends on the availability of alternative schools, the diversity of educational programmes, regulations governing parental choice of school and admissions policies, funding rules, the proportion of spare school places, the ease with which schools can expand capacity or close, and regulations concerning the provision of information to parents. *Competitive behaviour* in education would consist of "sellers" promoting a school's attractiveness to parents at the expense of other schools, and "buyers" (families) choosing among schools, based on their perceptions of each school's attractiveness.

Levacic, Hardman, and Woods' study focused on inter-school competition over a 5 year period within the English open-enrolment system, at the local level. Their unit of analysis was an "area of regional competition" (ARC), a discrete cluster of schools located within a few miles within each other. Student achievement was measured by the average change in the proportion of students in each ARC achieving 5 or more A to C grades in the GSCE examinations, compared to the national average improvement over the period. The authors attribute this improvement in part to the use of school examination results in national and local league tables of schools which rank schools against each other.

They used two indicators of structural competition: spare capacity within the schools, measured by the average capacity utilisation for the schools in each ARC over 1991–1996; and the availability of alternative schools, proxied by whether the school was in an urban or rural area. They used one indicator of rivalry: the proportion of parents exercising choice, measured by the extent to which there were fluctuations in pupil recruitment to schools as a proportion of the available pupils in the schools' catchment areas. A composite indicator of each ARC's competitiveness was used to rank the 89 ARCs in the study. No relation was found between this composite indicator of competitiveness and student achievement.

Levacic et al then classified the data into 3 bands of competition—little or none, middling, and high. No positive relationship between competition and student achievement emerged. Gains in student achievement were below the national average in the highly competitive ARCs, and above the national average in the least competitive ARCs. The highly competitive ARCs were urban areas with

high levels of spare capacity, "both factors associated with socially disadvantaged pupils".

The proportion of schools in each band of competition raises some questions about the reality of pervasive competition in open-enrolment systems. Only 16 percent of the ARCs were highly competitive, compared with the other ARCs in the study. Almost half the ARCs had relatively little or no competition, and 32 percent had middling competition.

Levacic et al looked at factors which might explain differences among schools in their rate of improvement of student scores. They note that the most selective schools, the grammar schools, had little scope to achieve a higher proportion of students achieving A to C grades, since most already had high proportions of students achieving these grades. They found that non-grammar schools showing more improvement than others were more likely to be full to capacity, to be starting with a lower average GSCE score, or to be changing their school mix (by reducing the proportion of students entitled to free school meals). This latter finding is in line with the "cream-skimming" effect noted by Smith and Meier in relation to private schools, which are similarly able to select their students. The proportion of socially disadvantaged students in a school also had a negative impact on the improvement of student GSCE grades. One of the conclusions of this study is that a school's "internal capacity to improve is in part inversely (and adversely) related to the socio-economic status of its pupils."

Church-affiliated schools showed no more improvement than others. The nature of the local education authority (LEA) could make a difference. The rate of improvement was higher in an LEA which maintained real spending (in a period of decline in educational expenditure), and had an active policy of school improvement, than in an LEA with a substantial number of grammar (selective) schools.

Grant-maintained schools, like fully-funded schools in New Zealand received more money per student.[24] They also had more autonomy in relation to their LEA. Yet these schools showed no greater improvements in student achievement than others, once account was taken of the fact that they had fewer students entitled to free school meals, and had reduced their proportion of such students over 1992–1995 more than LEA schools had done.[25] This finding fits with Smith and Meier's finding, using US state-level data, that greater school autonomy was not positively linked to higher student achievement.

---

[24] Unlike New Zealand, all state schools in England, whether grant-maintained or LEA schools, have a teacher salary component built into their grants.

[25] The authors describe the funding advantage of GM schools as inefficient, "since it has not, by this measure, led to higher educational output."

Summary

These different studies show that the concept of competition is not straightforward in education. Competition is not easy either to define in a meaningful way, or to measure. The general trend of findings in these studies also indicates that competition on its own does not play the dominant role in educational quality or achievement. Indeed, increasing competition may result—at best—in gains for only a minority of students, at the expense of other students. If competition lowered costs, these gains for a few could be analysed in terms of a trade-off. But the empirical material here indicates that educational competition increases rather than reduces costs.

If competition is to be relied on as the main driver of systemic quality and efficiency improvements in education, one would need to find it operating in every locality. Levacic, Hardman and Woods' data show that that is not the case in England. The New Zealand data in chapter 6 also indicates that competition is localized and the market is not open. This may be ascribed to the difficulty of easy entrance into the market. But it is also costly to open education to new entrants, especially if there is existing spare capacity in the public school system.

3 IS THERE A PRIVATE SCHOOL ADVANTAGE?

One of the prime assumptions of voucher advocates is that private schools, by the very fact that they are private, offer students a better education than state schools can. On the surface, a comparison of raw test scores would indicate that they often do. However, when the differences between public and private schools in terms of student intake and selectivity (by both schools and students) are taken into account, the research evidence gives a different and more complex picture. Differences also exist among private schools: whether they are religious or secular, the form of religion, and whether they are elite, or "alternative". Private schools are also defined differently in different countries.[26] Generally they are schools which are not owned by government, exercise more selectivity than state schools, take students from higher socioeconomic backgrounds, and have more latitude over their own running and accountability. In some countries where private schools enjoy substantial government funding or there is open enrolment in the public schools, such latitude over the running of the school varies little between the two sectors.

Student Achievement—US studies

In 1996, Witte updated his 1992 review of the research on the impact of private school attendance on student achievement. He concluded that most US studies conducted prior to 1990, particularly those reliant on the High School and Beyond (HSB) national database (including the heavily promoted work by Chubb and Moe (1990)) did not control sufficiently for selection effects or measurement errors in achievement tests. Those studies "generally concluded that private schools had a marginally significant effect on achievement, but that the effects were small enough that they may be irrelevant for public policy purposes" (p.161–162). Subsequent US research using the more robust National Education Longitudinal Study (NELS) database led him to a similar conclusion; it showed small effects for private school attendance, but a large role for student intake.

The more thorough studies he reviewed in 1996 show that "the vast majority of the differences are based on student differences" (Witte 1996, p.165). Gamoran's

[26] New Zealand is unusual in having three sectors: state, integrated (mainly Catholic schools), and private schools. Integration allows schools full government funding, without a capital or maintenance component. Integrated schools may continue to select students, and to charge fees to cover capital costs. The level of these fees is higher than for state schools, and in fact overlap those of some private schools. Integrated schools are more accountable for the use of government funds than the government subsidised private schools. This is covered in more detail in chapter 7.

study, controlling for student differences and prior achievement, found a secular private school advantage close to zero, and a disadvantage for reading and mathematics. Catholic schools retained a small advantage in mathematics. Gamoran concluded that "If public schools could take on a more focused academic climate and promote more course taking in math, this difference, too, would disappear" (Witte 1996: p.166).

The Evans and Schwab analysis of sector differences related to high school completion and enrolment in a four-year college found an overall Catholic school advantage, after controlling for student differences, prior achievement and school peer variables. Catholic school students were 12 percent more likely than their public school counterparts to graduate from high school (ranging from 28 percent more likely for students in the lowest quartile to only 4 percent more likely for the top quartile), and 14 percent more likely to attend four-year college. Non-Catholics attending Catholic schools were slightly more likely to attend college than their Catholic peers.

Analyses of why Catholic schools might have some advantage for students usually rest on Bryk, Lee, and Holland's 1993 study of Catholic high schools showing a higher and more even distribution of student achievement. Their analysis of the reasons for this points to a core academic curriculum (as opposed to the streaming or tracking prevalent in many US schools, as well as an emphasis on internal choice or diversity of subject), and also "a communal school organization and an inspirational theology". Lee's later work within the "black box" of school structure leads her to continue to emphasize the importance of commonness or lack of a wide choice within a school, provided that the curriculum is academic, and the school small.

However, Catholic schools in the US are also more selective of students. Witte (1997: p.268) reports data from the national ATS survey showing that Catholic school principals were much more likely to say that the following factors were important in their admissions decisions: prior achievement (56 percent, compared with 8 percent of their public school counterparts); test scores (51 percent, compared with 5 percent); and disciplinary records (71 percent, compared with 5 percent). Religious affiliation was much less important (39 percent). By contrast, public school principals' over-riding criterion was the location of the student's residence (87 percent). A US National Centre for Education Statistics study of private schools, 1985–1986, found that applicants were required to sit exams at 71 percent of Catholic high schools, 43 percent of other religious high schools, and 66 percent of nonsectarian private high schools (AFT 1993).

One of the longstanding issues in the research on private school effects has been the need to identify any selection bias which may lie behind the decision to attend a private school, according to "attributes, both observed and unobserved, that are conducive to higher educational achievement" (Figlio and Stone 1997: p. 2). Some of the factors which have been used in recent research to try to control for such selection bias are average tuition costs, religious affiliation, proportion of Catholics in the area, and the density of Catholic schools in the area. Figlio and Stone (1997) report mixed results from these studies. They cite positive findings from the Evans and Schwab study (described above), and Neal (1997), especially for minority students and initial low achievers, but no significant effects from the work of Sander (1996) and Goldhaber (1996).

To understand the difference in these results, Figlio and Stone tested the specifications of selection bias used by other researchers against NELS data combined with Dun and Bradstreet's "veritable census" of private schools, and demographic and economic characteristics of schools' counties. They found that the specifications "rarely explain a substantial portion of the selection into the relevant private-school sector" (ibid: p. 3). Their own correction for selection used the variables of family socioeconomic status (combining income, education and occupation), parental attendance at religious services, religious affiliation, students' previous test scores, the urbanicity of the school's county, private school availability (separately for Catholic, secular or religious school of the same affiliation as the student), and demographic and economic characteristics of the school's county. This set of variables had more than twice the explanatory power of the other studies specifications combined.

They found that religious private schools did not advantage high achieving, high income students, and disadvantaged low achieving, low income students. However, they did advantage black and Hispanic students. This result is consistent with Neal's findings. The positive effect for these groups is strongest in urban areas. Like Neal, Figlio and Stone ascribed this finding of a private school advantage only for minorities, especially those in urban areas, to the reasonable assumption that the public schools available in U.S. urban areas with high minority populations are particularly poor. However, the peer-group effect may also be relevant: only 18 percent of Catholic schools in urban areas in the US fall into the lowest quartile of student socioeconomic status, compared with 42 percent of the public schools in urban areas (AFT 1993).

Secular private schools gave an advantage for low income and initially low achieving students. This advantage was greater than for high income or initially high achieving students, and initially high achieving students were disadvantaged

in science.[27] Figlio and Stone offer two interpretations. One focuses on the high income student intake of nonreligious private schools, with peer-group effects a key source of low income students' advantage. The other focuses on public schools, and the more specialised courses they offer. Public schools gave more time to science and mathematics, and while the homework assigned was the same, public school teachers were more likely to mark and return homework to students.[28]

Why then, asked Figlio and Stone, would parents send their children to private schools, "even if there is no advantage to their particular children in terms of standard academic achievement?" (p.34). Their data yielded these private school attractions: religious education, the opportunity to interact with higher socioeconomic status students who are more likely to plan to attend college, stricter discipline (that is, school readiness to expel students), and more extracurricular activities.

Figlio and Stone conclude:

> *Finally, our results should be used with caution if applied to the voucher debate. The estimated treatment effects only simulate the effect of moving a marginal student from the public sector to the private sector (or vice versa). Thus, characteristics of each school (including peer characteristics associated with that school) are unchanged. A voucher system, however, would likely change substantially the composition of public and private schools, e.g. peer-group effects on achievement might deteriorate in both sectors. In particular, the strong positive treatment effects of nonreligious private schools, which appear to be concentrated among low-income and initially low-achieving students, may be especially sensitive to composition changes if the benefits arise from strong peer-group effects. (p. 35)*

Toma (1996: 122) also cautions against the use of simulation studies to predict whether "the performance superiority of private schools would continue with policy reforms that increased the share of students in the private sector", because this growth could alter the composition of students in the private sector.

Goldhaber's study is particularly useful in providing a way to estimate what the changes could be if private school intake broadened, rather than remaining selective. He computes "what a given student would have achieved in tenth grade had she been attending a school in the alternate [private] sector, and had she taken all her schooling characteristics with her." (1996: p. 98) The data show a slight overall advantage on the NELS maths test for non-Catholic private students; but

---

[27] Whitty, Power, and Halpin (1998) cite an English study based on census data which "indicated that upper middle-class children gained least 'added value' academically from attending private schools (OPCS 1987)."

[28] Figlio and Stone cite a study by Betts (1996) which found that student academic achievement was "strongly positively correlated to the amount of homework assigned, provided that some of the work is graded and returned." (p.32)

also show disadvantages on the reading test for this group, and disadvantages on both tests for Catholic school students. This masks some interesting differences related to student ability: students in the highest quartile would perform slightly worse in the non-Catholic private schools on the NELS mathematics and reading tests, but lowest quartile students would perform better. Top quartile Catholic school students would perform worse on the reading test, but much better on the mathematics test. Lowest quartile Catholic school students would perform better on both tests.

The large data-sets used in the research described above do not include the actual selection processes used by schools, such as those described on p. 25. A less sophisticated comparison of a cross-section of 70 private and public schools conducted by *Money* magazine (Topolnick 1994) found better quality in the best public schools, and noted again the peer-group effect arising from the greater selectivity of private schools. Unlike the public schools, which were legally obliged to educate all children in their district, these private schools could reject applicants—as many as 2 out of 3 applicants for elite private schools and some Catholic schools. Selectivity with respect to the private school sector operates on the supply side as well as on the demand side.

Studies using New Zealand data

Only a small number of studies comparing student achievement in public and private schools, within their contexts, have been done using New Zealand data. These studies have not taken account of the student selectivity aspect of private schools, and do not include any comparative material on curricula or selection processes.

New Zealand is one of the 5 countries included in Toma's (1996) analysis of the 1981 IEA study of 13 year olds' mathematics achievement. She found a private school advantage for children in Belgium, United States, and New Zealand, but a disadvantage in France and Ontario. The private school advantage found was small: for New Zealand, it is the equivalent of 2.5 percentage points. Toma's interpretation is that "the absence of political control over the schools is a determining factor of private school advantage" (p. 146). She explains the negative result for France in terms of state control through contracts for full funding. A more likely explanation, given the loose nature of this control, is the "second chance" nature of much private school attendance in France (Ambler 1997).

Toma was unable to explain the Ontario result, which provides a contrary example of private schools under no public control achieving less well than public schools. The reason she gives is the low proportion of Ontario children attending

private schools. This should not matter, providing there were sufficient numbers of children for her analysis.

No clear definition of "political control" is given. In 1981, Belgian and New Zealand private schools operated within national (but not rigid) curriculum guidelines, and received free textbooks and staff development along with state schools. The one difference between the private and state schools was school choice of staff.

The private school advantage in New Zealand was reduced when paternal occupation and education were included—so much so that it became negative for some children (Toma 1996: p. 144–145). Children whose fathers had secondary or tertiary education did less well at private schools than their peers in state schools. Conversely, children whose father's education stopped at primary school did better than their peers at state schools. Tomas explains this difference in these terms:

> *A possible explanation for these findings is that political control over the public schools is more likely to be vested in higher socioeconomic groups with the subsequent benefits of public schooling accruing to the higher socioeconomic groups. As a consequence, the lower socioeconomic groups benefit more from exiting the public system and consuming private schooling. (Tomas 1996: p. 145).*

There are a number of difficulties with this interpretation. The argument that higher socioeconomic groups control public schools assumes that they do not control private schools also. This seems unlikely, given that private schools in New Zealand tend to have a higher proportion of children from higher income homes than state schools do.

It is more feasible that the private school advantage found was due to school socioeconomic mix. Individual children from homes with low paternal education benefit from having peers from homes with higher paternal education. This could have been tested with Toma's variables relating to classmates' parental education, paternal occupation, and maternal employment. However, Toma's only analysis of interaction between school type and socioeconomic status was at the individual level, not the level of the school's co-producer or school socioeconomic mix (intake characteristics) effect. Even so, her analysis shows that school socioeconomic mix had a larger association with children's mathematics achievement at age 13 than the school type.

Finally, because her category of private schools included the newly integrated Catholic schools, which would have made up between half and two-thirds of her private school sample, the difference Toma found could be attributable to the Catholic auspices of schools (Bryk, Lee, and Holland 1993), and not generalizable to all "private" schools.

Hughes and his colleagues have undertaken several analyses of student performance in relation to the type of secondary school attended. Their analysis of examination success and the tertiary education or occupational destination on leaving school of 2746 students from 20 Christchurch schools (Lauder and Hughes 1990) showed a private school advantage after taking into account gender, students' individual measured ability, and family socioeconomic status (using the Elley-Irving scale based on the educational and income components of different occupations). However, after taking school socioeconomic mix into account, the private Protestant school advantage for examination achievement was considerably weakened, the private Catholic school and state single sex school advantages were modified, and the state coed disadvantage was substantially lessened. Taking school socioeconomic mix into account made little difference to the school-leaving destinations of students for three types of school, but modified the private Protestant school advantage substantially.

The full range of the difference between student achievement which could be linked with school type rather than student intake characteristics (school mix) was 0.16 to -0.19 on the 17 point academic achievement scale, equivalent to a modest 2 percentage points. On the 7 point school-leaving destination it was equivalent to 4 percentage points, a somewhat higher but still modest difference.[29]

Cheng (1994) reanalysed this data.[30] Including school type in her initial equation gave much the same picture as Hughes and Lauder: initial achievement, gender, family socioeconomic status, school mix, and school type were all significantly associated with student academic performance. She suggested that Hughes and Lauder overestimated the impact of school mix because of its high correlation with school type. She then respecified the categorical variables, using School Certificate results to gauge academic achievement, reduced the socioeconomic categories to 6, treating them separately in her equation, and defined school mix as the ratio of students in the top 2 socioeconomic categories over those in the bottom 4. This led to a finding that private school and state single-sex school students scored more for School Certificate than others, all things being equal. School socioeconomic mix had a negative impact, but smaller than school type. She noted some limitations of the data: the large sample size, which made it easier to obtain significant results, and the multicollinearity, or overlap, of interrelated variables. She con-

[29] Raw score differences between private protestant and state coeducational schools were 4.9 on the academic achievement scale, and 1.53 on the school-leaving destination scale.

[30] This reanalysis was funded by the NZ Business Roundtable.

cluded that "As a result, it is difficult to determine the degree to which school type affects student achievement" (p. 207). [31]

A journalist's comparison of School Certificate and university achievement in the Wellington region found that private school students did better than state school students on the School Certificate examination, but that state school students did just as well as their private school peers at university (Brown 1993). This comparison looked only at school type in relation to achievement.

Hughes and Lauder (1996) have also studied the first and third year university performance of students in terms of the type of secondary school they attended, whether their secondary school was coeducational or single-sex, the students' gender, and the faculty they were studying in. Their first year sample consisted of all full-time students attending the University of Canterbury in 1989, 1990, and 1991, and Victoria University in 1990 and 1991. Looking only at achievement in relation to gender and school type, they found that state students slightly outperformed private school and integrated school students (respective mean total scores were 241, 231, and 218 respectively). Women from integrated coeducational schools scored lower than those from integrated single-sex schools; women from private schools did better than men from private schools.

Estimates were made of university performance, based on the student's previous achievement in the university bursary exam (taken in the final year of secondary school). Taking faculty into account (to allow for any differences between faculties in their marking), they found that students from state schools outperformed their integrated and private school peers in arts, science, and engineering. Integrated school students slightly outperformed their state peers in commerce and engineering, and both outperformed their private school peers.[32]

Harker (reported in Matheson 1996) criticised this study for not including school mix. Given that private schools generally have a student composition with a higher socioeconomic profile than state or integrated schools, one would not expect the inclusion of school mix to change the order of their results (though the size of the difference might alter). This is because it is likely that most state and integrated

---

[31] Harker (1995) criticised both Lauder and Hughes' analysis and Cheng's reanalysis for the smallness of the school sample, the very small numbers of each type of school (4 Protestant, 3 Catholic, 4 state single sex, and 9 state coeducational), and the reliance on single level regression, using aggregated individual data. He noted that there are recently developed hierarchical statistical analysis techniques which are better equipped to keep school and individual student data independent of each other. In content terms, he criticised Cheng for ignoring the "contextual effect"—the co-producing, peer-effect—in the way she respecified school mix.

[32] Women outperformed men in arts, commerce, science, and law. Students from coeducational schools did as well as those from single-sex schools, once faculty and previous achievement were taken into account.

students going on to university study would come from mid-high decile[33] schools rather than low decile schools.

Hughes (1998) has also undertaken analysis of second and third year university performance of 5310 University of Canterbury students who began their study 1989–1991. During the second year of study, state students were slightly ahead of both their private and integrated peers (for full-time students, the respective means were 217, 209, and 202). Among full-time students in the third year of university, there were no significant differences related to the type of secondary school they had attended.

However, taking previous achievement levels into account shows that students from state schools did much better at university than their integrated and private school peers. The residuals, or the differences between their estimated score based on their Bursary achievement and their university achievement, were 8.8 points for state students, -16.6 for integrated school students, and -4.2 for private school students.

Data from the Competent Children study, which is following a cohort of children in the Wellington region and looking at their performance on 10 competencies, found that 6 year old children attending private schools scored higher on only one measure, word recognition. The average score for children attending integrated schools was somewhat lower than for state schools (Wylie and Thompson 1998). Family income overlapped substantially with school type.

When the same children were aged 8, a private school advantage existed on only one measure, PAT Reading comprehension, with a further indicative advantage when reading, writing, maths and logical problem-solving measures were combined. Again, this advantage could not be distinguished from the advantages conferred by family income (Wylie, Thompson and Lythe, forthcoming).

The Competent Children data show that both school socioeconomic mix and family income have a larger association than school type with primary school children's competency levels.[34] Children attending schools serving middle-class

---

[33] New Zealand state and integrated schools are given socioeconomic decile rankings reflecting the community characteristics of their student intake; these deciles are used to allocate additional funding, on a sliding scale, with the lowest decile schools (1 and 2), in poor communities, receiving the highest additional funding per student, and the highest (10) receiving no additional funding. The decile ranking effectively acts as an indicator of the social mix of the school, and thus New Zealand funding formulae recognize this as a factor operating for schools in addition to students' individual family resources. Private schools are not given decile rankings.

[34] The Competent Children study also found that the socioeconomic mix, or peer-group effect, of a child's final early childhood education centre is associated with competency levels at ages 5, 6 and 8. After taking family income into account, children in early childhood centres serving a mainly middle class group did better than others.

communities did better on communication, mathematics, and literacy, even after taking family income into account. Children attending decile 1–2 schools had lower mathematics scores at age 6 than others. This is consistent with the results from the National Education Monitoring Project (NEMP) and the recent IEA mathematics study. It shows that there is a negative impact from school segregation—that is, the concentration of children from low income families in schools with no or few children from other income bands.

No private schools in the Competent Children study catered predominantly for low income or low-mid income communities. This meant it was not possible to look at school socioeconomic mix in relation to different school types. However, taking school socioeconomic mix into account in relation to private schools only, showed an advantage for children attending private schools serving middle income communities rather than a wider socieconomic mix.

School Autonomy

One of the crucial planks of Chubb and Moe's thesis that vouchers which cover private schools will increase student achievement is their finding that school autonomy is related to more effective schools. However, other researchers have pointed to some major flaws in Chubb and Moe's analysis.

Glass (1997) observed that it ignored HSB data showing that there was no difference in private and public school teachers' ratings of their autonomy in the aspects of curriculum, textbook selection, choice of teaching methods, grouping students, student behaviour policy, and the content of their professional development.

Glass and Matthews (1991) criticised Chubb and Moe's reading that the correlation they found between (their measure of) school autonomy and student achievement was a causal relationship. Rather than school autonomy fostering student achievement, they suggest that it is just as likely, if not more so, that student achievement fosters autonomy: that schools whose students score well on tests are less likely to be the subject of bureaucratic attention.[35] This point fits well with the fact that it is the schools regarded as performing poorly which become the focus of mandatory school improvement and support in the decentralized systems of New Zealand, England, and Kentucky.

The granting of more autonomy through decentralization does not seem to have brought increased achievement in England and New Zealand. Instead all three

[35] In addition, they note that the student achievement data used by Chubb and Moe were collected in 1980 and 1983, but the data on school organization collected a year later, in 1984–5. To test the direction of the correlation, data on school organization would need to be collected either earlier or simultaneously with student achievement data.

systems, including Kentucky, have seen a greater insistence on centrally mandated systems of accountability. In England there has been a reasonably prescriptive national curriculum, and the recent introduction of a mandatory literacy hour, which has been criticised as undermining teacher autonomy. The recent green paper on assessment recommended the introduction of mandatory national assessment in New Zealand at the primary school level, and met widespread criticism from teachers, school trustees, and educational researchers.

There are other fragilities in Chubb and Moe's analysis which add to the dubiousness of their claims for their findings. Bryk and Lee (1992) note a number of conceptual, analytical and scaling issues in their comparison of students' 10th and 12th grade scores to gauge school effectiveness. These make their analysis somewhat circular. For example, use of item response theory expands a scale at its extremes, giving a larger change in scores for additional correct items for high achieving students than for those in the middle. This results in higher estimated gains for initially higher achieving students, advantaging private and suburban public schools, whose students scored much higher on the 10th grade tests.

Chubb and Moe's high performing schools are in fact a "melange of relatively large suburban schools and small private schools...this subset of schools contains some very different organizational forms" (Bryk and Lee 1992: p. 442).

Bryk and Lee also point to conceptual flaws in Chubb and Moe's composite indicator of school organization. This indicator contains two items which are not so much organizational properties as outcomes: teacher efficacy and absenteeism. Teacher collegiality, found in other studies to be an important component of school organization, was omitted. The proportion of students in the academic curriculum track of a school was a major factor in the school organization concept, and played a large part in the association of school organization with student achievement. Yet many public schools have moved from such explicit tracking; the more appropriate factor would have been specific courses taken. By using global measures, the "explanatory power of their model tilts towards more general factors external to the school" (p. 444).

Another example of this tilting toward the general is Chubb and Moe's use of a composite measure of student achievement based on 5 different test scores. Bryk and Lee's view is that only the HSB mathematics test should be used to test school effectiveness, since it is the only one whose content bears some relation to the taught curriculum. Chubb and Moe's comparison of "effective" and "ineffective" schools is also made by comparing the top and bottom quartiles only. In addition, insufficient attention is paid to variations in school size and urban location, and these factors are omitted from the final stages of their modelling.

Witte points out that even if Chubb and Moe's analysis was well-founded, their case for vouchers rests on "something like a 0.04 standardised regression coefficient [showing correlation, not cause] linking [student] achievement and [school] organization, and a modest link between school autonomy and effective school organization" (1997:261). This link explains only 5 percent of the achievement differences between students.

Chubb and Moe found private school students had a test score advantage of only half a question more than public students. Smith and Meier argue that this difference is much smaller than one would expect if "a quality demand were the sole driving force behind private schools...especially given the private school students' more favourable socioeconomic status" (p. 65).

Smith and Meier note that "markets for any product...rarely focus on a single goal. They frequently offer products of different colours, sizes, and quality" (p. 66). Religion is one of the main reasons for the demand for private schools. Location and racial segregation are others. "Freedom to choose where and with whom children went to school, after all, was the primary defence of segregation." Private schools grew rapidly in the Southern US states after schools were required to desegregate (Henig 1995:102).

Smith and Meier's Florida data over 4 years show private school enrolments gradually increasing over time as black public school enrolments increased, and as the proportion of Catholics in the district population increased. Private school enrolments also rose as public school performance increased, challenging the tenet that private schools are primarily chosen because they offer better academic quality. They conclude that "In the education marketplace, offering religious services and [racial] segregation may be just as profitable as offering an education demonstrably superior to the competition's alternative" (p. 72).

Differences between Public and Private Schools, and Within the Private School Sector

Is "private school" a uniform black box? How variable are the schools within it? How valid is the assumption that the private sector is different from the public sector in terms of school organization?

Glass (1997) provides evidence that there may be more overlap than difference between public and private sectors in the US. She studied autonomy in 3 nonsectarian and 3 public schools serving a middle to upper-middle class, white clientele, most of whose students were college-bound. Size and cost were the main differences. The public schools had much larger rolls and school buildings. Per-student spending was almost twice as high in the private schools.

While the public schools are forced to function and provide educational services to students within their means, the private schools depend on fundraising to supplement tuition so as to cover the true cost of educating each of their students. Public schools are mandated to provide an education to all students, whereas private schools are selective of students and their parents (p.5).

Glass's findings challenge Chubb and Moe's assumption that private school principals and teachers enjoy more autonomy. What constrains autonomy in both sectors is working within prescribed national laws, pressures from limited funding, and

...an arena circumscribed by the demands of parents, college admissions requirements, and the College board. Often these demands are conflicting and contradictory, yet teachers are able to extert autonomy by seeking protection from administrative hierarchies, participating in opportunities for decision-making, ignoring selected policies, and seeking the sanctuary of their classroom where their authority is unchecked. The greatest freedom is derived from the perception of a successful school.

She also concludes that

The challenge of making schools more creative, energetic, and innovative institutions may be more a matter of stimulating teachers and principals who have fallen into complacency rather than setting them free from some ill-conceived notion of a repressive and domineering bureaucracy.

Murnane (1984) noted that the range in quality among US schools in each sector was greater than the difference between sectors. This raises questions about the reasons for any differences between private and public schools, and the case for using public money to widen parental choice to include private schools, on the grounds that the private sector provides a better education. It also fits with the empirical literature indicating that school choice is not made on the single criterion of school quality.

Gorard's (1997) study of secondary school choice in a South Wales region gives interesting information on the operation of a quasi-market of non-elite private schools. Parents choosing these schools were from "religious minority" backgrounds, and upwardly mobile rather than middle-class. The schools were very small, and "sensitive to tiny variations in local supply". A quarter of the private schools in the region closed, opened, or merged in one year. Competition between the schools resulted in "moving schools to their most marketable form, which is that of the majority of schools—all-age, coeducational, non-selective urban day schools. Choice and diversity are not linked in this market" (p.7).

This finding provides an example of Brown's observation (see Chapter 1) that educational markets are unlikely to support specialization and diversity, since its

consumers (parents in this case) are more interested in accessing an education which minimizes risk to them and their child. Similar trends—towards the familiar and traditional high-status forms of education rather than innovation—were found among the high-profile City Technology Colleges initiated as part of the English open-enrolment system, and the grant-maintained schools, which were more autonomous than the majority of schools, and better funded (Whitty, Power and Halpin 1998, p. 89–90; 118–119).

Gorard found that parents were choosing schools on the basis of inadequate information, and being misled by the marketing of the school, or by their own comparisons (for example, with their own schooling, or with the status of elite private schools) or by their difficulty in getting from the school accurate information on class sizes and examination results. Children's preferences also played a central part. The private schools were not actually providing what the parents wanted for their children, but seemed more concerned with promoting themselves. Nor did they show a better overall performance than state schools. The more traditional, older, selective private schools did well, but the results of the newer private schools were often below the national average. Gorard describes the older private schools as able to operate as a "quasi-monopoly" within their area, and questions the ability of parental choice to increase educational diversity or raise educational standards.

A recent study by the US National Centre for Educational Statistics (Baker et al 1996), using data from the national 1990–1991 Schools and Staffing Survey, categorizes private schools into 7 groups: Catholic schools—parochial, diocesan, private order; conservative Christian-affiliated religious schools; unaffiliated religious schools; and nonsectarian schools. The organizational aspects examined are ones which have been used to explain differences in public and private school effectiveness. These are:

> *the school's main organizational goals; the professionalization of its principal; the compensation of its teachers; the size of administrative staff within the school; which decisionmakers have the most influence on crucial educational matters; and the school's curricular emphasis* (p.4).

The resulting picture shows no simple divide between public and private schools for these organizational aspects, and often considerable overlap. There are also marked differences between different types of private schools. Between the two sectors, public and private, there was very little difference in educational goals relating to the inclusion of basic skills and academic excellence, or years of science courses required. The main differences were in having a religious emphasis in the

educational goals, and teacher remuneration. While teacher salaries were lower in the private sector, Catholic schools were the ones most likely to make a pension contribution to their teachers (in addition to salary); other private schools offered housing. Public and diocesan schools were least likely to offer housing to their teachers. Similar differences emerged for medical insurance.

Other differences were in the principal's education, his or her influence over the curriculum, and the ratio of administrative staff to teachers in the school. Public schools had more principals with higher university degrees than the private sector as a whole, and a higher average length of teaching experience — but not in comparison with Catholic and nonsectarian schools.

The ratio of librarians and counsellors to class teachers was similar for all types of schools. Conservative Christian schools had the highest ratio of teacher aides to teachers. But private schools had a higher overall ratio of administrative staff to class teachers than public schools did; within this, public and Catholic diocesan schools were most alike. Public school principals were slightly less likely to say they had a great deal of influence over hiring policy (84 percent, compared with 93 percent of private school principals). Their estimate of whether their governing board had a great deal of influence in hiring policy was 42 percent, compared with 37 percent for private schools (within this group, Conservative Christian and unaffiliated Christian schools were higher, while the lowest were Catholic private order schools and nonsectarian private schools).

Private school principals had much more influence over their establishment of curriculum (86 percent compared to 57 percent of public school principals). Teachers played a slightly larger role in the private sector (64 percent compared to 55 percent of public schools), and boards slightly less (32 percent compared to 44 percent of public schools—least in the Catholic diocesan and private order schools, and nonsectarian private schools). Interestingly, these differences over curriculum establishment were not reflected in differences in curriculum emphasis (though perhaps a more fine-grained study would be needed here, to establish differences in practice rather than policy).

We have no comparable data for New Zealand on differences in autonomy and organization between private and public schools. The extension of decision-making to school level through the decentralization which began with the *Tomorrow's Schools* policy in 1989 points to the similarities being stronger than the differences. Diorio, Rich and Rawlings (n.d.) found that 24 percent of the private school teachers in their 1995 survey of 43 private schools thought they had inadequate opportunities to participate in decision-making in their school. This can be com-

pared with the 16 percent of state and integrated teachers in the national NZCER primary school survey who thought there were areas of the school's decision-making they should be involved in, but from which they were excluded.[36] Chapter 7 gives more information on differences in resourcing, selectivity, and costs.

There is one final observation to be made about research relating to a private school advantage. Most of the studies have been done at a systemic level, using aggregated data. Gorard's study is the only one to examine local markets, and the extent and impact of competition among private schools. There is an assumption that private schools operate in a more competitive environment than public schools. This may hold true for newer schools, but not for those with firmly established reputations and scarcity value—the "elite" schools. Similarly, we cannot say that a boys' private school and a girls' private school in the same area are in competition with each other.

Summary

Neither American nor New Zealand research yields any clear evidence that private schools per se improve student achievement[37] overall. Family resources and the school's socioeconomic mix of students are more important factors than school type. Attending private schools shows no clear advantages for children from high income homes. Those who do benefit from attending private schools in the US appear to be children from low income homes, initially low achieving students, and those from minority ethnic groups. Where the data on student performance can be analysed in terms of different types of private school, differences are also found, sometimes favouring Catholic schools, sometimes favouring secular schools. For New Zealand, the 1981 data suggest any benefit goes to children whose fathers had no school qualification; we have no more recent data available to indicate whether some children benefit more than others, or less.

The research on private schools also shows that this is a diverse sector. Some private schools are very different from their state counterparts: many differ very little other than in their resourcing and selectivity.

It is likely that the main source of the benefit for individual children from low income homes found in the US studies comes from the higher socioeconomic mix

[36] Diorio, Rich and Rawlings' study shows that private schools are diverse, and that most involved in private schools feel they have more autonomy than those in state or integrated schools. The NZCER national surveys of primary schools would indicate that autonomy is less of an issue for state and integrated school teachers than resources (Wylie 1997). However, there is no New Zealand study comparable to the US ones cited above which pose the same questions of both sectors.

[37] As measured by standardised tests, graduation, college attendance, and university success.

offered by private schools, rather than their ownership or seeming autonomy. This interpretation fits with the more robust and sophisticated analyses of the impact of competition described in the previous chapter. Other plausible hypotheses are that private schools are able to offer such children more individualised attention, through better resources than the state schools they could access (mostly serving low socio-economic status communities), such as smaller school size and smaller classes, and a greater concentration on academic goals.

4 INDIVIDUAL SCHOLARSHIPS

Individual scholarships are vouchers targeted to children from low income homes in order to allow them to attend private schools. They are usually limited to a given number of children each year. Such vouchers are usually made available on the assumption that these schools can provide a better education than the children are able to obtain in their local neighbourhood school. The often-cited Milwaukee scheme, which encouraged the development of new private schools in low income areas, has attracted the most interest, and controversy. In Colombia, these individual vouchers were also designed to create new schools, and boost the number of secondary school places available, since state school places are not provided in sufficient numbers to allow every child to attend secondary school. Of the schemes described below, England's Assisted Places Scheme, based on existing private schools, is the closest to New Zealand's Targeted Individual Entitlement (TIE) scheme (described in chapter 7).

Assisted Places Scheme (England)

This began in 1980, and will be phased out from September 1998, with the money that was spent on it going to reduce class sizes in state schools. It was targeted at academically able low income children, using targeted assistance on a sliding scale: full school fees were paid for children of parents earning less than £10,000, while others received part fees, up to a maximum parental income of £30,000. Whitty, Power and Edwards' (1998) evaluation of the Assisted Places Scheme found that it benefited mainly middle class children, because it did not take assets or parental education into account. The difficulty of taking assets into account in a targeted scheme was recognized in the advice given to the New Zealand Minister of Education by the Department of Social Welfare in the development of the TIE scheme.[38] Most of the Assisted Places Scheme students also "lived in the catchment areas of maintained [state] schools with sound or good academic records" (p.246), rather than in low income areas with schools which did not achieve good academic records.

Initially, schools entering the scheme were selected on the basis of their quality. Not all schools applying were selected. The schools themselves were already se-

[38] Ministry of Education (1995) Note to the Minister of Education on TIE: Asset Testing, Boarding Bursaries and Response from Independent Schools. *"DSW's [Department of Social Welfare] advice on asset testing: don't do it unless you can do it simply or unless you want to target a group very specifically. It is DSW's experience that attempting to devise measures that adequately deal with the self-employed is extremely difficult...asset testing can have unintended effects...in broad terms, in considering assets, DSW looks at their ability to generate income and/or the ease with which they can be converted into cash."*

lective, and further made their own selection of only academically able children. Less than 1 percent of the Assisted Places Scheme students had special education needs, and none of these needs required the "statementing" process that accompanies moderate or deeper special needs in England.

Assisted Places Scheme students did better in public examination results than their peers in the maintained (state) sector, and better than the private sector average. This reflects their selection into the schools on academic grounds. In some private schools taking 25–55 Assisted Places Scheme students a year, the achievement of these students was so much higher than the general level of the school that it "represents a significant boost to their school's results and consequently to its market appeal" (p. 244). This was especially true for those schools which entered the scheme more recently, without having to meet the original criterion of offering high quality.

Whitty, Power and Edwards found that few students exited their secondary school to take up Assisted Places Scheme places. The competition occurred at the transition to secondary school. The impact on state schools of the Assisted Places Scheme varied. In keeping with the hierarchical nature of English education, state schools which were ex-grammar schools, and which retained some selectivity, could compete more successfully than those which were ex-secondary modern schools.

US Schemes

There are currently two US programmes which use public money to fund private school attendance by low income children, in Milwaukee and Cleveland. Around 30 privately-funded voucher schemes also exist, largely sponsored by business organizations. All of these schemes, public and private, are small-scale, involving at most 1–2 percent of a district's school population. This means that these schemes can tell us little about the impact of systemic vouchers, that is, the impact of using public money to fund all students at any school, whether public or private. A recent private sector initiative offering vouchers to all students qualifying for a free or reduced price lunch in the low income Edgewood district in San Antonio may provide a better opportunity to see what the impact would be.[39]

[39] The district serves 15,000 mainly poor, Hispanic students. The voucher can also be used in public schools in neighbouring districts. The voucher amount will cover the total cost of private school tuition, up to an amount of $3,600 per student in grades K–8, and $4,000 per student in grades 9–12, slightly less if the choice is of public schools in neighbouring districts. The scheme will run over 10 years. The first year take-up rate of vouchers is estimated at 300–500 students; 14–25 percent of the currently available places, 150 in 3 Catholic schools in the district, and 2000 in the county where the district is located (some 1500 of these are in 40 Catholic schools). The scheme's sponsors expect existing private schools will expand, and be joined by new ones started by "educational entrepreneurs". The impact of the voucher scheme will be studied by Paul Peterson, a political scientist and voucher advocate (National Centre for Policy Analysis and CEO America 1998, Walsh 1998).

Studies of the existing schemes can, however, tell us something about the students and families who wish to attend private rather than public schools, and about the achievement of students who receive vouchers, compared with their public school counterparts. To a lesser extent they can also give us some information about the relative cost-efficiency of the two sectors, and the costs of such individual scholarship voucher schemes. The studies done to date also bring out the complexity of evaluating the impact of voucher schemes. The most rigorous study has been done in Milwaukee. Most of the private voucher schemes have not been analysed in any depth (evaluation was not built into their funding), and the studies which have been done on these schemes focus on the users of the vouchers, and their satisfaction with their private school option, rather than the overall impact.

Milwaukee Parental Choice Program

This scheme started in 1990. It applies to students from families with incomes not exceeding 1.75 times the national poverty line, and not already attending private schools in the district, or an out-of-district public school in the prior year. Initially 1 percent of the Milwaukee public schools (MPS) enrolled students were covered by the scheme. This increased to 1.5 percent from 1994–95— that is, 1,500 students.

There is supposedly random selection by schools; however, siblings are exempt from random selection. Schools are not required to take children with special needs, and can expel students.

The schools receiving voucher-funded students do not have to furnish annual financial accounts. They are exempt from state and district testing requirements, and required to meet state standards in only 1 of the 4 areas required of public schools, choosing from attendance, achievement, grade advancement, or parental involvement (AFT 1997).

Originally only secular private schools were eligible for this scheme, and voucher students were to form no more than 49 percent of their total enrolment. This was increased to 65 percent from 1994–95. Legislated changes to the scheme in 1995 allowed religious schools to take voucher students, allowed kindergarten to grade 3 students already attending private schools to receive vouchers, increased the voucher students to 15,000 by 1998, allowed a private school to have 100 percent voucher students, and cut all funding for data collection and evaluation.

This legislation was appealed. Expansion of the scheme continued, but without the inclusion of religious schools. A Wisconsin Appeals Court decision in June 1998 allowed the inclusion of religious schools, on the grounds that the vouchers were aid to individual students rather than to religious organizations. This decision is likely to be appealed to the US Supreme Court.

The salient points from Witte's evaluation of the 5 years of the initial scheme are:[40]

(1) Supply of private school places for voucher students was less than the target number. A third of the eligible schools offered places in the first 2 years of the scheme, rising to half in the next 3 years. However, the voucher scheme did allow several private schools to "survive and later flourish", offering an alternative for parents dissatisfied with public schools.

(2) The number of applications for private school vouchers was less than the target of 1 percent for the first 3 years of the scheme, and around 1 percent for the next 2 years. There were on average 1.35 applications for every place until 1994–95, when they fell to 1.07 for every place. However, there was also a mismatch between the school year levels of the applicants and the year levels of the places available, meaning that final enrolments were below the number of available places by between 19 and 44 percent. Interestingly, there was no decrease in this mismatch over time. This indicates that schools were not becoming more responsive to students, suggesting that they could not change their capacity to suit individual student needs, either because of the cost of doing so, or because individual choice schemes, particularly when only some students are making choices, make it difficult to predict demand.[41]

(3) The attrition rate from the programme was 46 percent in the first year (largely due to the closure of 2 of the private schools), falling to 28 percent in the final year. This attrition rate posed difficulty in evaluating the impact of the voucher scheme on student achievement. The small number of schools involved at the start of the programme also posed difficulties: most of the voucher students whose progress could be monitored over 4 years came from only 3 schools.

(4) Parents of voucher students had more education than their public school counterparts, and higher educational aspirations for their children. Location, which is a prominent reason given in studies of parental choice, was also important. The private schools which students chose with the vouchers were closer to their own homes than the schools used by their counterparts who remained in the MPS. Voucher parents were more dissatisfied with the public schools, and their children's achievement was lower than their peers, on average. They had much more involvement in their child's education than other parents, through helping their children at home with school work, contact with the school, and participation in school organisations.

---

[40] See Witte (1996) and (1997), and Witte and Thorn (1996).

[41] The interdistrict choice scheme which allowed Milwaukee students access to public schools in near-by suburbs that were generally better resourced than the MPS schools had 6,500 students participating in 1993–94, and a much higher application rate for the places available, 6.6 to 1 (Witte and Thorn 1996).

(5) Voucher students did not perform better than their public school counterparts in mathematics, and were marginally behind in reading, taking into account gender, prior achievement, poverty (measured by eligibility for free lunch), parental education, and ethnicity.

This lack of an advantage for voucher recipients was contested by Peterson et al (1996), who found that voucher students' mathematics scores in the third and fourth years were substantially higher then their counterparts who applied for places but did not get them, and who remained in the Milwaukee public schools. However, Witte(1997b) shows that this is not a valid comparison, for two main reasons. The "reject" group was not a valid control group for comparison with the voucher students who remained in their voucher schools for three years or more. The students who were "rejected" and who also remained in the Milwaukee public schools did not provide a random sample of those who applied and were rejected. They came from poorer homes, their parents were less educated and had less involvement in their children's education, and they were in higher grades.

There were only 27 students in the "reject" control group used by Peterson et al, and 5 of these—a large enough number in a group this size to influence the result—scored a 1 in the mathematics test. A 1 often signals that students did not fill out their test form. When Witte re-estimated the results on students in both groups who scored more than 5, he found no difference between voucher recipients and the "rejects". He also compared the "reject" students with their counterparts in the public schools who did not apply for the voucher scheme, and found that the public school "non-choosers" had even higher fourth year mathematics scores than the voucher recipients. His conclusion was that "the 'math phenomenon' [as Peterson et al termed their result] is conditioned on the *Rejects*, not on anything happening in either the *Choice* schools or the larger MPS system" (Witte 1997, p.15).

Rouse (1997) also carried out a re-analysis of Witte et al's data, comparing all voucher students' progress in mathematics and reading with the Rejects sample, and with MPS students. She too notes the small size of the Rejects sample. Because of a change in testing policy in the MPS, which made only the problem-solving component of the mathematics test mandatory, she also had to impute overall mathematics scores for MPS students from a sub-sample of MPS students who had taken the whole mathematics test. Her re-analysis finds a small advantage in mathematics, once previous achievement is taken into account, but no differences for reading between the voucher students and others. She cautions against using the Milwaukee data to extrapolate on the benefits of vouchers overall.

There are other aspects of the Milwaukee voucher scheme experience that point to difficulties with private school supply, accountability, and retention of the origi-

nal purpose for targeted schemes. In 1995–1996, out of the 18 voucher schools available to Milwaukee students, 4 closed, including 2 new schools with 100 percent voucher enrolment. There were allegations of inflated enrolment figures and missing or fraudulent financial data (Molnar 1997, p.77).

In early 1997, Polly Williams, the African-American who authored the 1990 voucher bill to gain support for African-American community schools, put forward a new bill which emphasized fiscal accountability of the voucher schools, and restricted it to secular schools. The Catholic schools in Milwaukee are predominantly attended by white students, and she feared that the money available for African-American education initiatives through private schools serving African-American students would be cut. The achievement of children attending the Milwaukee Catholic schools is in fact no better than their matched counterparts in the Milwaukee public schools with the same social and economic backgrounds (Molnar 1997, p.149).[42] A voucher scheme which results in individual schools having only a limited proportion of African-Americans is less likely to show greater responsiveness to their needs, and would be less likely to act as a focus for community development as well as student achievement. Williams also sought regulations to stop the private voucher schools from charging voucher parents "registration" fees of US$50 to US$350, and some schools requiring that voucher parents give either money or time to school fundraising efforts.

Williams' former business and Catholic allies opposed this bill. Molnar (1997) documents her increasing disillusion with the transformation of the scheme from her original hopes. Coons and Sugarman had a similar experience. They initiated a Californian referendum to provide vouchers for all children, but with particular provision and protection of low-income children, through partial school selection by lottery and no additional tuition charged above the voucher level. However, they also found their initiative overtaken by private interest groups. The final proposition, which went to voters in 1993 (and was defeated)[43], allowed schools to select students, and to charge additional fees on top of a lower voucher amount (Murnane and Levy 1996, p.112).These two cases show that it is difficult to keep voucher schemes limited to low income or minority groups.[44]

---

[42] Milwaukee Catholic schools also have higher fees than the voucher amount. They charged $4,000 a year in elementary school fees at a time when Milwaukee public school spending per elementary school student was US$2,958, or $US4,645 when school transport and fringe benefits were included (Molnar 1997: p. 149).

[43] 20 state referenda in 14 states in the USA between 1966 and 1993 have resulted in defeats of proposed voucher legislation (Doerr, Menendez, Swomley 1996: p. 27–29).

[44] Molnar (1996) provides a sobering description of the actions of conservative business and philanthropic trusts in the development and transformation (or takeover) of the Milwaukee scheme.

Peterson, Greene, and Noyes (1996) agreed with Witte and Rouse that the Milwaukee voucher programme could not be used to test the usefulness of vouchers in education, describing this programme as "highly compromised" (p.41). Their criteria for a system of choice which could "stimulate innovation, diversity, and responsiveness" were that "Families must be given a large enough voucher so that they, especially the poorest, can afford quality education; existing schools must be invited to participate and new ones encouraged to form; religious liberty must not be constrained; and regulations must not be overburdensome" (p.43).

In their reading, the Milwaukee scheme failed to provide sufficient stimulus to the supply side by not allowing religious schools to participate, not allowing voucher schools to have 100 percent voucher enrolment, and not being allowed to charge parents fees (the assumption that some direct parent payment towards the child's education encourages educational achievement also underlies the partial-subsidy approach taken in the private voucher schemes). Other problems were the amount of the voucher, and random selection (rather than total school selection) from a pool of high-need students who came from low income families and were not academically successful or well-disciplined before they sought private schooling. On the demand side, they felt that the scheme did not allow a true test of the impact of vouchers because of the small number of vouchers available, the non-eligibility of students already attending private schools, and the eligibility of only low income families. Thus student access was restricted to schools serving low income families, or schools in financial difficulty.

This is an instructive analysis of the nature of the Milwaukee programme, for several reasons. First, it brings out the importance of an adequate supply of schools. Second, it shows that the incentives required to encourage quality, stability, and diversity of private school supply for low income students are primarily adequate public funding, coupled with school selectivity of students. Peterson et al's requirements would not allow the "hard to serve" students access into private schools, but would require voucher students to be already succeeding. Private schools would therefore remain distinctive—and advantaged—in comparison with public schools, in terms of their fees, selectivity, and accountability.

Third, it shows the pressure on small-scale individual voucher schemes to be open to all students, not just to those from low income homes, whose educational needs are highest. If the scheme had been open to students already attending private schools, then it would also have been substantially more expensive, and served higher income groups, probably at the expense of low income students seeking access to private schools. Since it is unclear whether private schools per se can substantially raise student performance at a general rather than individual level,

this might not matter. But if money that would otherwise have gone to the education of low income children goes instead to the better-resourced, then existing gaps in educational achievement related to home resources and school socioeconomic mix will only grow.

Cleveland

This scheme started in mid 1996. Low income students in grades K–3 were eligible, even if they were already attending a private school. The initial selection was random, by a central office.

The scheme covered 1,996 students in 1996–97. A quarter of the voucher recipients were already enrolled in private schools, 33 percent came from the public schools (1.7 percent of the existing public school population), and 42 percent were kindergarten students entering school for the first time. A total of 6,244 students applied for the scheme (3 students for every available place), and 29 percent of these were existing private school students.

All private schools, including Catholic schools, were eligible to take part, and 55 schools did so, including 4 new schools set up in response to voucher funding. Vouchers paid up to 90 percent of a school's tuition for students whose family income was below 200 percent of the poverty line, to a maximum of $2,250; and up to 75 percent of school tuition costs, or $1,875, whichever was less, for students whose family income was above this.

Greene and Peterson (1997) surveyed parents of voucher recipients and unsuccessful applicants who remained in the Cleveland public schools. Voucher parents whose children had used public schools or whose child was starting school were much more satisfied with the private schools than those using public schools.[45] Parental income was generally lower than it was for those public school or private school counterparts who applied for but did not receive vouchers; other factors were the same. No comparison was made with parents who did not apply for the scheme. Analysis of student results in 2 new schools set up as a result of the voucher initiative showed above average progress over the 1996–97 school year in reading and mathematics, and below average progress in language skills for first grade students, but gains for second and third year students.

A state evaluation of grade 3 voucher students in a wider range of voucher schools found that their achievement after one year's attendance in private schools

[45] The act of choice, or being selected for a selective school, can increase parental satisfaction even though the school itself is of much the same quality as a neighbourhood school. Driscoll (1993) found in a comparison of 66 assigned schools and 66 magnet schools in similar communities that though parental satisfaction was higher at the magnet schools, the magnet schools' resources, curriculum and student achievement were similar to those of the assigned schools.

was no better than their counterparts in the Cleveland public schools (Walsh 1998). This study also took prior achievement into account, and found, in contrast to Milwaukee, that before they used the vouchers to attend private schools the Cleveland voucher students were already achieving at significantly higher levels than their public school peers (Metcalf 1998). The authors of this study cautioned against drawing conclusions about the impact of the voucher programme after such a short time.[46]

Costs of the Cleveland and Milwaukee Schemes

The Milwaukee scheme cost $7 million in 1996–97. The Cleveland programme overran its budget of US$5.25 million by US$1.9 million, mainly through the use of taxis to provide student transport. This overrun was covered by state funds earmarked for the public schools. In future the budget for the programme will be increased substantially (Feldman 1998).

The Milwaukee scheme, for 1,650 students, cost US$4,373 per student. Levin's (1997) comparison of this amount with the per-student amount in K–8 and elementary Milwaukee public schools found that the voucher cost about US$1,000 more than the per-student amount in the public schools. Including an estimate for facilities costs of about 10 percent of expenditure brings the additional cost of the voucher down to around US$570 per student.

The average Cleveland voucher cost per student was US$1,763. This did not include transport, administration, or state aid already given to private schools. Taking those into account, the per-student voucher cost was estimated to be US$3,192 per student. By contrast, the per-student cost in the Cleveland public schools was US$6,200. However, this covered much higher secondary school costs, and costs of programmes such as special education, compensatory education, school meals, and vocational education. These are all legally required of public schools, but are not offered by most private schools (Levin 1997). Another estimate of the per student cost in the Cleveland public schools which takes these differences into account, and adds the larger transportation cost of the voucher scheme, shows that the voucher scheme cost US$744 less per student. This does not take into account non-public contributions to private schools. One estimate of US Catholic school funding is that the fees charged amount to only 51 percent of the total school costs (AFT 1997).

---

[46] Nonetheless, their work attracted a dismaying attack from voucher advocates, and a re-analysis which is based on lower standards for results to be treated as statistically significant than is normal in research, as well as the inappropriate and misleading combinations of the test used in most of the voucher schools with that used in the two private schools included in the Greene and Peterson study, which refused to take part in this study's testing (Metcalf 1998).

In each scheme, a substantial portion of the voucher recipients were kindergarten children (25 percent in Milwaukee, 42 percent in Cleveland). In neither city could public schools accommodate all their kindergarten-aged children. It may be that it was this lack of public availability, rather than dissatisfaction with public school quality, which accounted for many of the kindergarten enrolments.

Private vouchers

The private voucher movement "is part philanthropy, part political reform" (Moe 1995, p.9). Little money has been put aside by the groups offering private vouchers to evaluate their work. The evaluations which do exist focus on the characteristics of the families using vouchers, and parental satisfaction, rather than student achievement. Moe's introduction to his collection of studies of these schemes simply assumes the link between parental satisfaction and school quality which is inherent in the market model. He thus defends data on parental satisfaction as adequate in assessing the benefits of vouchers, though he acknowledges the difficulty posed for this assumption by the fact that low income parents' satisfaction with their children's public schools is often high. He attributes this to their lower expectations.[47]

Moe is also explicit about the trade-off between accountability through regulation, and accountability through the market, or competition (p. 19). He makes it clear that voucher advocates are resistant to any form of accountability other than competition. If voucher schemes do not do as well as their advocates expect, then one of the reasons given will be that any regulations they work within are "onerous restrictions" (p. 19). This theme emerges also with charter schools. Moe acknowledges the potential of voucher schemes to "skim off the cream", and uses this as one of the criteria which should be used to assess voucher schemes—whether they reduce skimming, or make it worse. He supports the allocation of places by random ballot to reduce the cream-skimming which is evident in research on private voucher schemes.

The US private voucher schemes provide privately funded subsidies for low income children to attend private schools. Most are small schemes, serving from 8 to 180 students, with the 4 largest schemes in Milwaukee (2,650), Indianapolis (1,100), San Antonio (900), and Los Angeles (775). In 1994–95, 6,572 children received private vouchers in 17 cities. The waiting list was around 13,000.[48] Half the

[47] It may also reflect their experience, and the available comparisons. New Zealand data shows that parental perceptions of their children's academic performance are associated with their socioeconomic status: what is regarded as high performance by low income parents is regarded as low by high income parents (Lauder et al 1995: p. 50, Nash 1993: p. 111).

[48] Many of these are likely to be existing private school students (Matland 1995).

vouchers went to children already enrolled in private schools. Participants are also asked to pay half the tuition cost of their chosen private school. Most schemes offer places on a first come, first served basis, but the large Milwaukee scheme allowed schools to choose. This was partially done to keep administrative costs down.

Around 60 percent of the families in the private voucher schemes choose Catholic schools. Moe explains this partly by the higher price of secular private schools, and concludes "If vouchers were widely available, the price of these schools would be reduced, they would become more attractive as educational alternatives, their supply would increase, and more students would move into them" (Moe 1995, p. 22).

Some cream-skimming does take place as a result of the programmes. Voucher recipients' mothers have much more education. Their families have higher educational expectations for their children, and are more likely to be white, married, and have fewer children than their counterparts not taking part in the scheme. Moe ascribes this effect to voucher allocation on a first come, first served basis. However, a third of the children in the private schemes belonged to the Milwaukee scheme, where schools had more of a selective role than the schools in other private voucher schemes.

Getting information about the schemes out to potential applicants "proved to be an operational task that was more complicated and consequential [for cream-skimming] than leaders had counted on" (p.25). Since private schools in the scheme were often the main source of information about the scheme, this may account for the 50 percent of vouchers going to existing private school attendees.

The main parental reasons for choosing a school made available through the schemes were academic quality, discipline, general atmosphere, and frustration with the public schools. Voucher scheme parents were more satisfied with their child's school than their public school counterparts were; the Milwaukee parents in the private voucher scheme were also more satisfied than those using the public voucher scheme.

Matland (1995) estimates that less than 1 percent of the eligible children in the San Antonio area applied for private vouchers, and suggests that this low figure shows little interest in exiting the public sector for private schools. The impact on public schools appears to be minimal, with no significant enrolment drops at individual schools. In terms of the market theory underpinning vouchers, Matland notes that "Even the most market sensitive organization is unlikely to see the loss of 1 percent of its customers as a strong signal to change operations" (p. 509). Further, he makes the point that because half the voucher recipients were already in private schools, "at least 50 percent of the expenditure of the CEO program pro-

vided no increase in the educational quality being received by children in San Antonio" (p. 508)[49]. Cream-skimming does, however, remove the parents most likely to exercise "voice", the internal spur to improvement in public schools.

Colombia

Only limited information is available about the Colombian voucher scheme. It was designed to increase a low rate of secondary school enrolment, particularly by children from low income families, who were more likely to be going to poor quality primary schools, leaving primary school early, and unable to afford secondary school (Calderon 1997). Public secondary school places are in short supply: Calderon notes the lack of support for public spending on education from middle and high income groups, who send their children to private schools. Access to public secondary schools appears to depend on an "adequate recommendation from the local politician" (p. 6). Not surprisingly, given this social segregation by sector, private elementary schools offer higher quality education than the public schools do.

The voucher scheme began in 1991 in the 10 largest Colombian cities, with 18,000 vouchers. The central government provided 80 percent of the funding, and municipalities 20 percent. Eligible families were those in the 2 lowest social strata of 6, whose children had completed primary school. Ballots were used to allocate vouchers where the demand in a city was greater than its quota. The voucher amount was set at the average fee of a private school serving lower-to-middle income families in the 3 largest cities, which would give it a higher relative value in other regions where school fees were lower. This amount was 40 percent lower than the average per-student cost in the public sector.[50] Families were required to pay any gap between the voucher amount and the school fee.

By 1996, around 100,000 students were receiving vouchers in 1765 private schools, an average of 50 students per school, in 212 municipalities. The scheme has grown rapidly, yet it still serves only a small proportion of low income families. Around 5 percent of the students completing public primary schools go on to private secondary schools. The overall enrolment rate in all secondary schools increased from 50 percent in 1990 to 56 percent in 1994.

No evaluation of the programme in terms of its impact on student achievement is available. On the assessments of the regional directors of the voucher scheme,

[49] This assumes, of course that the San Antonio private schools were better that their public counterparts.

[50] This comparison is on raw amounts, without the analysis of other private school income, or differences in roles of private and public schools. Other analyses of private and public school costs have shown that including these gives a somewhat different, and more comparable, picture (Levin 1997,Tsang and Taoklam 1997).

the quality of education is higher in the private schools which were operating before the scheme (serving 80 percent of the students) than in the new schools which were created as a result of the voucher programme, and whose enrolment is mostly voucher, i.e. low income, students.

Summary

It is difficult to generalize from any of these schemes about the systemic value of individual subsidies to be used in the private sector. The Assisted Places Scheme was beneficial to most Assisted Places Scheme students, and the schools that they went to. The original private schools taking part in the scheme were mostly well-established, with sound student achievement records, and offered low income scholarship students a somewhat higher socioeconomic mix than they were likely to find in the public schools they could access. The similar New Zealand TIE scheme described in chapter 7 also generally offers low income students access to a higher school socioeconomic mix. Such schemes should show benefits for individual students from low income homes.

To assess their full value, however, we also need to have data on the impact of such schemes on the quality of education for students who do not receive or seek to receive scholarships, and who remain in the public schools which lose or do not receive scholarship students.

Whitty, Power, and Edwards (1998) describe the Assisted Places Scheme as "a relatively weak measure for stimulating market forces, as it offers the choice of a traditional academic schooling only to parents unfortunate enough to have low incomes but fortunate enough to have an academically able child and an appropriate school within reach" (p.239). Symbolically, however, "the very existence of the scheme endorses the superiority of private provision". In providing "choices of school outside those offered by local education authorities, it can also be seen to foster more subtle forms of privatization through encouraging private (family) decision making in place of bureaucratic allocations" (p.240).

The targeted schemes in the US and Colombia offer children from low income homes access to private schools of a different sort, with a socioeconomic mix that may be the same as or only slightly higher than that in the public schools they can access.[51] It is therefore not surprising that private school student achievement in the Milwaukee scheme appears little different from that in the public schools, and that the Cleveland scheme also appears to show little difference, other than for

[51] Though the US voucher schemes were drawing on families with better education than their peers, who were likely to have higher aspirations for their children.

two schools. As we saw in the previous chapter, and shall see in the section on Chile in the next chapter, where a similar pattern occurs in a full voucher system, the seeming advantage of private schools owes much to socioeconomic mix, rather than to ownership or autonomy.

To gauge the full impact of individual voucher schemes, it is necessary to look at what happens to the public school system. Do vouchers act to spur positive change, and make the public schools more attractive? Do they cause resource problems if money leaves the public school system? Unfortunately, none of the studies of individual scholarship schemes provide these essential pieces of the jigsaw. In Milwaukee, the public school system lost the state equalization aid it would have received from the voucher students had they stayed in the school system. The impact of this may have been minimal, given the small proportion of students in the scheme. It is not clear whether this state aid remained with the private schools when students transferred back into the Milwaukee public schools. It is also not clear how many schools the voucher students exited or chose not to go to. If it was only a small number of schools rather than all schools, then one would expect a greater impact on those particular schools.

Despite the attention being given to them by some voucher advocates, none of the individual scholarship voucher schemes, or the studies of them, provide a solid basis for gauging the impact of systemic vouchers. However, the themes which arise in studying their nature and impact are consistent with the themes which emerge in research on open enrolment in public schools, and voucher systems. These themes show little evidence that the hopes pinned on vouchers by their advocates can be realized.

5 FULL VOUCHER SYSTEMS

A few countries have funded private and public schools equally, or close to equally. The more established systems have done so to accommodate strong religious, cultural, or language differences, and to avoid costly social divisiveness. More recently, Chile and Sweden moved to voucher systems because of a general application of market models to social policy, including education. No evaluation was built into the Chilean and Swedish policies.

The Netherlands

The Netherlands could be described as a voucher system, in that government funds all schools equally, whether public or private. The origins of the system lie in the particular accommodation of religious differences enshrined in the Dutch constitution. In 1994, 35 percent of the primary schools were public, 30 percent Catholic, 30 percent Protestant, and 5 percent private secular, with a small number of recently established Muslim and Hindu primary schools. Only 17 percent of secondary schools were public. Most schools are not autonomous, but are administered by authorities which may be municipalities, church organizations, or individual school boards (which may include parents). There were some 6,300 of these authorities in 1994, with responsibility for from 1 to 100 schools. The authorities choose teachers and teaching materials. There is a common national curriculum, so that while there is choice of school, the choice is of religious or social values, not widely different curriculum options.

James (1997) attributes the lack of elite private schools in the Netherlands to the limit on schools charging additional fees, and to the central negotiation of salary scales, which means that private schools cannot attract better teachers by paying them more.

While all schools are precluded from charging school fees, other than for extracurricular activities, municipalities cannot spend more on public schools without spending the same amount on the private schools in their jurisdiction. This means that it is difficult to provide extra funding for public schools serving immigrants ("black" schools), at a time when there is white flight from these schools, often into the private schools, and increased ethnic segregation (Karsten 1994). There is in fact more ethnic than socioeconomic segregation.

Karsten notes that the Dutch system does not allow rationalization or planning to try to reduce either costs[52] or segregation, since the private school authorities are autonomous, and can be selective, where the public schools cannot. Freedom of

[52] Though recently the government has set a minimum roll to discourage small schools.

parental choice cuts against trying to improve educational opportunity for the disadvantaged.

Karsten also sounds a warning note of particular relevance for New Zealand. The longer the experience of unregulated parental choice, the harder it may be to end ethnic and social segregation: Karsten's recommendations for controlled choice systems received critical media coverage and rejection by the government.

Belgium

Belgium's education system also funds private and public schools alike to accommodate religious differences. Language differences have also fostered the development of separate systems. Schools are not allowed to charge fees. Teachers' salaries are nationally set, and schools do not have control over their own budgets. They can decide their own programme, assessment and graduation requirements, and they can select their students. Vandenberghe's study (described in Chapter 2) showed that competition between schools increased social and ability segregation, making it harder for schools serving low ability and low income students to close the gap with other students and schools.

France

French subsidies for private schools pay teachers' salaries. Tuition costs paid by parents in 1991 ranged from US$4 a month in some rural primary schools to US$150 a month in Parisian secondary schools (Ambler 1997:357). Most private schools are Catholic, and many Catholic schools have a sliding scale of fees related to family income and number of children enrolled.

A few schools remain totally unsubsidised by the state, usually catering for remedial work with secondary students. Ambler notes that supply of private schools is constrained by the lack of government support with capital costs.

Although fees are "relatively modest" for private subsidised schools, they serve fewer low income students, more middle income students, but similar proportions of high income students, as the public schools. Some of this is explained in the location of the private schools (Catholic schools are common in the traditionally Catholic provinces, rare in urban working-class neighbourhoods).

Students transferring between the public and private sectors are often poor achievers. Ambler (1997) suggests that middle class parents "tend to work the dual system to find a school where their children can continue progress toward the *baccalaureate*", whereas working class parents are "more likely to accept as final a school decision to move a child out of the more prestigious academic tracks" (p.360). Working class children in private schools had slightly higher achievement than

their public school counterparts. Ambler concludes that the private school subsidy opens up opportunities for individual children, but at the cost of increased school social segregation.

Increased social segregation has also been the cost of the introduction of choice among public schools since 1984. Children are assigned to their neighbourhood school, but parents can request a transfer to another school. Ten percent of parents requested another school in the first 5 zones to allow choice. Secondary and tertiary teachers were heavily over-represented among those parents making choices, as were clerical workers. Manual workers were least likely to request another school. Their choices of school also differed. Most high income parents asked for a school with a good academic reputation (73 percent, compared with 43 percent of clerical workers and 20 percent of manual workers). High income parents were most likely to mention reputation as their reason for change, but also, like low income parents, proximity. Manual workers were the group most likely to select a school with more than 20 percent immigrants (i.e., ethnic minorities). Ambler also notes that the increased social segregation reinforces school hierarchies:

> *Working-class children tend to stay in the academically weaker schools, while middle-class children tend to desert them. In response to this demand, the more prestigious schools are encouraged to offer only highly academic programs, leaving schools down the prestige hierarchy to teach difficult students and nonprestigious courses of study (p. 363).*

Sweden

In 1992, Sweden introduced entitlements for students attending approved compulsory level private schools, at the rate of 85 percent of the average per-student cost in the municipality where the private school was located. Full funding for private schools was decided against, on the basis that the private schools could be selective of students, where the municipality could not, and private schools did not have to provide school health care, home language education (for children whose first language was not Swedish), free meals, or transportation (Miron 1996). Municipalities only funded the schools; approval of the schools was done by the National Agency of Education. Private schools could still charge fees, though these were to be "reasonable". When some private schools continued to charge fees at the same rate as before the introduction of vouchers, they were taken to task by the National Agency of Education. But Miron concludes that "Compared to similar reforms in other countries, there were very few restrictions or safeguards" (p. 34).

A change of government in 1994 saw the reduction of the subsidy to 75 percent, and a commission set up whose recommendations were to give municipalities more

say in approving private schools, basing funding on student needs rather than a set proportion of the municipal cost. The approval of schools was to include consideration of any "substantial and tangible" negative impact on the funding municipality, a minimum school size of 20 students, requirements to follow the national curriculum more closely, and to provide school health care and home language instruction for children of immigrant families. The National Agency of Education's outline of the Swedish school system in 1998 indicates that some of the commission's recommendations were taken up: private school funding "is determined in respect of school intake and pupil needs", but approval remains with the National Agency of Education (Skolverket 1998).

Private schools were already increasing before the introduction of high public subsidies for private schools, but their rate of increase has been rapid since: from 89 schools in 1991/92 to 238 in 1995/96, representing an increase from 1.89 percent of all schools to 4.82 percent. However, since private schools are often small, the increase in students was only from 0.94 percent of the total enrolment in 1991/92 to 2.16 percent in 1995/96 (8,337 to 20,047 students). Most of the enrolment growth occurred in large cities; more than 100 of Sweden's 288 municipalities have no private schools. Some small village schools closed by municipalities because of their high costs reopened as private schools, able to call on municipal funds. A third of the private school students are enrolled in Montessori or Steiner schools, a quarter in schools with no special character, 17 percent are in religious schools, including a few Islamic schools that were not approved until 1995/96, 9 percent in language or ethnic schools, 8 percent in specialist subject schools, and 7 percent in international schools.

School fees are still required by around half of the private schools; they are less likely in the newer private schools, and some have voluntary fees. The average school fee was US$200 a year in 1994/95. Average per student costs are the same in municipal and private schools (US$7,100). The subsidy for private schools cost municipalities an additional 200 million Swedish crowns in 1993/94, and appears to have contributed to funding cuts for municipal schools. Central government funding for education was also cut between 1991 and 1994.

Sweden also has open enrolment within municipalities, with preference for students in a school's catchment area. Only 7 percent of parents in a 1992/1993 survey had applied to a school out of their area, or an independent school. Patterns of open enrolment vary substantially between municipalities, related to the availability of schools within reasonable distance, the information available to parents, the political affiliation of the municipal government, and local traditions.

Both the subsidy to private schools and the open enrolment within municipali-

ties have contributed to growing ethnic ("immigrant") segregation in the 3 main urban areas. For schools with high immigrant populations, there has been a loss of the children of well-educated parents to schools in higher income areas.

Chile

Before the military takeover of Chile in 1973, Chile had free public education, with 95 percent of children enrolled in primary school. There was substantial attention paid to education in the 1960s to ensure high enrolment, including substantial professional development, free textbooks, and food for students below the national median income. Repetition rates were decreased (from 50 percent of first grade students to 30 percent), and teacher salaries raised to make the profession more attractive. Subsidies for private schools were gradually reduced from a rate of 50 percent of the cost of public education, leading to the closure of many private schools (Winkler and Parry 1996).

The military government in Chile passed responsibility for education to the municipal level in 1980, and provided vouchers in the form of equal per-student-attendance monthly payments to municipal and private schools alike. The Ministry of Education's role was reduced to policy formulation, setting norms and standards, and monitoring their implementation (Schiefelbein 1991:20). Decentralization was initially voluntary, with additional funding added to the per-student funding as an incentive.[53] Most decentralization occurred 1980–1982. The per-student funding was based on a consumer price index (rather than historical or average per student costs). This funding fell about 20 percent in real terms between 1982 and 1985, creating deficits for some municipalities which had no money of their own to allocate to education. Rural areas[54], with higher unit costs, were also hard hit until they received higher per-student subsidies. The basic rate was increased in 1986, when all school funding was decentralised. Recent changes in the 1990s allow private schools to charge parental fees, but their government subsidy is decreased accordingly. This allows private schools to exercise an indirect selection.

Private schools increased markedly after the introduction of vouchers, but mainly in urban, non-poor areas. Not all private schools take the government subsidy: elite private schools continue to operate as before, their funding based on

[53] Extra funding was also given to schools "opting out" in England, and "opting in" in New Zealand to encourage voluntary take-up of the unpopular policies of grant-maintained status and bulk funding (now called full funding).

[54] Though voucher advocates such as Nechbya foresee the growth of private schools in poor areas as a result of introducing vouchers, many rural areas in Chile proved too poor to attract private schools. Nor is there any evidence in the Chilean material that middle and high income families shifted house to lower income areas to take advantage of new private schools and lower housing costs.

fees and privately sourced subsidies. Many of the subsidised private schools are Catholic schools which were operating before the introduction of vouchers, but the majority have opened since, and are run as private for-profit businesses. This has created competitive situations for schools in urban areas. The private schools cost the same as public schools, but they tend to hire more untrained teachers, at half the salary rate paid to trained teachers in municipal schools. They have used the difference to build or maintain their school, buy computers, and offer clothing, transport or additional food to attract students. They are much more selective of students, in contrast to municipal schools.

Selection is not officially permitted, but "occurs because it is difficult to monitor and prevent it" (Parry 1995). Selection occurs through interviews with parents and children, particularly for young students, previous achievement and conduct reports, tests, parental fees or voluntary obligations, not offering programmes for students who have mild learning difficulties, and not taking part in the free school meal programme. Schools that did not operate student selection "over time became refuges for the poorest co-producers" (Parry 1995). They were under-enrolled, and their government funding did not cover their costs, requiring municipal subsidisation (using the surplus from more popular schools), or, in the case of the few private schools which ended up in this situation, subsidisation from the owners' more popular schools.[55]

There was a 25 percent fall in public school enrolment 1979–1994, with most of this occurring in the first 6 years of the voucher system. There was a shift from public to private subsidised schools, and another shift from private subsidised schools to private fee-charging schools. By 1994, 57 percent of primary school students were in municipal schools, 35 percent in private subsidised schools, and 9 percent in private fee-paying schools. School enrolment patterns reflected family income levels: in 1990, 72 percent of students from families in the lowest 40 percent of income distribution attended municipal schools, compared to 51 percent of students from families in the next 40 percent, and 25 percent of those in the top 20 percent. Forty-three percent of students in the middle 40 percent of income distribution went to private subsidised schools, compared to 32 percent of the top 20 percent. Forty-three percent of the latter group attended private fee-paying schools. Thus there has been increased socioeconomic stratification of schools (Carnoy 1998).

Large gaps—of 35 percentage points on one test—appeared between students from the poorest homes and those from the most affluent homes. "The 1970 scores

[55] In the New Zealand context, these schools would be operating at a growing deficit, since no cross-subsidisation is possible. Schools with continuing deficits attract Ministry of Education intervention, which can include decisions to close the school.

of schools operating in deprived areas were equal to 80 percent of the scores of schools in the upper half of income distribution, while in 1988 the corresponding figures were 53 and 60 percent in urban and in rural areas respectively." (Schiefelbein 1991). Grade repetition in poor urban and rural areas occurred twice as often as in schools in the upper half of income distribution. The graduation rate from primary school was lower for students from poor homes, and few were eligible to enrol for university.

Carnoy (1997) reports other achievement data showing that overall scores on two nationally standardised tests in Spanish and mathematics, taken by grade 4 students, declined between 1982 and 1988. This overall decline occurred because of the decline in low income students' scores, in both public and private schools; middle income students scores were slightly higher in 1988 than in 1982. Overall scores had increased again by 1990, to the same level they had been 8 years earlier. Lower income students did better in public schools; middle income students did better in private schools.

More recently, average test scores rose overall between 1990 and 1992, and stayed level in 1993 and 1994 (Carnoy 1998). This followed a substantial increase in education spending, including raising the level of the education voucher, with additional support given to low income schools through targeted spending and technical assistance by the democratic government which replaced the military dictatorship.

The Chilean system does not provide parents with independent information about the schools, though student achievement results on national assessments are theoretically available from individual schools, which also market themselves. No independent review of schools appears to be done. No transport is provided, nor any monetary assistance with transport. Schools, private and public, can ask for parental donations, but these provide only a very small proportion of schools' funding. Municipalities also give additional money to schools, which means that schools in wealthier municipalities receive more funding than others.

In her study of Santiago schools, Parry (1997) found that student socioeconomic background was the factor with the largest relation to student achievement scores. School type was not related to achievement, but selectivity of students was. "Educational vouchers promoted the use of selection to sort students by ability, and although selection was more common in private schools, some public schools also selected their students" (p.249). Student achievement was also related to school leadership. Contrary to pro-voucher assumptions, school leadership and innovation were more likely to occur in the public schools, though these had less autonomy than the private schools. Further, Parry notes that the catalyst for innovation in

schools usually originated in central requests that schools review their curriculum, in municipal or government funding, and in programmes inviting schools to compete for funding for innovative work. In other words, additional funding and "bureaucratic" requests were necessary spurs for innovation. Private and public schools were equally likely to be interested in additional money for innovation. Innovation was more likely to be in providing vocational education or specialist programmes, rather than in teaching methods.

In terms of the voucher advocates' assumptions about private school efficiencies, Parry's study also shows that private schools had higher administrative and maintenance staff ratios per student than public schools. In Santiago, class sizes in the subsidised private schools were much the same as in the public schools. The private schools differed in offering a narrower curriculum, allowing them to employ fewer teachers.

Vermont

The largely rural state of Vermont has a long-standing voucher scheme for students in 80 small towns without their own high schools. Students can choose a public school in another town or district, or a private school. The town pays the chosen school the average cost per pupil in the state's public high schools, and students choosing private schools pay any difference between this amount and the private school fee. Most students tend to choose the nearest school; student achievement is not the most salient criterion (Wells 1993:164–165). This option is systemic as far as individual small towns are concerned; however, it depends on adjacent systems having schools with spare capacity.

Summary

Research on full voucher systems covering both public and private schools shows no evidence that they provide a powerful means to overcome the gaps in achievement between low income students and others. Nor do they appear to increase overall achievement. School choice appears only to exacerbate existing social divides of class and ethnicity. This increased segregation in turn makes it more difficult to close the gaps, because lower achieving students are less likely to be schooled alongside higher achieving students. That is, they are less likely to attend schools which are better resourced in terms of students' human capital. The widespread exercise of school and student selectivity operates against improving standards overall.

There is also no evidence of increased efficiencies or lower educational costs, simply because private schools have access to per-student public funding at the

same level, or close to the level, of public schools. Parry's research findings about the sources of innovation are consistent with the findings of research reported in earlier chapters. These throw into doubt the voucher advocates' assumption that private schools are necessarily more innovative, or responsive to student needs. Her material on their exercise of selectivity, both overt and covert, shows that it is more likely that private schools operating within a market environment will seek to define and maintain a niche situation, based on attracting only limited segments of potential "consumers", and using like to attract like. This is rational behaviour where individual schools have no responsibility to ensure that all students' needs are met, or overall standards of achievement are increased. National assessment does not by itself provide a sufficient "stick" to change this behaviour, or to allow the gaps between different groups of students, reflecting social differences, to be closed.

6 OPEN-ENROLMENT/QUASI-VOUCHER SYSTEMS

Open-enrolment system, or quasi-voucher systems, have much in common with full voucher systems. They pivot on parental and student choice, and funding formulae based on per-student calculations and school responsibility for budgets. The main difference is that open-enrolment systems are limited to public schools.

What happens when students are not assigned to a designated local school, but can, theoretically, make their choice from any public school? The research base on the impact of introducing choice as a central element in these systems spans the last decade in New Zealand and the United Kingdom. In both these countries, choice has been widened on the basis of the market/competition model. It can thus provide a "natural experiment" on the effects of this approach, and the likely trends if the open-enrolment model is extended into a full voucher model which includes private schools. This chapter also looks at relevant research on school choice in open-enrolment systems which start from an assigned base, and the "controlled choice" systems of Cambridge and East Harlem.

Parental reasons for school choice

Do parents make their choice of schools on grounds which would encourage improved quality, innovation, and diversity, as the voucher advocates assume?

Walford (1996) summarises the findings of recent UK research: the reasons parents give for their choice of school often accord "greater value to 'process' rather than 'product' criteria" (p.57). Process criteria focus on children's happiness and security in a school; product refers to outcomes such as examination results. Children's own preferences are an important part of the decision-making process. The publication of "league tables" of schools, based on their examination results and the recent mandatory national primary assessments, has given product factors more prominence, but children's preferences continue to be cited by parents.[56]

There are some limitations with research on school choice focused on parental reasons for their choices. Unless material about the schools they are considering is

[56] As reported by parents. I have found only one study of school choice which has asked children for their own preferences. Bracey (1998) reports a study of student retention in a foreign languages selective magnet school which found that children who stayed at the school were more likely to have been involved in the choice of the school, and to have friends there. School staff felt that parents of children who left had made the choice on the basis that a selective school had to be better by definition, rather than considering the match between their child and the specialist curriculum offered by a "choice" school. It would be interesting to see when children's views differ from their parents, how children form preferences, and to what extent children are aware of choice of school.

included, it is hard to tell whether there are in fact marked differences among the schools in terms of their reputation, and whether putting a child's happiness or ease ahead of outcome actually results in the deliberate selection of schools which have poor reputations. The available research suggests that it does not, and that there is substantial overlap between perceptions of children's comfort, and the public reputation of schools.

West et al (1998) found that children's happiness meant, for some families, the child's contentment; for others, it meant that the child "could fulfill parental expectations and ambitions" (p. 59). This latter definition appeared more often among parents choosing private schools, who were more likely to be seeking a small class size, children from the same (middle and upper class) social background, and peers who were likely not to disrupt their own child's learning (since private schools can be more selective of undesirable students).

Research comparing school choice among parents in different income groups suggests that the process is more complex than weighing happiness against outcome. Choice is also shaped by the availability of schools in terms of affordability (including travel, time, and safety costs related to distance), schools' own selection criteria (including enrolment schemes), and parental values and conceptions of choice and choice-making (Ball 1993, Gewirtz et al 1995, Lauder et al 1996). Generally, parental exercise of choice in open-enrolment systems is greatest among middle class families.

England

Whitty, Power and Halpin (1998) provide a useful synthesis of the main findings of research to date on the impact of the market/choice/competition policy in the UK. Empirical studies show little evidence of the benefits assumed by pro-market advocates. Schools which are in a position to be selective do select. They prefer students who will enhance their results, reputation, and competitive position, and who will remain longer at school. These are not the educationally disadvantaged, or the "difficult to teach", even when they come with a higher funding allocation, as those with special needs do. Popular schools are often not interested in expanding to meet demand: "they try to capitalize upon and enhance the scarcity value of their product. It is noticeable that the most successful and elite private schools in England did not choose to expand during the 1980s, despite the demand for their product by the *nouveaux riches* of the Thatcherite era" (p. 116).

Gewirtz, Ball and Bowe's (1995) mainly qualitative study of three "micro-markets" in London shows how the introduction of the market mechanism makes schools more conscious of their image. A micro-market is defined as

a set of relationships between a designated group of schools within which there is a possible and actual direct competition for student enrolments and sources of further funding, e.g. community use of the school, sponsorship from local employers and local support for fundraising events.

They document an increase in both formal and informal selection by schools. Informal selection includes admissions procedures which are more off-putting for less valued students. Exclusions have also increased in schools which are concerned to improve their image. While this is rational behaviour in terms of the competitive market context, other less popular schools must then cope with a higher proportion of children with problems. The overall systemic cost is higher, as problems such as truancy and bullying, which could previously have been dealt with internally, are passed to social services or not dealt with at all.

Where league tables exist and are thought to shape a school's public image, students with special needs are regarded as somewhat of a liability. Again, there is a "shunting" effect, so that the less popular schools end up with more special needs students. However, they have less ability to support them, due to the greater volatility of their rolls, especially if declining student numbers result in teacher redundancies. By contrast, programmes for "gifted" children have increased in many schools, largely as a marketing tool. Streaming has also increased, despite the research showing its negative impacts. Gewirtz et al also point out that:

The policy orientation of the English market puts almost exclusive emphasis upon instrumental, academic and cognitive goals. For example, there is no requirement for schools to publish information on the expressive, cooperative and community aspects of schooling, on levels of enjoyment, happiness, stimulation and challenge for teachers and students, on degrees of innovation and creativity in school approaches to teaching and learning, nor on the quality of special needs provision (p. 174).

These researchers show how the process of choice, and conception of choice, differ amongst parents.[57] The "*privileged/skilled choosers*" are usually middle class, and themselves well qualified educationally. They compare schools on an informed basis, and look for the school which will offer their child the best opportunity to come through schooling with the best examination results. "*Semi-skilled choosers*" come from a range of class backgrounds. They have high educational hopes, but lack the knowledge and skills to make informed choices; they also face greater financial constraints, including time and transport. "*Dis-*

[57] Their qualitative material allows insight into the process of choice and consideration of actual alternatives that survey questions on the reasons for parental choice usually cannot provide, with the exception of quantitative material looking at sources of information about schools and matching family and student characteristics to those of schools, and looking at distance between homes and chosen schools (e.g. Lauder et al 1995, Meyer and Glazerman 1997).

connected choosers" are almost all working class. Locality, friends and family loom large in their educational decision-making, as do the strong constraints of lack of time, transport, and money.

This categorization fits other studies on parental choice. It also shows that families are competing with one another for a good thought to be in limited supply, and competing on uneven ground.[58] In a market situation, it is not only schools which are placed in a more demanding form of competition than a system of neighbourhood schools, but also parents, and thus their children. This would not matter so much if the quality of schooling was the same in different segments of the market. But there are substantial differences related to student intake.

The UK Audit Commission (1996) found a "substantial minority" of parents were unable to get their child into the preferred school, with formal appeals against admissions decisions doubling between 1990 and 1995. A third of schools were full to capacity, or more, while a sixth were less than three-quarters full. The Audit Commission suggested that an occupancy rate of 95 percent, plus or minus 10 percent, was a good gauge of the best use of school capacity. It found only half the schools in England fell within 85–105 percent of their capacity. Around 17 percent had more than a quarter of their places unfilled, while 20 percent were overfull. Only 5 percent of the English schools which increased their student capacity significantly during 1993–96 did so because of the popularity of the school.

> *In short, the schools that are in demand do not tend to expand—and in these cases "choice" is primarily exercised by the schools deciding which pupils they will accept (through the rationing device of the schools' admissions policy), rather than by parents deciding which school their child will attend.* (Audit Commission 1996:19).

The Commission's survey of 5 different areas found that around 20 percent of parents either did not state their genuine first preference because they could not get it, or did not get their first stated preference. This was particularly marked in the inner London borough surveyed, where almost half the parents did not get their real first preference. Between 1991/92 and 1994/95, appeals rose nationally by 58 percent in the primary sector, and 35 percent in the secondary sector. Fitz et al (1993) found, in relation to grant maintained schools, that parents who had professional occupations were the most successful in getting their first preference, and families where the father was unemployed were the least successful. Evidence of growing school selectivity of applicants, and of "adverse selection" through suspensions and expulsions, is also given by Walford (1996). These work to pro-

[58] Kohn (1998) describes the way that American middle class parents seek to advantage their own children at the expense of others, and at the expense of innovation which would be more effective for children's learning.

duce "local hierarchies of schools...where resources flow from those children with greatest need to those with the least need" (p.59).

Brain and Klein (1994) described the results of a survey of parents of children going to secondary school in one English city with "sharp competition" between schools, due to declining numbers of children in the area. Nonetheless, even in this situation, a third of the parents felt they had not had a real choice. This is because parental preferences did not match the range of schools available. Half the parents would prefer a coeducational school, but only 3 of the 7 secondary schools were coeducational, and only one of these was secular; this one was oversubscribed every year. "The irony is that it is precisely the diversity of schools...that restricts parental choice." (p. 2)

Brain and Klein also noted that while there are differences in parental preferences for schools, their preferences in terms of qualities are common: a happy school atmosphere, good discipline, and, in third place, academic reputation. The schools all marketed themselves in these terms also. They concluded that these results could lead to two different policy emphases. If based on parental preferences for school type,

> *there would have to be a dramatic increase in the numbers of schools, many of them very small indeed, to satisfy minority views and concerns. The national curriculum would have to be slimmed down even more radically than seems likely if schools are to be diverse in what they offer: specialisation in the arts or sport, for example. (p. 3)*

If commonality in qualities was the basis for policy,

> *it would seem that we need less rather than more diversity in the types of schools, with all of them competing to deliver what most parents seem to want. Choice matters to parents only to the extent that they can avoid sending their children to those schools that [in their view] do not deliver. (p. 3)*

There is little clear evidence available about the impact of open enrolment on its own, since a new curriculum was also introduced a few years afterwards, and few comparable assessments exist. Davies and Bember's (1998) study of 7 cohorts of 6 year olds from 5 schools, representing a cross-section of schools, shows no changes over 7 years after the reforms. They also cite a study by Lake over a 10 year period, ending in the early 1990s, of 17,000 7 and 8 year olds. Reading attainment showed a general decline, "due to an increase in poor attainers...with the highest attainers doing as well as ever" [p. 154]. The results of this study indicate that the achievement gap was widening before the English introduction of open enrolment, and did not narrow after its introduction.

Schools serving low income areas make up the majority of the "failing" schools identified by OFSTED, the UK school inspection agency. The increased social seg-

regation fostered by open enrolment makes it difficult to break this cycle, or to redraw the English hierarchy of schools, which is based on their selectivity and the socioeconomic status of the students.

New Zealand

New Zealand had a different and less hierarchical education system than England, though the schools with the best reputations were located in middle class areas. Access to schools was based primarily on location, and secondary schools each had their own geographical zone for student recruitment. McCulloch (1991) showed that zoning allowed schools some flexibility—or selectivity— in their enrolment of out of zone students. Since each school had its own zone, the zones reinforced any differences in residential segregation due to housing prices or areas with large amounts of state housing, which formerly provided affordable rental accommodation to low income families.

Open enrolment was formally introduced to New Zealand schools in 1990. Initially, open enrolment gave priority to students in home zones where schools were oversubscribed, and, for one year only, allocated any remaining places by random ballot. In 1991, home zones were abolished, and over-subscribed schools were allowed to set their own enrolment schemes. Most of these retain some concept of a home zone (83 percent of the 408 schools which had enrolment schemes in 1997). Twenty-two percent of secondary schools had enrolment schemes, compared to 16 percent of primary schools. Enrolment schemes were more likely in areas with roll growth, and in high decile areas (ranging from 30 percent of decile 8–10 schools to 9 percent of decile 1–3 schools) (Minister of Education 1998, p. 46–47). These overall figures mask the high proportion of enrolment schemes in high decile secondary schools. In Christchurch, which experienced some decline in rolls overall, 100 percent of decile 7–10 secondary schools had enrolment schemes (Ladd and Fiske, forthcoming).

Studies of the impact of open enrolment in New Zealand have focused mainly on local "markets". The major project in this area is the Smithfield project on the impact of school choice in New Zealand 1990–95. This includes parent survey, student achievement data, enrolment data and school case-study data for two urban areas. Analyses of this material (Lauder et al 1995, 1996, Hughes et al 1997) have shown that segregation in New Zealand urban schools has not decreased since the introduction of school choice, and has increased for some schools in low income areas. The random balloting required in 1991 did, however, reduce socioeconomic segregation between schools.

School and Student Selection

The first Smithfield study found that greater numbers of middle and high income students are now choosing schools other than their neighbourhood school, which they would formerly have been zoned to attend. There is a much lower rate of acceptance of working class and Māori students applying to "high circuit"[59] schools, even when their prior achievement is as high as that of other students. There is also a "domino" effect: students are choosing to move away from the lowest decile schools to adjacent schools with slightly higher deciles.

Different schools have quite different experiences of the new market situation. Lowest decile schools now operate in a more turbulent environment, facing greater student loss (and turnover) than others.[60] By contrast, some schools serving high socioeconomic status students appear to be "insulated" from the market, enjoying a near monopoly position: they are oversubscribed, have a stable roll, and can select their students.

A later Smithfield project focused on changes over 5 years in the third form intake of 11 state and integrated secondary schools in one of the two study cities. These schools took 80 percent of all central city secondary students, and 90 percent of suburban secondary students. Information on the third form student intake for each school, 1990–1995, included home address, ethnic background and parental occupations. Home addresses were categorized according to the former zones for each school.

Over the 5 years, the total third form intake for the city declined by 24 percent; the socioeconomic and ethnic composition remained much the same. Case studies of 4 schools in a mid to low socioeconomic area show differences in patterns across this period. One school, which lost three-quarters of its students, also saw a decline in the average socioeconomic status of its student intake from 5.1 to 5.9 on a scale of 7, a decline in Māori and Pakeha students, and an increase in Pacific Island students. The school with the most stable roll, maintaining numbers despite the overall decline for the city, also maintained its average socioeconomic status of 3.2, and its ethnic composition. Fluctuating rolls were experienced by a third school,

[59] The Smithfield project found 3 different groups of schools in terms of their popularity, the socioeconomic status of students' families, and their geographical distance from the homes of the students. "High circuit" schools are described as schools with a high average parental socioeconomic status, operating enrolment schemes, with students drawn from a range of localities within a city rather than the local neighbourhood alone. "Low circuit" schools are more likely to be attended by students who live in the neighbourhood, whose families have low socioeconomic status, and to have declining rolls with high student turnover. "Middle circuit" schools come between these two poles.

[60] Thrupp (1998) gives a vivid description of how school socioeconomic mix works to increase and intensify management and organisation processes in schools serving low income students, to the detriment of student learning.

which increased its enrolment of Māori and Pacific Island students while losing Pakeha, and saw a decline in the average socioeconomic status of its intake from 3.7 to 4.5. The fourth school gained Māori students because of its bicultural programme, saw the ethnic and average socioeconomic status of its students fluctuate (around 4.5), and had lost 40 percent of its students by 1995.

Pakeha students and students from high and middle socioeconomic backgrounds living in each school's former zone were most likely to bypass the first and fourth schools, but not the second. Of those bypassing their local school, 65 percent of high socioeconomic students, 48 percent of middle socieconomic students, and 15 percent of low socioeconomic students went to middle or high circuit schools. In terms of ethnicity, 50 percent of bypassing Pakeha students went to these schools, and 8 percent each of Māori and Pacific Island students. Very few students moved from high or mid circuit schools to the 4 schools studied.

The Education Review Office (ERO)'s review of schooling in Mangere-Otara found that students bypassing decile 1 secondary schools went to 16 schools: 2 were also decile 1 schools, but the rest were decile 2–4 schools. This confirms the "domino" pattern of leakage from the lowest decile schools to schools in slightly higher decile ranks, without increased access of low income students to the mid and high decile schools.

Ladd and Fiske (forthcoming) analysed school enrolment patterns in the Smithfield study city and two others over the period 1990–1997. Their work shows even starker evidence of increased social segregation. The lowest decile schools had the greatest student—and funding— losses, with an increase or intensification of their proportions of low income students. Student losses and intensification of low income students were independent of any population changes in the area. Enrolment schemes were near universal in high decile schools, decreasing as school decile ranking decreased. Each city showed a slightly different pattern, reflecting different patterns of schools in terms of capacity and location.

Another indicator of the link between school socioeconomic status and selectivity found by Ladd and Fiske was that expelled students generally go to schools 1–2 deciles lower than the school expelling them.

The review of school decile ratings following the 1996 census also shows a link between popularity and the socieconomic mix of the school: 38 percent of the schools which increased their decile rating relative to other schools had also gained more students 1995–1997 than similar surrounding schools (Ministry of Education 1997). The other main reason for an increase in decile rating was because of demographic changes in the area which also affected surrounding schools.

Further evidence that school attractiveness and popularity depend mainly on student intake, location in "good" residential areas and previous reputation can be found in Wood's (1995) study of choice in Auckland, and Fowler's (1993) study of choice in Christchurch. In a market system of education provision, low decile schools face greater difficulties in attracting students, and also teachers (ERO 1998, p.11).

NZCER's survey of a nationally representative sample of primary schools in 1996 on the impact of the reforms also contains material which shows differential effects for different families, and schools. These are related primarily to socioeconomic status. It found that 85 percent of parents were able to access the primary school of their first choice. Main reasons preventing parents from accessing the school of their first choice were transport, the school's enrolment scheme, and cost. Māori and Pacific Island parents were more likely not to be able to access the school of their first choice.

Although only 11 percent of the primary schools responding did not have places on their rolls for all prospective students who applied, 23 percent of the schools had an enrolment scheme. Schools with enrolment schemes were more likely to be large city schools, serving high income families, and with a low proportion of Māori students on their roll.

The primary schools whose rolls had decreased since 1989 tended to be very small, to serve mainly low income families, and to have 30 percent or more Māori students on their roll. Principals of these schools were twice as likely as others to think that changes in student preferences accounted for changes in their school roll over the period of the reforms.

Only 21 percent of the primary principals described their relations with other local schools as competitive—and half of these said their relations were also friendly, or co-operative. Competition was more likely to be experienced by schools serving either low income or high income families. Schools experiencing competition or who had lost students as a result of competition were just as likely as other schools to make changes to marketing, curriculum, assessment and reporting to parents. However, it was the principals from schools with co-operative relations with other local schools who were more likely to say that the reforms had had a positive impact for their students (Wylie 1997).

Student Achievement

In terms of the impact of open enrolment on student achievement, the increased concentration of low income students in low decile schools did not result in any closing of the achievement gap. There was a slight decrease in overall standards of achievement. Ladd and Fiske found that School Certificate results declined in the

lowest decile schools over the period 1993–1997. There was no improvement in School Certificate results for high decile schools.

We have little material with which to explore the impact of open enrolment on primary school achievement because of the lack of any monitoring component built into the reforms.[61] One possible overall indication is the lack of difference between average scores on the Burt word recognition test at 6 and 8, and PAT reading comprehension test at age 8, for a sample of Wellington children with an over-representation of higher income families in 1995 and 1997, and average scores for the same age-groups on the national norming of the tests in 1981 and 1990 (Wylie and Thompson 1998; Wylie, Thompson and Lythe, forthcoming).

Impact of Open Enrolment on School Fees in New Zealand State Schools

School fees have become increasingly important since New Zealand switched to a choice-based system. This reflects in part a decrease in actual government funding of schools since 1989, which may or may not be related to the switch to self-managing schools. The growing role of school fees also reflects the shift to self-management, and schools' sense of the need to maintain or improve their reputation and image in a more competitive environment. Fees also allow schools to be more selective, without overtly refusing entry to specific students.

Local funds raised by schools increased by 69 percent between 1992 and 1996. Government funding increased 16 percent (at a time of rising rolls). By 1996, local funds contributed 12 percent of school income, compared with 9 percent in 1992. Budget announcements in 1998 restored government funding to a level slightly lower than in 1989 (Gilling 1998a).

Consumer surveys of a national cross-section of 41 state and integrated schools found that 33 of these schools increased their voluntary donation between 1993 and 1998. The highest primary school fee increased over that period from $66 to $110 (not inflation adjusted), and the highest secondary fee from $255 to $450. In 1994, integrated school fees, which include a component for capital expenditure, ranged from $101 to $120 a year for Catholic primary schools, and from $240 to $297 for Catholic secondary schools (McGeorge 1995:268).

Legally, state school fees are treated as voluntary donations. Parents cannot be

[61] Schools continue to use tests which were used prior to the introduction of open enrolment, including standardised tests, such as the PATs, and the 6 year reading tests. However, they did not keep assessment records or actual tests done prior to the reforms since their main use was diagnostic or for allocation of students. While it would make life easier for the researcher to have strictly comparable data on student achievement, the costs of introducing mandatory national assessment outweigh the benefits. It is impossible to have mandatory national testing without school league tables, which have their own negative effects on school segmentation. They also run counter to one of the premises of choice-based policy, by fostering narrowing of the curriculum rather than encouraging diversity.

compelled to pay them. It is possible that this has resulted in a reclassification of donations as activity fees in many schools (Gilling 1998b). However, some schools do put (illegal) pressure on parents and students to pay donations. Pressure can take the form of refusing to give testimonials, refusing access to extracurricular activities, calling in debt collectors, or asking parents to pay an enrolment bond.

Consumer magazine's advice in its 1998 survey of school fees takes for granted that government funding for schools could not cover all school costs:[62] "To refuse to pay on principle simply makes the burden greater for other parents, and means that your own children will be subsidised by other families." Its advice also assumes that children are already enrolled in a school, and that if parents cannot afford the fee, the school will allow a lower payment: "There is no need to feel embarrassed about approaching the principal." Such an approach might not have worked in Feilding Agricultural High School, which is reported to have called out the names of students in "debt" to the school in form assemblies (Iosefa 1998). Nor would it enable attendance at Hutt International Boys School by a boy from a family who could not afford the $1,000 enrolment bond, or the $905–$925 term cost for attendance dues, activity fees, and a proprietor's levy (Lane 1997).

The Children, Young Persons and their Families Service now has a standard policy of paying school fees for the children in its care, to guard against such reactions from schools. However, this implicitly gives school fees a mandatory rather than voluntary status.

The Ministry of Education's (1998) recent circular to schools on parental payments notes that school boards can legally ask parents to pay an enrolment bond, refunding any sum not spent on breakages or losses when the student leaves the school, but they cannot make the payment of this bond a condition of enrolment. However, there is no appeals process to guard against this practice, and neither ERO nor the Ministry of Education appear to be monitoring schools' categorization of parents' financial contributions.

The proportion of parents paying the full fee is lower in low income areas (Ladd and Fiske, forthcoming, Wylie 1997), and these schools cannot raise as much money locally as schools in middle or high income areas. Low decile primary schools are more reliant than other schools on government funding, and spent proportion-

[62] Its 1994 advice acknowledged that "we think it is wrong that government funding of schools does not cover many things parents consider essential to a good education" before going on to recommend payment on fairness grounds to other parents in the school. It also recommended that parents who believed that fees were too high, or whose child was denied access to a facility because of an unpaid fee, should complain to their school board, and if dissatisfied with that response, contact the Ombudsman. The 1998 advice to parents takes a less assertive stance, and provides no guidance to dissatisfied parents.

ately less on learning resources over 1994–96; by contrast, high decile primary schools were able to spend slightly more, proportionately, on learning resources over the same period. In 1996 high decile secondary schools were getting 18 percent of their income from local fundraising, compared to 10 percent for low decile schools. The proportion of spending on learning resources declined slightly for both high and low decile secondary schools, but not for medium decile schools (Gilling 1998b).

Open-enrolment Systems in the US

A US Centre for Educational Statistics national survey of parents of children over 8 year olds in 1993 found that the three main reasons for choosing a public school were a better academic environment, special academic courses (e.g. those offered by the specialist "magnet" schools), and the convenient location of the school. School location was more important to low income parents. By contrast, parents choosing private schools did so mainly to find a better academic environment, or for religious/moral reasons. Overall, parents choosing schools were likely to live in urban areas, be white and university educated, and have a high income. However, Black and Hispanic parents exercising choice were more likely to be choosing among public schools (most magnet schools were developed in urban areas as a means for desegregating schools).

Alum Rock

Alum Rock is often described as the prototype voucher programme. However, it is best described as an open-enrolment programme, since it was limited to the 14 public schools in one district. Alum Rock was a poor district, and had no private schools. There was a marked emphasis on fostering the supply side as well as the demand side, with each school supported so they could offer distinctive "mini-programmes". Enrolment limits were put on the more popular schools after the first year. The Rand evaluation showed no improvement in student reading scores after controlling for prior reading scores, race, and receipt of free school lunch. "Socially advantaged" parents were quicker to exercise choice than others, but at the end of the 5 year experiment, there was more general interest in looking at options beyond the neighbourhood school. Still, by the third year of the programme, only around 18 percent of parents chose a school other than their neighbourhood school (Wells 1993).

Cross-district Open-enrolment Systems

Location is the main reason for school choice found in a number of studies on open-enrolment systems across districts. Location includes proximity to the par-

ent's workplace. Educational quality or access to a different programme are less influential (Lewis 1995).

Kozol (1992) cites early patterns of the Massachusetts 2000 open-enrolment system, which allowed inter-district enrolment. Movement across district lines was only from poor to rich districts; 93 percent of the students choosing (and being accepted by) a school in another district were white and middle class. Of the children enrolling out of Brockton, a largely poor, working-class district of 80–100,000 people, only 5 percent were low income. By moving, they took with them US$850,000 from the district education budget—a considerable sum for a district already in financial difficulties. The state had to step in to cover the financial cost of the exiting students to the remaining students. No information is given on the costs in terms of changes to school mix and the extent of segregation.

Kozol also raises the issue of how voucher amounts would be decided, and suggests that a sum based on district per-student spending is most likely. That fits with the Milwaukee and Cleveland voucher programmes. But if this is so, then the resource disparities between US schools based on district wealth and residential segregation, which some pro-voucher advocates advance as a reason for vouchers, will only be entrenched through vouchers.

Minneapolis

Does open enrolment increase parental satisfaction? Because there are not enough of the most popular schools, assigning students by choice rather than neighbourhood allows satisfaction for some at the cost of others. Meyer and Glazerman's (1997) study of the Minneapolis open- enrolment system provides interesting information on the formation of parental choice, and that cost.

They describe the Minneapolis system as a controlled choice system, because parents submit their first three preferences (of between 12–26 of the district's 50 public elementary schools, depending on their home address) to the district, and racial balance is taken into account (this is more important than filling schools to capacity). Siblings are also kept together. Parents' first choice is given more weight in the allocation. Lotteries decide admissions if a school is over-preferred, and those who are not selected go onto a waiting list for this school. They do not get assigned to their second or third preferences until all first choices have been processed.

Eighteen percent of the families who applied by the deadline for school allocation did not get their first choice in 1993. Thirty-eight of the 50 schools were over-subscribed, 18 for whites only, 12 for non-whites, and 8 in general. Most were oversubscribed by only 1 or 2 students, and most students got into the school of their first choice before the school year started. However, 20 percent of the stu-

dents enrolled after the annual deadline for school choice, and were unlikely to get their first preference.

Only 26 percent of the families chose their neighbourhood school. Over half, 55 percent, chose a school that was more than a mile away, and which qualified for free transport. Meyer and Glazerman describe the choice process as one involving "complex trade-offs" (p.8). Rather than look at choice in terms of descriptive statistics, they used regression modelling to estimate school preferences. Differences between schools in terms of safety or test scores were not factors, despite the prominence of safety as a reason given by parents when interviewed. Parents did prefer schools with a higher proportion of students from two-parent households, and of the same race as themselves.

A study of requests to transfer into magnet schools in another US county in 1985 also found that the ethnic composition of the schools played a larger part than school quality, programme offerings, or parental satisfaction. White students chose schools with fewer minority students, and minority students chose schools with fewer white students (Henig 1995: 165–167).

In Minneapolis, families also chose schools chosen by their neighbours—though the schools were often not the nearest school. Meyer and Glazerman suggest that this may reflect the use of neighbours as a source of information about schools. (Other information is available through a parent information centre, which stresses the special character of the school, and the importance of a match between individual children's needs and the school.) Witte and Thorn (1996) also found that informal sources of information about programmes and schools were the main source of information for parents using the Milwaukee voucher system and its interdistrict transfer programme.

The Minneapolis system has increased racial integration, but parental satisfaction with it is low, because the first choice is not guaranteed. One preference is to return to neighbourhood assignment, with the option of open enrolment if the parent does not want the neighbourhood school.

Cambridge

Cambridge, Massachusetts, is one of the two "controlled choice" systems which are usually cited as exemplars. Open enrolment began as a preventative desegregation measure in 1981. Parents list their first 3 preferences, some for programmes within schools, based on information about the schools provided by the Parent Information Centre set up by the city, and by part-time parent liaison staff hired by each school to meet prospective families, give tours of the school, and answer questions (Fiske 1991, p.171). The annual cost for the parent information centre and

staff development to revitalize unpopular schools is US$67 a student, and for transport — within a compact city — another US$54.[63]

The importance of making an informed choice is underlined by making enrolment of children contingent upon their parents' visit to the Parent Information Centre. Information about the process and the centre is also conveyed through community meetings, personal letters to parents of children enrolled in Head Start programmes, visits to early childhood education centres, flyers in laundromats and supermarkets in several languages, and a 24 hour recorded phone message.

The 13 schools offer a wide variety of programmes and approaches: 11 regular and 9 alternative. The schools do not select their students. Allocation of places is done monthly by the district, keeping racial balance in mind. Other considerations are availability of space, keeping siblings in the same school, and geographical proximity. A lottery is held if there are too many applicants for the places available. Students who do not get their first choice go onto a waiting list for the next vacancy, and the 15 percent who get none of their first 3 preferences go onto the waiting lists for all 3 schools. District officials work with the least popular schools to improve them by making them more attractive to parents.

Petronio's (1996) study of Cambridge kindergarten parents' choice decisions found they made little use of test data in their comparisons of schools,[64] and used the Parent Information Centre as a source of information about the choice making process, rather than about the schools themselves. Their main sources of information were their friends and neighbours, people who shared their values. She found two strands: middle and upper class families preferred alternative programmes and two programmes "reputed to serve the children of Harvard professors"; lower income and minority families preferred traditional programmes,[65] and schools closer to home, and were less likely to visit the schools before making their choice. The lack of guarantee of a place in the chosen school, allocation by lottery for oversubscribed schools, and the time taken to gather information and visit schools were aspects of the scheme that frustrated some parents, particularly those who were middle class. Diversity of options seemed less important than the quality of the teachers.

---

[63] In St Paul, Minnesota, a more dispersed city, annual transport costs in the early 1990s were US$120 per student for those attending neighbourhood schools, and US$350 for those attending "choice" schools. (Doerr et al 1996: p. 86).

[64] One suspects that test data become more important as children approach secondary school age.

[65] Petronio cites Henry Levin's analysis that this difference in parental preferences has important implications for the work opportunities of their children. "Parents who select highly structured schools are preparing their children for jobs at low occupational levels, while parents who choose schools that stress conceptual thinking and development beyond basic skills are preparing their children for relatively higher occupational positions". (p. 35).

By 1991, 63 percent of the 7,500 Cambridge students were in non-neighbourhood schools, and the schools were desegregated. Using data prior to the introduction of school choice, Henig shows a stronger decline in desegregation prior to the introduction of controlled choice, due to "strong government actions" to desegregate, and suggests that the controlled choice programme has maintained this decline rather than been its main contributor. Private school enrolments declined by 5 percentage points from 1978 to 1987, from 20 to 15 percent of students (Henig 1994: 131).

Standardised test scores showed improvement in achievement (76 percent of all third, sixth and ninth grade students passed the reading, writing and mathematics sections of the state's basic skills test in 1991, compared with 62 percent in 1987). Black student performance on tests matched white student performance, though gaps remained between children from poor homes and their affluent peers. Henig notes that while scores increased, Cambridge students were still scoring below the state average in 1987 (82 percent of third graders passed the reading test, compared with the state average of 93 percent, 78 percent the mathematics test, compared with 93 percent, and 79 percent the writing test, compared with 91 percent). However, Henig also notes that it is possible for standardised test scores to increase with repeated teacher experience with the tests, and Cambridge started using them only in 1986.

Croninger and Lee (1995) note that Cambridge's particular demographic character may be an important factor in the success of its controlled choice scheme. They contrast this to a "large metropolitan area like Detroit, where over 90% of the city's public school enrolment is minority, compared to only 9% in the surrounding suburban communities" (p. 318).

East Harlem

In District 4 in East Harlem, choice evolved gradually, through the district superintendent inviting teachers and school administrators to think of innovative ways to improve learning in a high-poverty district. The district itself set up two specialised schools, a performing arts school, and the Beta school "for troubled youngsters who could not function well in traditional settings and needed more counselling and a less rigid curriculum" (Fiske 1991, p.181). By 1991 there were 50 schools in 21 buildings, 16 regular elementary schools, 9 bilingual elementary schools, 23 alternative schools, and 2 high schools. The alternative school specializations ranged from mathematics and science, performing arts, and gifted and talented — common themes for magnet schools — to a maritime and a biomedical programme. A curriculum using sports examples was tried but did not

succeed. Alternatives that are too popular are duplicated to keep school size small. The smallness of the new schools is regarded as a key factor in the success of the District 4 choice programme.

As with Cambridge, there is a strong emphasis on providing information to enable a choice to be made that will suit the individual student. Sixth grade students choose from 6 schools, and 90–97 percent get one of their first 2 choices; 1500 students from other New York city school districts also choose East Harlem schools. Attendance is higher than before.

The evidence on increases in student achievement is mixed. Several reports show evidence of increased student achievement, but with different figures (Henig 1995, p.131). One study shows a very large increase in the proportion of students reading at or above grade level, from 16 percent in 1973 to 63 percent in 1987; another shows an increase from 27 percent in 1978 to 42 percent in 1989. Henig notes that the oversubscribed East Harlem schools are selective of their students, and that this may account for some of the increase in scores. However, Cookson (1996) cites a study which found that the proportion of *all* New York students reading at or above grade level rose from 15 percent in 1973 to 65 percent in 1988, suggesting that District 4's results reflect a city-wide increase, rather than its move to provide choice in smaller schools.

Cookson also wonders whether district reporting of student achievement was based on limiting the proportion of students taking the tests. This may account for the seeming decline in 1991, when 51 percent of New York city students read at or above grade level, but only 3 of East Harlem's 16 elementary schools and 1 of its 4 junior high schools matched this "modest goal". Indeed, all the schools in East Harlem had a lower percentage of their students at or above grade level in 1991 than in 1988. In 1991 only 38 percent were reading at or above grade level, compared to 46 percent for New York city as a whole (Henig 1995).

Henig also provides information about the additional costs of magnet schools: these are around 8 percent higher than for nonmagnet schools, with high schools costing more again. Transport costs were 27 percent higher. To fund the East Harlem diversity, students "received more federal aid per student than anywhere else...and the (district's) budget was exceeded by 3.5 percent annually for many years" (p.164).

Do Magnet Schools Improve Performance?

Gamoran (1996) used NELS data to compare the progress from eighth to tenth grade of students in 48 magnet schools with their peers in the same area (central cities in a standard metropolitan statistical area) attending regular public schools,

Catholic schools, and secular private schools. Taking individual prior achievement, gender, race, ethnicity, family structure, and school composition (in terms of racial, ethnic, economic and family structure) into account, there were no achievement differences between regular public schools and private secular schools. In other words, student intake characteristics accounted for apparent differences, rather than the "value added" by the school. However, the performance of students in magnet schools was substantially higher than that of students in other schools, both private and public, for science, reading, and social studies. He notes that further work is needed to see if the advantage for magnet school students comes at the cost of their peers in the same districts (through cream-skimming). Hendrie (1996) reports two national studies showing that magnet schools receiving federal funding aimed at desegregating schools have not been successful in decreasing segregation, suggesting that some cream-skimming is occurring.

Cookson (1996) cites a study by Plank et al (1993) which "found that students who attended choice schools did not do as well as private school students or students who were assigned to neighbourhood schools" (p. 105). Shumow, Vandell and Kang (1996) describe the research literature on magnet schools as showing "inconsistent results regarding student achievement". Their own study of low income Milwaukee children attending assigned schools, magnet schools, and schools participating in the district's open enrolment scheme[66] showed that children whose parents chose their school were reported by their children to be engaged in more activities with them, more emotionally supportive, and more likely to show firm-but-responsive parenting strategies (rather than "harsh" strategies), but less involved in their child's chosen school. Two reasons for this seeming discrepancy between home support and school involvement were put forward: transport difficulties and costs if the chosen school is not the local school, and confidence in the school. Small advantages were found for children attending choice schools for mathematics and school orientation (a combination of the children's self-appraisal of their school competence, teacher reports of children's work habits, and report card grades for conduct), but not for reading. However,

> *A more powerful predictor of academic achievement and school orientation was parental involvement in their children's schooling. This involvement included homework supervision, school visits, and communication with the teacher* (p. 459).

---

[66] The same Milwaukee which offers public and private voucher schemes for students to attend private schools, and inter-district enrolment. It is perhaps worth noting that rather than being a monopoly provider offering only uniformity, the Milwaukee public schools in fact offered a diversity of choice, from the neighbourhood schools (most, however, within low income areas), to magnet schools offering a wide range of programmes.

If choice of school increases parental trust, it would be interesting to know whether that same trust also acts to limit the positive parental involvement described here, particularly if the chosen school is too distant to allow school visits.

Can we Limit the Disadvantages of Open Enrolment?

Fiske gives a useful synthesis of the successful ingredients of open-enrolment systems which are equitable, and do not simply continue or exacerbate existing school segregation by income or ethnicity:

- There must be a range of high-quality alternative schools from which to choose — this means developing the "supply side" (through central leadership and support, rather than imposition).
- Every student must have a chance of choosing every school— this means that selection of students needs to be centralized within a location, rather than left to individual schools.
- All parents need to know all the options available.
- Transportation must be available to those who cannot afford it.
- The scheme needs to be adequately funded, since choice schemes do cost more.
- Training is needed before choice can be introduced.

Charles Willie, a promoter of controlled choice plans such as Cambridge, also calls for the elimination of school zones and enrolment schemes based on location: "Unless everyone chooses, you have a system of choosers and non-choosers, and you cannot control for self-selection" (Fiske 1991, p.199).

These conditions are more costly than simply removing school zoning, as was done in New Zealand. External co-ordination and support is given, without compromising school responsibility. These conditions give the market a more defined structure than in New Zealand; they pay more attention to the supply side, and more attention to ensuring that the process of choice is informed, and unconstrained by transport costs. They do not assume that either parents or schools enter a market on a level playing field. The fact that these conditions are absent in New Zealand (and England) helps to explain why the introduction of choice and competition has not markedly increased the diversity of schools, or changed patterns of school attendance which reflect socioeconomic differences, other than to reinforce them.

Without such safeguards, and without spare capacity within desired schools, it is schools which are able to select students, rather than students choosing freely among schools. It is competition among students and their families which increases, rather than competition among schools. The schools which reach capacity first are those serving middle class students, and those with better reputations. To provide choice of the kind that was talked about when the reforms in New Zealand and

England were introduced requires substantially greater funding than governments wishing to hold or cut public spending are willing to provide. The available data on open enrolment clearly indicate that systems which put choice at the centre, without structuring the "market" more equably, are unlikely ever to deliver the improvements they are said to offer in educational opportunity, diversity of choice, or achievement.

Moreover, the material on parental choice is indicating that such decisions are more likely to be based on concepts of social ease than educational quality, and that faced with choice of curriculum, parents would often rather have security of good quality in terms of teachers. This emphasis on teaching quality rather than diversity of subject fits with Brown's analysis that school specialization of subject is in fact too risky for most parents and students.

7 VOUCHERS IN NEW ZEALAND: PRESENT AND FUTURE TRENDS

This chapter looks at the nature of private school provision in New Zealand, and the individual scholarship scheme known as Targeted Individual Entitlement (TIE), in order to gauge the impact of government funding on private school provision, and the likely impact if a full voucher system was introduced.[67] It also compares fee levels within state, integrated and private sectors, to see if a full voucher system would decrease social segregation within schools, and make schools with higher socioeconomic intakes more accessible to low income students. Some aspects relevant to assessing the nature of competition between the sectors are also explored; however, this exploration can be tentative only, given the lack of both qualitative and quantitative research comparing school processes, resources, and structures across all sectors.

Private Schools in New Zealand

In 1987, two years before open enrolment began for the state sector, private schools were 4.34 percent of all New Zealand schools. By 1997, they were 4.31 percent. Their share of student numbers was 3.53 percent in 1987, and 3.52 percent in 1997. The 4 largest private schools enroll about 40 percent of all private school students (Kerr 1996). In 1987, there were 123 private schools; there are currently 120.

These figures disguise considerable movement in the private school sector over the last decade. Between 1988 and 1998, 82 new private schools opened, most of them small and Christian, and 33 closed.[68] But most of the movement is due to integration: in the same period, 72 private schools integrated. Integrated schools get full government funding for teacher salaries and operational costs, but must take responsibility for their own capital costs. Private schools seeking to integrate must own their own buildings and grounds. Integrated schools were 9 percent of schools in 1987, rising to 10.88 percent in 1997. Their share of student numbers rose from 8.4 percent to 9.6 percent (reflecting their smaller average size).

---

[67] A full voucher system is currently being promoted by the political party ACT, and by the Independent Schools Council, whose membership of 50 of the 120 private schools includes the largest and most established schools, and most of the private secondary schools. The Independent Schools Council refers to vouchers as "entitlement funding" (Fyfe 1998).

[68] Compiled from material kindly supplied by the Data Management Unit, Ministry of Education May and June 1998. Over this same period, 24 new integrated schools opened; 11 Catholic schools closed, 8 integrated, and 6 opened; 157 state schools closed, and 61 state schools opened. The greatest growth in schools and student numbers 1987–1997 was in the integrated school sector.

Davies' (1995) survey of all private schools[69] notes an increase from 112 to 135 in the number of private schools between 1985 and 1991, despite cuts in government funding for private schools in that period. He suggests that this does not support the case that government subsidies are needed to stem integration (see below). However, there were 24 applications in hand for integration in 1991 (Ministry of Education 1991). Davies shows that 55 percent of the private schools then existing were small, with rolls of less than 91. The comparison of school size and proportion of Māori and Pacific Islands enrolment (Table 1, Appendix) shows that private primary and secondary schools are generally smaller, but composite schools slightly larger, than integrated or state schools. Private secondary and composite schools have on average much lower proportions of Māori and Pacific Islands students than others; state schools have the highest proportions of these students at primary and composite schools, but much the same proportions as the integrated sector at secondary schools.

Integrated schools have a slightly higher average decile rating than state schools, with a higher proportion (13 percent) of decile 10 schools (the highest socioeconomic ranking) and a lower proportion (5 percent) of decile 1 schools. Private schools are not given decile ratings, so no direct comparison of socioeconomic composition can be made with the state and integrated sectors. Diorio, Rich and Rawlings' 1995 study of private schools included a survey of 365 parents in 5 schools. They found that 67 percent had annual household incomes of over $50,000, 50 percent over $70,000, and 22 percent over $110,000. In the Competent Children study, 74 percent of the Wellington region children attending private schools when they were 8 years old (in 1996–97) came from high income families ($60,000 or more), compared with 33 percent of those attending state schools, and 40 percent of those attending integrated schools (Wylie, Thompson and Lythe, forthcoming).

Government Funding of Private Schools

Private schools had 50 percent of their teacher salary grant paid from 1976–1985, with a sliding decrease to 20 percent by 1989, and nothing in 1990. Government subsidies for private schools were reintroduced in 1991, a year after they were phased out. The cost of the subsidies for private schools, and their subsequent increases, has been met by new appropriations, rather than existing government funding for education.

The government subsidy for private schools was originally provided for operational costs only, and was linked to teacher salary levels. Some capital funding

[69] This had a high response rate of 89 percent of all private schools.

support was available on a discretionary basis — in 1994, 40 percent of actual interest paid, with the maximum level of subsidy set at a reduction of 4 percent in the borrowing rate, for a maximum period of 25 years. The 1998 budget announced the termination of this loan interest subsidy scheme. Grants were also supplied for basic furniture and equipment for new schools, or extensions of existing schools, to state standards.

In 1995, the subsidy was increased and its basis was changed to a per-student amount, based on the average amount spent per student in the state sector in four bands: years 1–6, years 7–8, years 9–10, and years 11–13, calculated by dividing aggregated spending for each band by the number of students in that band.[70] This included teaching salaries, operating costs and capital costs, minus some other costs related to ownership, such as spending on minor capital works and maintenance. It is rather puzzling, if not contradictory, that the per-student funding formula for privately owned schools includes funding for major capital works, but not minor capital works. Integrated schools are expected to cover both kinds of capital costs themselves. Individual state schools receive funding for minor capital works in their operational grant, but not for major capital works.[71]

The move to a single per-student sum reflects the present government's desire to base education funding on formulae, and to provide state schools with all their funding in one package ("bulk funding", now known as "full funding"), on the basis that this will increase school autonomy, and hence effectiveness.[72] Such an approach would also make it easier to move to a full voucher system.

The shift in the basis of calculating private school subsidies meant a substantial increase in government funding for private schools, particularly for schools which were already well set up for buildings and grounds. For private secondary students, the subsidy is now 40 percent of the average state per-student amount. The subsidy for Years 1 to 6 private school students rose from 22 percent of the average state per-student amount in 1995 to 25 percent in 1998. However, the dollar amount rose from $436 to $934. Average per-student funding for primary state schools rose

[70] Government funding does not cover the full costs of students in state and integrated schools; local fundraising contributes nearly 12 percent of school income (Minister of Education 1998).

[71] State schools must apply for government funding for capital works. The funding available for capital works is far less than is applied for. Schools able to raise sufficient money can receive matching government grants. There was little enthusiasm for, and considerable opposition to, the recommendation from a 1993 school property taskforce that schools should be given the option of owning their own property.

[72] Table 2 in the Appendix shows the weight of per-student funding in calculating state and integrated schools' operating grants. Some funding for special needs students is now calculated this way, appearing to shift resources from low decile to high decile schools, and some professional development funding is to be shifted from providers of advisory services to schools on a per-teacher amount which has been criticised as making it harder for rural schools and some others to access the support they need.

by 11.5 percent over this period, largely because of catch-up increases in lagging operational grants and teacher salaries. These increases were passed on through the government subsidy to the private school sector. In 1999, the subsidy for private primary students will rise to 30 percent of the average state per-student amount.

Unlike teachers in the US private sector, private school teachers in New Zealand are usually paid at the same rates (or higher) as those negotiated between government and teacher unions. This may reflect the current shortage of teachers; it also reflects the existence of national bargaining, which sets a common framework.

One reason given for increasing the government subsidy to private schools was that it would discourage them from seeking integrated school status. The 1998 government funding level of $26.4 million for private schools compares with an estimate of $90 million if all these schools were integrated. The 1991 Ministry of Education review of integration policy noted that the 1975 Private Schools Conditional Integration Act "does not contain sufficient strength to allow for adequate Ministerial discretion to refuse to accept an application from a registered private school to become an integrated school or to stop negotiations on reasonable grounds" (Ministry of Education 1991, p.8).

Government could, of course, change the legislation, rather than increase private school subsidies. If the main focus was on providing choice within an area, it could allow integration of only those schools which would increase the diversity of supply. It could also set a limit on the fees which integrated schools are entitled to charge their parents to cover capital funding.[73] The levels of fees for some newly integrated schools in fact overlap with those charged in the private sector, making these schools equally inaccessible to low income students. The government could also set a minimum enrolment, as the Netherlands has recently done in an effort to control its educational spending.

Davies (1995) notes the difficulty of asking state schools to close or amalgamate, when newly established private schools can use integration to gain increased funding. At present, there is also nothing to stop a private school opening in an area where there is spare capacity in the local state and integrated schools, and receiving government subsidies for each student.

A current case is the Wellington suburb of Whitby, which is largely Pakeha, and has a higher average income than the more ethnically mixed neighbouring Porirua

[73] 1994 examples ranged from $1,700 a year to more than $3,000 a year. McGeorge (1995) notes that this difference reflects the end of cheap government loans for integrated schools, and the need for these schools to pay market rates on borrowed money. The average fee charged by private secondary schools in 1992 was $5,531 (Houghton et al 1994).

basin. A developer's proposal to provide land for a private school has met with some support from Whitby families wishing to avoid the local low decile schools, and unable to guarantee their children's access to higher decile schools further away. Should this school go ahead, an opportunity to provide a more even socio-economic mix in the local schools will be lost. This will impact on Porirua students' educational opportunities. It will cost government more, both in funding for the new school, and in higher per-student funding for local low decile schools, which cannot operate efficiently because they are running below capacity.

Are New Zealand Private Schools more Cost-efficient?

Te Puni Kokiri's (1995) comparison of comparable costs, excluding capital costs, show higher costs for private schools than public schools. Interestingly, private schools appear to spend proportionately more on administration, property, and maintenance (though this might include some capital expenditure), and proportionately less on education.

1992 Expenditure for Secondary Schools (<499 students)

	State		Private		
Expenditure	**Avg. per student**	**Percent of Total**	**Avg. per Student**	**Percent of Total**	**Percentage greater than State Expenditure**
Educational	3050.8	79.2	4561.0	65.6	49.5
Administration	238.8	6.2	1003.0	14.4	320.0
Property & Maintenance	458.4	11.9	1359.0	19.5	196.5
Other Expenditure	104.0	2.7	31.0	0.4	-70.2
Total Expenditure	3852.0	100.0	6954.0	100.0	80.2

Although private schools spend proportionately less on education, they still spend more in dollar terms than state and integrated schools, because they are able to charge fees. In 1992, the government subsidy to private schools was 20 percent of the teacher salary equivalent grant. This came to an average of $430 for primary students, and $541 for secondary schools. The subsidy made up only 9 percent of private primary schools' income, and 7 percent of private secondary schools' income (Houghton et al. 1994). The rest was made up largely of fees.

Fees were not decreased after the reinstatement of the teacher salary grant in 1991. Instead, some schools increased fees and others maintained them, citing the

1992 Expenditure for Primary Schools (100–499 students)

	State		Private		
Expenditure	**Avg. per student**	**Percent of Total**	**Avg. per Student**	**Percent of Total**	**Percentage greater than State Expenditure**
Educational	1904.9	81.3	2668.0	64.7	40.1
Administration	133.6	5.7	680.0	16.5	409.2
Property & Maintenance	257.7	11.0	737.0	17.9	186.0
Other Expenditure	46.9	2.0	41.0	1.0	-12.5
Total Expenditure	2343.0	100.0	4126.0	100.0	76.1

Sources: Report of the Ministry of Education on the compulsory schools sector in New Zealand, 1993, Ministry of Education, 1994; The Financial Basis of Independent Schools, report commissioned by the Ministry of Education, University of Otago Consulting Group, March 1994.

need to recoup reserves spent to cover the decrease in the salary grant and its loss for one year. Private school fee increases appear to have continued since, despite the increase in government subsidy. A survey of 20 private schools, mainly at the "elite" end, found that school fees rose by an average of 5 percent between 1997 and 1998 (Keane 1998). But not all private schools are oversubscribed and able to set their own fee levels. Houghton et al. found that although the average private school had an operating surplus in 1992, half the 8 secondary schools surveyed showed operating losses during the year, as did 2 of the 11 composite and 2 of the 17 primary schools.

Houghton et al report much higher average fees in 1992 for their sample of 36 schools than does Davies for his 1995 sample of 114 schools. However, Davies notes

Private School Fees

	Houghton et al	Davies
Primary level	$3,655	$2,881
Secondary level	$5,531	$3,933 (F3–4) $4,636 (F5–7)
Range:		
Primary	$1,150–$5,500	
Secondary	$4,000–$6,300	
All schools		$0–$7,000

that some of his respondents may have given him term rates rather than annual rates, and his estimation of the average amount may have included missing data as zero, rather than being based solely on those schools supplying the information.

Having so much more money available allows private schools to offer smaller classes. In 1993, the average private primary school teacher:student ratio was 1:19, and secondary, 1:12.9. This compares with 1:25.5 and 1:17.5 for both state and integrated schools (Minister of Education 1994). The increase in government funding from 1991 appears to have helped private schools to make a steady reduction in teacher:student ratios (Houghton et al 1994).

Small class sizes were one of the main attractions of private schools for the TIE scheme parents. Others were the additional resources and higher socioeconomic peer group (Smith and Gaffney 1997). Diorio, Rich and Rawlings also found in their 1995 survey of parents, teachers and boards that parents sought a higher socioeconomic and "hard working" peer group, as well as more individual attention for their child.

The evaluation of the TIE scheme also shows that private school costs are considerably higher than state school costs. The TIE scheme entitlement was based on average government spending per student in the state sector, plus 10 percent, which was to cover additional expenditure on low decile schools and the gap between the average government amount and private school fees. Yet 76 percent of the principals of the private schools surveyed in the 1996 TIE evaluation said the entitlement did not cover their school fees. Most of these schools subsidised the scheme by covering the fee gap themselves.

Private school fees also do not cover the full cost of private schools for parents. The TIE scheme parents had to meet additional costs, not always apparent when their children were accepted by private schools, for items such as application or registration fees, class materials, building levies, ability assessments, information technology equipment, and extracurricular activities such as music and sports. Transport and school uniforms could cost more than the Ministry allowance, and there were also boarding costs. Seventy percent of the 1996 cohort of TIE parents said the allowance was insufficient to cover these additional costs for the 1996 school year, as did 60 percent of the 1997 cohort parents. In 1996 TIE parents paid an average of $730 for these extra costs. The 1997 cohort paid $596 (Smith and Gaffney 1997, Gaffney and Smith 1998).[74]

[74] The evaluation does not explore the reasons for this difference in extra costs for each cohort. Since the 1996 cohort costs varied only slightly over the two years, the lower costs reported by the 1996 cohort may reflect differences in the schools attended and their costs, including the school's subsidy for additional costs, or parental discretion over which additional costs to cover. The 1997 scheme offered 8 more schools than the 43 offered in 1996. For 1999, 41 schools are offering places.

These data make it clear that children from low income families would still have difficulty accessing private schools if private schools were given a subsidy of 100 percent, or, as in the Swedish system, 75 percent, of the average cost of government funding per student in state schools. If the funding was 100 percent, low income students would still face additional costs of at least $500–$700, plus the $900 or $1,100 uniform/transport allowance currently included in the TIE entitlement – around $1,600 in total. They could face even higher costs if private schools did not continue to subsidise the gap between their actual fees, and the 110 percent of the average state per-student cost given through the TIE scheme. This situation is more likely if greater numbers of low income students apply for private schools, and are selected. Low income students would have to have a substantially higher voucher amount than others to make them more attractive to private schools than students from other families.

Private Schools and Accountability for Use of Government Funds

Davies found that religion was the source of school special character for at least 64 percent of the private schools. Some mentioned their tradition, others small classes, or individual attention to students. A few schools offered alternative education, and some were founded to meet the needs of ethnic minorities.

Just over half the private schools said they would not consider integration. These were either well established traditional schools, or newer religious schools, often registered in the last 10 years, which did not wish to lose their curricular independence. Only half the schools would be prepared to follow the national curriculum or participate in the national qualifications framework. However, 72 percent of the schools thought the state should provide them with 100 percent of average state per-student costs; 49 percent were in favour of "different funding bands, with different state accountability and monitoring regimes for each funding band (i.e. submit annual reports, parent elected boards etc)." This indicates that a substantial proportion of private schools would be reluctant to accept the level of accountability required of state and integrated schools, even if they were funded at the same level. This is shown in more detail in the next table.

The current accountability of private schools for their government funding is limited to supplying a copy of audited accounts to the Ministry of Education. The Ministry does not request information on student fees. Unlike Sweden, it has not analysed student fees in relation to government funding, to check whether increased government funding has held or lowered student fees, thus making private schools more affordable for a wider range of students. Nor has there been any linkage

Acceptability of State Accountability and Monitoring Regimes to Private Schools

Type of Accountability Mechanism	Acceptable %	With Conditions %	Not Acceptable %
Parent only elected board of trustees	18.3	8.7	75.1
Annual audited accounts to Ministry of Education	64.4	10.2	26.4
Annual reporting to Ministry of Education	58.3	13.0	28.7
Charter	46.3	12.6	41.1
National curriculum	46.7	9.9	43.6
Qualifications framework	49.1	15.2	36.0

(Davies, p. 66).

between government funding and school fee levels, unlike Australia, where government funding declines as fees increase. Miron (1996) considered that the Swedish system of funding private schools had remarkably light checks and balances; the New Zealand system has even fewer.

The Education Review Office does carry out inspections of private schools every two years. These focus only on the requirements for registration, though individual schools can request, and pay for, more thorough reviews. ERO school reports are made to the owners of the school, and do not have to be publicly available, as state and integrated school reports must be.

In 1996, the Chief Review Officer of the Education Review Office gave an overview of the quality of the New Zealand private school sector (Aitken, 1996). This raised some issues about the relation between parental choice and school quality, and about the kind of accountability that could be expected in a full voucher system which included both public and private schools.

> *About 7% of privately owned schools have been categorised by the Education Review Office as "excellent/exemplary". All these are long established single sex schools with substantial private support (financial and other) in addition to the revenue earned from fees and provided by State.*
>
> *The bulk of privately owned schools are found to be competent—supplying what their terms of registration and the law required.*
>
> *A small proportion are not competent as service providers*[75]*—and almost all of these are*

[75] 7 percent compared to 12 percent of state schools, without taking the sector differences in school intake into account. In low income areas, the proportion is markedly higher: 27 percent in Mangere-Otara, 65 percent on the East Coast (Brett 1998, pp.39,46).

small schools, usually self-defined as "Christian" and delivering a specialist brand-named curriculum.

The standards of proof of accountability and service quality for privately owned schools are, as you all know, much lower than for State owned schools.

This is partly because of the limitation of the registration instrument, but largely at the request of your own organisational representatives, who have successfully argued to me since 1993 that in your niche market the educational and other risks are carried by the fee-paying parent as consumer, and not by the student as consumer.

In the rest of the education market, the Education Review Office has chosen to treat the young person, the student, as the consumer, so our methodology has necessarily been adapted considerably to meet your special sectoral preferences (p.4).

The Chief Review Officer ended by concluding that
private schools are distinguishable in terms of ownership, price, and the allocation of consumer risk [to parents as the feepayers, not students as consumers]. At present, however, [they are] much less so in terms of the quality of service supplied or some of the generally accepted output indicators such as external exam results (p.4)

Although government subsidies to private schools have increased recently, there has been no increase in additional accountability of the sort that might be expected, given that government is taking an increased share of the "consumer risk".

The Targeted Individual Entitlement (TIE) Scheme

This scheme began in 1996. It offers 160 scholarships a year for private school places to children from low income homes.[76] The 1998 Budget announced the continuation of the scheme, at the same level. In 1999, approximately 640 scholarships will be available—about 2.5 percent of the total private school enrolment. Money for the scheme has come from new appropriations, rather than from existing government funding for education.

The amount of the entitlement was calculated by taking the average cost of educating a child in the state sector, including "wages, operating costs, depreciation and cost of capital injections; and the capital cost of existing stock" (Minister of Education 1995a, p.5). It was then given an additional weighting of 6 percent to take socioeconomic status into account. This "approximates the additional resources currently allocated to the education of this group in the state sector" (ibid). This gave figures of $3,551 for primary students, and $5,777 for secondary students, compared with average private sector fees of $3,700 and $5,700. However, these

[76] Defined as $25,000 a year or less.

averages covered a wide range, from $2,000 to $8,000 per annum; the paper noted that fees for 12 of 19 "leading private secondary schools" exceeded $6,000. The cost of private school fees played a part in increasing the additional weighting for the TIE students to 10 percent over and above the average student cost.

It should be noted that the additional weighting of 6 percent was originally provided on the basis of the additional funding given to low decile schools. It therefore confuses school socioeconomic mix with individual student background. The extra funding provided to low decile schools recognises that school socioeconomic mix has an impact of its own, over and above the individual student's family resources. Children from low income families attending a high decile state school do not bring additional funding with them, because the school mix does not entitle the school to this funding. Strictly speaking, since private schools offer a school socioeconomic mix which is on the mid to high side, the formula should not have included an allowance which is for the school mix, not the individual student.

In addition, TIE students are given an annual allowance of $900 (primary students) and $1,100 (secondary students) to cover uniform and transport costs. As noted above, this additional amount does not cover all costs faced by families. The scheme also has administrative costs, through a contract with the Independent Schools Council to administer it. Regional Ministry of Education offices also play a part in advertising the scheme and giving information to applicants.

The number of children in the eligible group of families with incomes of $25,000 or less was estimated at 170,000 (Minister of Education 1995b).[77] Officials expected applications from 10–20 percent of these children in the first year (Minister of Education 1995, p.3). In the event, only 807 applications were made (Hill 1996a), or 0.5 percent of the eligible group. The number fell to 790 in the second year (Christchurch *Press* 1996), and around 600 in the third year (*Education Weekly* 1998).

Underlying Assumptions of the TIE Scheme

The scheme was based on the premises that parental choice of schools improves student learning, that private schools should be available to students from poor homes to increase their choices, and that attending a private school confers an advantage. There was also an assumption that consumer choice would be made on quality grounds, thus increasing the supply of good quality education:

> *The availability of a choice of educational options and the ability to exercise choice are likely, in combination, to result in the provision of higher quality education opportuni-*

[77] This is around a quarter of the state and integrated school enrolments for 1995.

ties. For families with the appropriate level of resources, internationally comparable educational facilities are readily accessible in this country. For a proportion of NZ families, however, educational choice is considerably limited. For families at the lower end of the socioeconomic scale, education choices are effectively limited by cost—the cost of fees for attending independent schools; the cost of travel to more distant schools, and the cost of uniforms and other expenses associated with attendance at both independent schools and some state schools (Minister of Education 1995)

Contrary to the research evidence, the Minister of Education's paper mentioned the higher performance of the UK's Assisted Places Scheme students in the context of what it called "successful" targeting of lower socioeconomic families, and significant early gains in reading scores from the Milwaukee voucher scheme. It stated that "international research, including that embracing New Zealand, indicates that private schools may be more successful in educating children from lower SES families than state schools" (Minister of Education 1995). Toma (1993) was the only research report cited in support of this claim. The shortcomings of her analysis were discussed in Chapter 3. Her material provides no comparison of low income student achievement in *both* private and state schools with the same socieconomic mix, which would be the real test of a private school advantage in New Zealand.

The then Minister of Education asked his officials to look at the implications of including state schools in the scheme. The Ministry of Education (1995a) advised that state schools should be included in the scheme, on the grounds that:

- choice should be "genuine";
- opinion polls showed that "parents from lower socio-economic groups are less inclined than parents from higher socio-economic groups to see private schools as the ideal educational option";
- "distance and cost of transport are the most common barriers of access to preferred education options for low income families";
- "many of the most popular state schools have full rolls and hence access is considerably limited";
- if the scheme were limited to private schools, "the Government would be seen to be reinforcing the perception that private schools were superior to state schools".

Operation of the TIE Scheme

This advice was not taken. State schools were not included in the scheme. All private schools whose programme was based on the New Zealand National Curriculum were eligible to participate. If more than 160 places were offered by

eligible schools, priority would go to the schools most accessible to the largest number of low income families. A geographical spread would be sought, as would a balance between single-sex[78] and co-educational schools.

Just under half of the private schools (62 of 127) were interested in taking TIE students. Of these, 19 schools were turned down by the TIE administrators; these were mostly "small and religious-based" (Clifton 1995). Of the 43 schools cleared to take TIE applicants, ERO had judged 2 to have lower standards than other primary schools (Davies 1995, p.80). This indicates that priority was given to the private ownership of the schools, rather than to the use of parental choice to access better quality schools, which was central to the policy development.

Selection of Students

Treasury recommended random selection among applicants for a given school, since it saw the TIE scheme "primarily as a means of evaluating how private schools perform in improving the educational achievement of students from the lowest socio-economic backgrounds" (Minister of Education 1995c, para.20). The private schools' preference was to make their own selection, preferably on their own, but if needs must, after a central ballot to narrow the field for places at each school to 6 applicants for every place offered. They were not prepared to take randomly assigned students. Similarly, Davies (1995) found that only 3 percent of private schools would accept students from low income families on the "recommendation of an outside agency". This shows that private schools regard their practice of student selection as essential.

The TIE scheme, while better targeted to low income families than the UK APS scheme, has attracted parents who are better educated than their low income peers, more likely to be in skilled work, and slightly more likely to have attended private schools themselves.[79] The ethnic profile of students applying for the scheme for the 1996 year was 59 percent Pakeha/European, 22 percent Māori, 8 percent Asian, 6 percent Pacific Islands, and 5 percent other ethnic groups. The ethnic profile of those accepted was close to that of the applicants.

However, these figures are not representative of the ethnic composition of low income families. In the 1996 census, 47 percent of Pakeha/European children between the ages of 5–14 lived in families with incomes of less than $20,000, as did 35 percent of Māori children, 9 percent of Pacific Islands children, and 6 percent of

[78] Some two-thirds of private schools are single-sex; as are 45 percent of decile 10 state secondary schools, compared to 7 percent of decile 1 secondary schools.

[79] The material on the TIE scheme which follows is drawn from the two interim evaluation reports (Gaffney and Smith 1997, Smith and Gaffney 1998).

Asian children (Statistics New Zealand 1998, Table 14.)[80] Thus Māori low income families were much less likely to apply for the scheme than their Pakeha/European or Asian counterparts, and Pacific Islands families slightly less so. Sole parent families were 61 percent of the 1996 cohort, and 66 percent of the 1997 cohort.

Some schools were in more demand than others. Although the total proportion of applicants to places was 6 to 1 in 1996, 40 percent of the schools took less than 20 percent of their applicants, while 12 percent took more than half their applicants. Forty-five percent of the schools offered only 1 or 2 places; another 24 percent offered 3 or 4.[81] Unlike the APS, Milwaukee, or Cleveland schemes, TIE students do not form a substantial proportion of most individual schools' enrolments or funding. Only 4 schools found the TIE enrolments a useful supplement to their funding.

Because such small numbers are involved within each school, any cream-skimming effect from the scheme is likely to be minimal for both the schools, and the state or integrated schools which the students would otherwise have attended. The cumulative impact of the scheme, at its present steady rate of 160 new places each year,[82] also seems unlikely to have this effect, unless new private schools were to open in low income areas and draw most of their intake from TIE students.

Just over half of the 43 schools taking part in the TIE scheme were interested in offering more places. The average proportion of school rolls which could be filled by TIE students if the scheme was to expand was 13 percent. Sixty-seven percent of the schools were already operating at 95 percent or more of their roll limit; one school was operating at only 60 percent, and another 3 at 80–90 percent of their roll limit. All the schools also offered part-fee and full-fee scholarships.

Selection for TIE students usually involved interviews with the family and student. Principals were concerned that students and their families would fit into the school, be committed to its values and its expectations of behaviour, and be motivated. Just over half the principals used the same selection process for TIE positions as for their own scholarship and fee-paying students, but scholarship students also usually sat academic tests. Some schools did test TIE students' academic ability. The selectivity involved here would need to be taken into account in any

---

[80] The Census report also gives the income band $20–30,000, but not $20–25,000. The ethnic composition of families with children aged 5–14 in this income band shows 52 percent Pakeha/European, 31 percent Mäori, 8 percent Pacific Islands, and 6 percent Asian.

[81] Overall 1 in 4 applicants were successful in 1997, compared to 1 in 6 in 1996, reflecting lower numbers of applicants.

[82] After 5 years TIE students would be around 3 percent of the total independent school enrolment. This includes those schools which are ineligible for the TIE scheme because they do not follow the national curriculum. These also tend to be small schools.

evaluation of the scheme involving comparison of individual children's achievement with that of matched peers.

The private school principals with TIE students reported that their performance matched that of their fellow students.[83] Most settled well, with only a handful of students leaving the schools because they did not enjoy them or could not meet additional costs. Transport time, and sometimes awkwardness due to fellow students' affluence or ethnic stereotyping, were the main dislikes of students.

Systems supporting private and integrated schools

Private schools and Catholic schools do not operate completely as stand-alone units, in competition with one another. The Independent Schools Council lobbies government for increased funding for private schools, and promotes private schools to the public and to prospective parents. As a way to differentiate private schools from state schools at a time "when more schools are getting the flexibility to operate independently, and the differences between state and independent schools are narrowing" (ISC Director, quoted in Fyfe 1998), and when private school enrolments are suffering because fewer parents are able to pay the fees, the Independent Schools Council has also encouraged private schools to put a more overt emphasis on values in curriculum, and most recently, to adopt a common framework (developed by Carol FitzGibbon in the UK) which schools can use to assess their effectiveness through value-added measures.

There are common bodies for fundamentalist Christian private schools. Among integrated schools, there are common bodies for Seventh Day Adventist, Steiner, and Montessori schools. Catholic schools are supported through regular newsletters and broadsheets, which include reports of innovations and achievements in the schools to encourage good practice; policy statements are also available for schools to pick up and use without having to invent their own. The Catholic school system as a whole is seeking to expand, and to bring into Catholic schools more of the 50–60 percent of Catholic students who attend state schools. There are no Catholic schools in some areas of the country, particularly Catholic secondary schools; attendance dues are also thought to discourage Catholic students from enrolling in Catholic schools.

Under open enrolment, a small minority of Catholic schools have become more competitive with other Catholic schools. Where one school loses students to another, the Catholic system is then faced with the additional costs of empty classrooms

[83] The evaluation did not include any independent comparison of TIE recipients' performance with matched students in comparable state schools, or in the schools the students would otherwise have attended.

in the less popular school, and demand for additional room in the more popular school. However, the bishops, in their role as the schools' proprietors, are in a position to mediate such situations (Corrigan 1998).

How Separate *are* the Sectors?

Public funding goes to all three sectors. State schools receive the most, integrated schools slightly less, and private schools from 25 to 40 percent of the per-student amount paid in the state sector, other than minor capital spending.

Accountability requirements are, as noted, minimal for private schools. Private and integrated schools retain the right to select students, and charge fees which are higher than the voluntary (in law) charges for state schools.[84] High decile state schools and schools in areas with insufficient capacity have enrolment schemes which allow some selectivity.[85] They are also likely to exclude low income students, inasmuch as their stated catchment areas are not likely to include low income areas.

Schools in all areas can determine their own capacity; state and integrated schools must do this in negotiation with the Ministry of Education.[86] The Catholic schools' central office is currently negotiating with the Ministry of Education to increase the cap on the proportion of non-Catholic students from 5 percent of a school's enrolment capacity to 10 percent. This cap is on the school's capacity, not the actual enrolments, so in schools with spare capacity the proportion of enrolled students who do not fit the special character criterion of Catholic schools may in fact be larger. The cap had its origins in the Catholic bishops seeking to protect the Catholic nature of the schools; but it gained support from teacher unions during the original integration process, which occurred during a time of fewer children coming into schools overall. The Ministry of Education's desire for efficient use of public spending on education means it has concerns that Catholic schools may

[84] Diorio, Rich and Rawlings (nd) conclude that parental income was often used by private schools which were not oversubscribed, and thus not in a position to select students through interviews or previous academic results, as a proxy indicator for parental interest in education, and the likelihood that the child would work hard, and not disrupt other children.

[85] Brett (1998) describes an application process for one prestigious boys' state secondary school which involved the child sitting an exam and parents and child attending an interview. She gives application rates for 4 such schools; they range from 1.8 to 2.6 applications for every available place.

[86] Diorio et al (n.d.) posit an advantage enjoyed by less popular state schools which is not enjoyed by less popular private schools: the brake put on school expansion if there is underutilized capacity in other state schools in the area. However, this brake is more theoretical than real, and ignores schools' own unwillingness to expand if the school size is seen as one of the key factors in the school's culture and its reputation. This comparison also ignores the role that school mix plays in the "popularity" of schools in the state sector, and the fundamental differences between the two sectors: the obligation of the state sector to serve all children, and to spend public money as wisely as possible. Funding capital expansion is likely to be more expensive than retaining existing schools.

expand in areas with spare state school capacity. The cap has a certain elasticity, in terms of the criteria used within each diocese. Parents may have to show the local priest their child's baptism certificate, or only their own baptism certificate. Protection of the special character of Catholic schools lies mainly in the criteria for appointing Catholic staff: the school principal, the director of religious studies, up to 50 percent of staff in primary schools, and 40 percent in secondary schools; and in the inclusion of the religious education programme in the timetable, school policies which respect the special character, such as the inclusion of prayers in the school day, and the tangibility of a Christian ethos in the school, including a co-operative approach with other schools (Corrigan 1998).

Religion is the core of most private and integrated schools' "special character". Their inclusion in state funding allows students from families belonging to particular faiths to be educated within that faith. But by the same token, their inclusion does not necessarily widen the diversity of choice for those who do not share particular faiths.

Summary

New Zealand is in fact close to having a full voucher system already, with its open enrolment, near full funding of integrated schools, and sizeable subsidy to private schools, as well as schools' ability to retain selectivity. This could be described as a quasi voucher system on the cheap, without any of the safeguards included in the controlled choice programmes, or the accountability requirements included in the European and, more recently, the Swedish systems. Parents have only a theoretical right to choose. There is no authority to which parents can appeal, as they can in other choice-based systems, if they are excluded from a school through selection or, in the case of integrated schools, failure to pay enrolment bonds.

The additional financial cost of a full voucher system in New Zealand, one which included all existing private school enrolments, is estimated to be around $95 million a year.[87] This sum does not include any additional weighting for low income students, the transport and uniform allowance provided in the TIE scheme, start-up costs to cover the cost of new schools, or coverage of home-schooled children. Moving to a full voucher system might well make it difficult not to include such children at the same rate as others.

[87] This is estimated on the basis of 1996 private school enrolments, and the 1998 per capita subsidy for private schools, using the average amount of $1,487.25 for the 4 subsidy levels for different years for students enrolled in composite schools. This assumes that the basis for the per capita subsidy would remain the same, though since the average amount overall includes funding for students in low decile schools and other support for disadvantaged students, it is arguable that the basis should change to reflect private school efficiency and fundraising advantages in terms of student intake.

Full voucher schemes which include private schools cost substantially more than current educational spending. Levin and Driver (forthcoming) estimate an increase of around 25 percent on US public educational spending. Around half of this is to cover students already enrolled in private schools; other additional costs include transportation, information, adjudication, record-keeping and monitoring, but not the additional school accreditation and monitoring which would be necessary with the entry of more private schools (assuming that all schools would need to accept some accountability for their use of public funds). This estimate does not cover additional capital costs, though these could increase if all schools were given the same allowance as public schools (given that private schools tend to be smaller than public schools).

The impact on access to education and educational quality of extending the present government funding systems for state and integrated schools to private schools would depend on a number of factors:

- whether the additional money required would come from new funding, or be taken from existing government funding for education
- the amount of the voucher
- the supply of private schools
- the willingness of private schools to accept accountability for their receipt of public funds, and become less selective of students.

Source of funding

If the additional funding required to provide a full voucher system were taken from existing funding, then per-student funding would reduce across the board. It can be argued that schools are already underfunded. The Ministry of Education implicitly acknowledges the additional difficulties faced by schools in low income and some rural areas with its support schemes for schools identified as facing problems. Around 10 percent of schools get such support each year.

If the additional funding required to turn the New Zealand system into a full voucher system came from existing education funding, schools would need to continue to increase their local fundraising, and levy higher school fees, simply to maintain their current level of educational provision. This would be particularly onerous, and probably impractical, for schools in low income areas. High decile schools which regarded private schools as their competitors would probably feel the need to increase their fees and fundraising even more to keep pace, e.g. in keeping class sizes as small as private schools could offer. Even if private schools agreed to become less selective, by keeping their ability to charge fees at a higher

rate than state and most integrated schools they could in fact retain their selectivity, at a covert level, and remain inaccessible to low income students.

If schools become more reliant on their own fundraising, then there is likely to be interest in making fees mandatory rather than voluntary. This would change the status of education in New Zealand, and end the principle of providing equal educational opportunity which has guided educational policy since 1943.

The amount of the voucher

Substantial increases in existing per-student funding, or at least substantial increases in per- student funding for students from low income homes, would be necessary for all students to have an equal chance of accessing all private schools. Even then, school selectivity would probably operate to favour students from mid to high income homes, and those whose parents had higher education than others.

The supply of private schools

The private school sector is small in New Zealand, and without government funding to build or buy schools, it is unlikely to expand. The Director of the Independent Schools Council, commenting on the supply of private schools in the face of the recent growth in the number of school-aged children, also noted that popular private schools were often not interested in expanding, since their size was an advantage; and that culture, tradition and location, also related to reputation and popularity, were not able to be reproduced (Hill 1996b). She also noted that private companies had few incentives to set up new schools, without new government funding.

However, it is not clear that even with increased government funding, good quality private schools would be started in low income areas. There is a parallel here with health: Tyack (1992) notes that Medicaid "vouchers" available to poor Americans to buy health services did not result in the creation of high quality medical services in poor areas.

There would, perhaps, be pressure to allow private schools to take over existing state school buildings and grounds.

The gain in school diversity which could theoretically come from vouchers is also limited, since most private schools are religiously based, with limited attractions for non-adherents.

The willingness of private schools to accept accountability and become less selective

It is doubtful whether private schools would be willing to relinquish what are seen as key planks of their independence—and their attraction. Yet if they did not, then

the market created by their inclusion into open enrolment alongside public schools and, to some degree, integrated schools would not be an open market, but one which gave unfair advantages to private schools.

Marginson (1996) notes that increasing government support to private schools in Australia, and the growing reliance of public schools on parental fees and local fundraising to cover the full cost of education,[88] has created inter-school competition and "market relations", but not a single market. "It is segmented, as school markets always are, and one of the segmentations falls along the government-private school divide." Public schools cannot challenge this status segmentation simply by being "marketized"; in fact, comparison on market grounds makes them look inferior in socioeconomic terms, since they are less likely to be selective, and more likely to serve a wider range of students, including those in low income communities and those with special needs. Additionally, as in New Zealand, state schools operate under a more accountable regime than private schools do.

Increased government funding for private schools might not matter so much if private schools were accessible to all, and provided a balanced socioeconomic mix. But moving to a full voucher system would instead intensify the social segregation which open enrolment has already increased. Research shows that increased socioeconomic segregation widens rather than narrows the achievement gap between low and high income students. Thus overall standards may not be maintained, let alone improved.

[88] Two 1995 studies found that school fundraising covered almost a third of the operating costs of schools, excluding teacher salaries and capital costs. As in New Zealand, the disparities between the funds able to be raised by schools in high and low income areas are marked (Marginson 1996, pp.121–122).

8 THE IMPACT OF DELIVERING EDUCATION THROUGH VOUCHERS

In the empirically based research on choice and competition in education, and comparisons of private with public schools, support for the premises behind educational vouchers is more the exception than the rule. Economic modelling which takes account of the empirical research findings does not bear out the contention that educational vouchers would radically improve education—that is, that they would be the "panacea" claimed by Chubb and Moe. There is no evidence that they encourage more equal access to good quality education, spur innovation, foster more efficient resource allocation, or improve achievement.

At best, a small minority of low income children receiving individual scholarship vouchers would benefit, providing that vouchers enabled them to access smaller classes and schools with a higher socioeconomic mix and clear academic curricula. However, even individual scholarship vouchers provide no guarantee of such access. Full voucher systems limit this advantage to those low income children who can both demonstrate high ability, and find a suitable place in such a school. In addition, high income families would be additionally advantaged if public funds supported their choice of fee-based selective education.

Even these small benefits come at considerable cost. In 1994, the New Zealand Ministry of Education advised its then Minister on the advantages and disadvantages of vouchers. The sole advantage noted was that "The weighted voucher entitlement or assisted place would increase the possibility for some students in some areas to have access to 'quality education' at the school of their choosing" (p.7). Eleven disadvantages were noted. As well as strong sector and political opposition, they included lack of private school accountability, increased selectivity, increased financial cost, and additional administrative costs, particularly for targeted schemes. The research bears out this summary.

To this list of disadvantages can be added the overall systemic costs. The negative effects on schools serving low income children are clearly visible in the research on open-enrolment schemes (quasi-voucher schemes limited to public schools), and on student performance. Vouchers increase existing gaps between the educational outcomes for low and high income students by increasing school stratification, and increasing the isolation of low income children in low income schools. As a result, overall achievement and standards are lowered, and less value is obtained for the public money spent on education. The system's capacity to improve educational opportunities is eroded.

Vouchers also lead to additional marketing costs for schools, which come at the expense of resources for learning. But spending more on marketing does not necessarily produce more enrolments, or a broader socioeconomic mix, for schools located in low income areas, and/or with a predominantly low income student intake. As Fowler's (1993) research shows, "unpopular schools had no ability to respond to or change some important factors affecting parental choice, especially the socioeconomic status of the suburb, the type of children who lived there, and the impressions created." Popular schools which are able to select at least some of their students give preference to students from higher socioeconomic groups. This strengthens their market position. On the other hand, unpopular schools cannot select, because they need to take all comers to survive. As a result, their market position declines as their socioeconomic mix narrows. This, in turn, impacts on the achievement of their students.

To counteract these negative impacts, voucher systems–including New Zealand's current system of open enrolment–need the kind of safeguards that exist in the controlled choice system of Cambridge, Massachusetts. These safeguards differentiate between what is realistically the school's responsibility, and what is the system's responsibility. Curriculum and pedagogy are left to schools, with the system providing resources, inspiration, and infrastructures of support. The system's role is to ensure that student access to educational options is not governed by their family's socioeconomic status, and that an infrastructure is available to support schools, so as to ensure that a good range of options is available to parents and students; that school popularity is not decided on student socioeconomic intake characteristics alone; and that school capacity is efficiently filled. Thus the system makes allocation decisions, based on family choice. It also funds transport and the provision of information about schools, based on programmes rather than league tables.

Nonetheless, even the most promising voucher systems – Cambridge, Massachusetts, and Harlem's District 4–show achievement gains that are modest, rather than radical. Marked differences remain in the choices made by low and middle income families, with informal information and the choices already made by neighbours, family and friends seeming to outweigh official information. And there are suggestions that, as Brown (1997) concluded in his analysis of the nature of education, parents are more interested in reliable education than in diversity.

The incentives stemming from New Zealand's present self-managing, open-enrolment system encourage schools and parents to put their own interests first, even though schools may need to be more concerned with marketing than teaching, and parents may seek something which does not in fact provide their child

with a better education. This self-regard results in adverse outcomes for others, and for the system as a whole. The research covered in this study shows that in order to achieve real educational improvements, education policy has to grapple with the inegalitarian nature of so much educational provision. Inasmuch as the unevenness of school socioeconomic mix reflects social inequality, educational policies and practices on their own are unlikely to be able to do much to close the gaps, unless socioeconomic inequalities are properly addressed (Hout 1996). Regardless of education policy, inequalities are known to have markedly increased in New Zealand over recent years. However, the more even school socioeconomic mix which is the most efficient way to reduce disparities and raise overall standards will not be achieved without deliberate intervention, and without a clearer and more realistic differentiation between what is indeed individual schools' responsibility, and what is the responsibility of the system as a whole.

APPENDIX

TABLE 1
Per Capita funding

State school funding components which depend on roll size are:
Base funding
Per-pupil funding (at four levels; includes transition funding)
Relief teacher funding (according to number of full-time equivalent teachers)
Targeted rural schools (schools must meet remoteness criterion)
Vandalism (also risk rating; not paid to integrated schools)
Mäori language programme (Mäori students in programmes at each immersion level)
Targeted funding for educational achievement (also socio-economic decile)
Special education grant (also socio-economic decile)
Careers information grant (for all students in Form 3 and higher, according to decile)
Normal and model schools
Risk management (from 1999) professional development funding (formerly paid to advisory services; according to the number of teachers).
Individual student funding
Ongoing Resourcing Scheme (for verified special needs students)
Transition Resourcing Scheme (for verified 5–7 year olds special needs students)
Support for the teaching of English for speakers of other languages (named students)
Other special education allowances (transport, special equipment)
Other funding components which depend on property or other measurements are:
Maintenance (except integrated schools)
Minor capital works
Heat, light and water
Attachment and travel grants for attached teachers
Continuing education
Secondary Tertiary Alignment Resource (STAR) (for tertiary programmes)
Out of hours music and art classes (primary students)

(Source: Ministry of Education circular: Operational funding for New Zealand Schools)

TABLE 2
Roll size and Proportion of Māori Students by School Type 1991–1996

1991	State	Integrated	Private
Primary			
Average roll size	174	162	92
Average % Māori enrolment	23	13	6
Composite			
Average roll size	240	307	365
Average % Māori enrolment	32	5	6
Secondary			
Average roll size	769	432	318
Average % Māori enrolment	20	17	7
1996	**State**	**Integrated**	**Private**
Primary			
Average roll size	199	160	111
Average % Māori enrolment	26	14	11
Average % Pacific Island enrolment	5	10	1
SES Decile	5	6	-
Composite			
Average roll size	274	272	290
Average % Māori enrolment	42	13	6
Average % Pacific Island enrolment	3	3	1
SES decile	4	6	-
Secondary			
Average roll size	766	443	368
Average % Māori enrolment	21	18	6
Average % Pacific Island enrolment	6	11	1
SES Decile	5	6	-

REFERENCES

AFT (1997) *The Cleveland Voucher Program* Washington, DC: American Federation of Teachers

AFT (1997) *Milwaukee Voucher Program a Poor Investment* Washington, DC: American Federation of Teachers

Aitken, J. (1996) Private Schools—Alternative Schools? Paper prepared for Independent Schools Conference

Ambler, J. S. (1997) Who Benefits from Educational Choice? Some Evidence from Europe, E Cohn (ed) *Market Approaches to Education—Vouchers and School Choice* Oxford: Pergamon, 353–380

American Federation of Teachers (1993) Myths and Facts about Private School Choice *American Educator* 17(3) pullout section

Arum, R. (1996) Do Private Schools Force Public Schools to Compete? *American Sociological Review* 61(1),29–46

Audit Commission (1996) *Trading Places: the supply and allocation of school places* London: Audit Commission

Baker, D., Han, M., Keil, C.T., and S.P. Broughman (1996) *How Different, How Similar? Comparing Key Organizational Qualities of American Public and Private Secondary Schools* Washington: US Department of Education, National Centre for Education Statistics, NCES, 96–322

Ball, S. (1993) Education markets, choice, and social class: the market as a class strategy in the UK and the USA *British Journal of Sociology of Education* 14, 3–19

Blair, J.P. and S. Staley (1995) Quality Competition and Public Schools: Further Evidence *Economics of Education Review* 14(2), 193–198

Bracey, G. Attrition from a School of Choice *Phi Delta Kappan* February 1998, 473–474, Section 2, p. 2-3

Brain, J. and R. Klein (1994) Like it or lump it *Times Educational Supplement* 4 February 1994

Brett, C. (1998) The Middle Class Education Panic Attack — Where to Go, Private or State? *North and South*, April 1998, 36–47

Brown, B. (1997) Why Governments Run Schools, E Cohn (ed) *Market Approaches to Education—Vouchers and School Choice* Oxford: Pergamon, 75–96

Brown, K. (1993) State students match private peers at Victoria *The Evening Post* 28 August 1993

Bryk, A.S. and V.E. Lee (1992) Is Politics the Problem and Markets the Answer? An Essay Review of *Politics, Markets, and America's Schools*, *Economics of Education Review* 11(4), 439–451

Bryk, A.S., Lee V.E., and P. Holland (1993) *Catholic Schools and the Common Good.* Cambridge, Mass. Harvard University Press.

Calderon, A. (1997) Voucher Program for Secondary Schools: the Colombian Experience. World Bank: Human Capital Development and Operations Policy Working Papers (http://gopher.worldbank.org.html/hcovp/workp/wp_00066.html)

Carnoy, M. (1997) Is School Privatization the Answer?, A. Kohn (ed) *Education, Inc. Turning Learning into a Business* Arlington Heights: IRI/SkyLight Training and Publishing, 163–166

_____ (1998) National Voucher Plans in Chile and Sweden: Did Privatization Reforms Make for Better Education? *Comparative Education Review* 42(3), 309–337

Cheng, Wen Li (1994) Do Schools Matter?—A critique of "Social Inequalities and Differences in School Outcomes" *New Zealand Journal of Educational Studies* 29(2), 201–208

Chubb, J.E. and T.M. Moe (1990) *Politics, Markets, and America's Schools* Washington,DC: The Brookings Institution

Clifton, J. (1995) Well-heeled top grants *Sunday Star Times* 10 December, A6

Consumer (1994) School Fees Issue No. 323, 18–19

Consumer (1998) Paying in a "free" system Issue No. 367, 26–27

Cookson, P. W. (1996) School Choice in the United States: progressive individualism, educational deregulation, and the public good, G. Walford (ed) *School Choice and the Quasi-Market* Wallingford: Triangle Books, 95–110

_____ (1996) There is no Escape Clause in the Social Contract: the Case against School Vouchers, J. Hanus and P. Cookson *Choosing Schools—Vouchers and American Education* Washington, DC: The American University Press, 113–170

Corrigan, P (1998) personal communication

Couch, J.F., Shughart, W.F., and A.L. Williams (1993) Private School Enrolment and Public School Performance *Public Choice* 76, 301–312

Croninger, R. G., and V. E. Lee (1995) Review essay of School Choice: the Struggle for the Soul of American Education, by P. W. Cookson, *Educational Policy*, 9(3), 315–319

Darling-Hammond, L. (1998) Teachers and Teaching: Testing Policy Hypotheses from a National Commission Report *Educational Researcher* 27(1), 5–15

Davies, J. and I. Bember (1998) Standards in reading at key stage 1—a cause for celebration? A seven year cross-sectional study *Educational Research* 40(2), 153–160

Davies, A.R. (1995) *School Choice in New Zealand: Implications for Independent Schools* Victoria University of Wellington, Research Paper for the Master of Public Policy degree

Diorio, J., Rich, P., and F. Rawlings (nd) *Autonomy Under Seige: the Private Sector in New Zealand Education*

Doerr, E., Menendez, A.J., and J.M.Swomley (1996) *The Case against School Vouchers* Amherst, NY: Prometheus Books

Driscoll, M.E. (1993) Choice, Achievement, and School Community, E. Rasell and R. Rothstein (eds) *School Choice – Examining the Evidence* Washington, DC: Economic Policy Institute, 147–184

Education Weekly (1998) TIE Scheme has 160 places available *Education Weekly* 29 June 1998, 3

Education Review Office (1998) *Good Schools, Poor Schools* Education Evaluation Reports No. 4 Autumn 1998

Epple, D. and R.E. Romano (1998) Competition between Private and Public Schools, Vouchers, and Peer-Group Effects *The American Economic Review* 88(1), 33–62

Feldman, S. (1998) No Bargain *Education Week* 6 May 1998, 13

Figlio, D.N. and J.A.Stone (1997) *School Choice and Student Performance: are Private Schools Really Better?* Institute for Research on Poverty Discussion Paper, 1141–97 (Institute for Research on Poverty web site is www.ssc.wisc.edu/irp)

Fiske, E.B. (1992) *Smart schools, Smart Kids*. New York: Touchstone.

Fitz, J., Halpin, D., and S. Power (1993) *Grant Maintained Schools: education in the market place* London: Kogan Page

Fowler, M. (1993) *Factors Influencing Choice of Secondary School: a case study*. Christchurch: University of Canterbury

Fyfe, A. (1998) Independents struggle *Education Review* 20 May 1998, 1

Gaffney, M. and A. B. Smith (1998) *Evaluation of the TIE Project: A Second Preliminary Report* Dunedin: Children's Issues Centre, draft interim research report to the Ministry of Education

Gamoran, A. (1996) Do Magnet Schools Boost Achievement? *Educational Leadership* 54(2), 42–46

Gewirtz, S., Ball, S., and R. Bowe (1995) *Markets, Choice and Equity in Education* Buckingham: Open University Press

Gibson, A. and S. Asthana (1998) School Performance, School Effectiveness and the 1997 White Paper *Oxford Review of Education* 24(2), 195–210

Gilling, D. (1998a) *The Operations Grant and the Per Capita Funding of New Zealand Schools: 1999 Update* Wellington: Economic and Social Research Associates

Gilling, D. (1998b) *Analysis of 1998 Budget on government spending on schools* Wellington: Economic and Social Research Associates

Glass, S. R. (1997) Markets and Myths: Autonomy in Public and Private Schools *Education Policy Analysis Archives* 5(1) (http://olam.ed.asu.edu/epaa)

Glass, G.V. and D.A. Matthews (1991) Are Data Enough? *Educational Researcher* 20(3), 24–27

Goldhaber, D. D. (1996) Public And Private High Schools: Is School Choice An Answer To The Productivity Problem? *Economics of Education Review* 15(2), 93–109

Gorard, S. (1997) Market Forces, Choice and Diversity in Education: the Early Impact *Sociological Research Online* 2(3) http://www.socresonline.org.uk/socresonline/2/3/8.html

Greene, J.P. and P.E. Peterson (1997) *An Evaluation of the Cleveland Scholarship Program* http://data.fas.Harvard.edu.PEPG

Grimes, A. (1998) The Funding of Elite Schools: An Economic Approach, draft ms. Institute of Policy Studies, Victoria University of Wellington

Hannaway, J. (1995) School-Based Management: Some Theoretical Considerations, paper prepared for conference on Improving The Performance Of America's Schools: Economic Choices, 1994, National Research Council Board On Science, Technology And Economic Policy, National Academy of Science

Harker, R. (1995) Further Comment on "Do Schools Matter?"*New Zealand Journal of Educational Studies* 30(1), 73–76

Harker, R. and R. Nash (1995) *Analysis of School Effects on School Certificate Results through the use of Hierarchical Linear Models, 'Progress at School' Project, Phase 2, volume 2.* Palmerston North: Massey University

Hendrie, C. (1996) Magnets' Value in Desegregating Schools is Found to be Limited *Education Week* 13 December 1996, 1, 27

Henig, J.R. (1995) *Rethinking School Choice* Princeton: Princeton University Press (3rd printing, some updating since original publication in 1993)

Hill, D. (1996a) Eight applicants for every place in poor kids' scheme *The National Business Review* 28 June 1996, 24

_____ (1996b) School rolls rocket up *The National Business Review* 28 June 1996, 24

Houghton, R.M., Wilson, A.G., and V.L. Honigberg (1994) *The Financial Basis of Independent Schools* Dunedin: University of Otago Consulting Group

Hout, M., with Fischer, C.S., Jankowski, M.S., Lucas, S.R., Swidler, A., and K. Voss (1996) *Inequality by Design: Myths, Data, and Politics* Working Paper, Russell Sage Foundation (http://tap.epn.org/sage/hout.html#1)

Hoxby, C. M. (1994) Does competition among public schools benefit students and taxpayers? Cambridge, Massachusetts: National Bureau of Economic Research, Working Paper 4979

_____ (1996) The Effects of Private School Vouchers on Schools and Students, Helen F. Ladd (ed) *Holding Schools Accountable: Performance-Based Reform in Education* Washington: The Brookings Institution, 177–208

_____ (1998) What Do America's "Traditional" Forms of School Choice Teach Us about School Choice Reforms? *Federal Reserve Bank of New York Economic Policy* Review March 1998, 47–59

Hughes, D., Lauder, H., Watson, S., Hamlin, J., and I. Simiyu (1996) *Markets in Education: Testing the Polarisation Thesis* Smithfield Project: fourth report to the Ministry of Education

Hughes, D., Lauder, H., and R. Strathdee (1996) First-Year University Performance as a Function of Type of Secondary School Attended and Gender *New Zealand Journal of Educational Studies* 31(1), 13–28.

Hughes, D. (1998) personal communication

Iosefa, S. (1998) Schools use debt collectors to get struggling parents to pay *The Press* 10 February 1998, 1

James, E. (1997) Benefits and Costs of Privatized Public Services: Lessons from the Dutch Educational System, E. Cohn (ed) *Market Approaches to Education—Vouchers and School Choice* Oxford: Pergamon, 479–498

Kane, T. J. (1996) Comments on Chapters Five and Six *Holding Schools Accountable: Performance-Based Reform in Education,* Helen F, Ladd (ed) Washington: The Brookings Institution, 209–217

Kapel, D.E. et al (1995) School Choice: Education's Trickle Down Theory for Urban Students Attending Private Schools [SOURCE NEEDS COMPLETION]

Karsten, S. (1994) Policy on ethnic segregation in a system of choice: the case of The Netherlands, *Journal of Education Policy* 9(3), 211–225

Keane, P. (1998) Chalking up higher costs for exclusive education *Sunday Star-Times* 15 February, 7

Kelley, C. (1994) The Applicability of Market-Based Solutions to Public Sector Problems, paper presented at the Annual Research Conference of the Association of Public Policy Analysis and Management, Chicago

Kerr, J. (1996) *Address to the 1996 Independent Schools Conference*

Kohn, A (1998) Only for *My* Kid—How Privileged Parents Undermine School Reform, *Phi Delta Kappan* April 1998, 569–577

Kozol, J. (1993) "I dislike the idea of choice, and I want to tell you why..." *Educational Leadership* 50(3), 90–92

Ladd, H. and E. Fiske (forthcoming)

Lane, M. (1997) School enrolment bond queried *Evening Post* 3 May 1997, 5

Lauder, H., Hughes, D., Watson, S., Simiyu, I., Strathdee, R., and S. Waslander (1996) *Trading in Futures: the nature of choice in educational markets in New Zealand* Report to the Ministry of Education

Lauder, H. and D. Hughes (1990) Social Inequalities and Differences in School Outcomes *New Zealand Journal of Educational Studies* 25(1), 37–60

Lauder, H., Hughes, D., Waslander, S., Thrupp, M., McGlinn, J., Newton,S., and Dupuis, A. (1994) *The Creation of Market Competition for Education in New Zealand: an empirical analysis of a New Zealand secondary school market, 1990–1993* Wellington: Ministry of Education

Levacic, R., Hardman, J., and P. Woods (1998) Competition as a spur to improvement? Differential improvement in GCSE examination results, paper presented at the International Congress for School Effectiveness and Improvement, Manchester

Levin, H (1997) Educational Vouchers, Effectiveness, Choice, and Costs (1997), paper prepared for Annual Meetings of the American Economics Association, New Orleans. (http://epn.org/sage97levin.html)

Levin, H. and C. Driver (forthcoming) Costs of an Educational Voucher System, in *Educational Economics*; pre-publication version available from authors, CERAS 109, Stanford University, Stanford, CA 94305–3084

Lewis, J.F. (1995) Saying No to Vouchers: What is the Price of Democracy? *Bulletin*, September 1995, 41–51

McCulloch, G. (1991) School Zoning, Equity and Freedom: the case of New Zealand, *Journal of Educational Policy* 6(2), 155–168

McGeorge, C. (1995) Private and Integrated Schools in New Zealand: subsidizing the illusion of choice *Journal of Education Policy* 10(3), 259–270

Manski, C. F. (1997) Educational *Choice* (Vouchers) and Social Mobility, E. Cohn (ed) *Market Approaches to Education—Vouchers and School Choice* Oxford: Pergamon, 97–126

Marginson, S. (1997) *Markets in Education* Sydney: Allen and Unwin

Marginson, S. (1996) Marketization in Australian Schooling, in G. Walford (ed) *School Choice and the Quasi-Market* Wallingford: Triangle Books, 111–128

Marlow, M. L. (1997) Public education supply and student performance *Applied Economics* 29, 617–626

Matheson, D. (1996) No basis for better school results, *NZ Education Review* 6–12 September, 2

Matland, R.E. (1995) Exit, Voice, Loyalty and Neglect in an Urban School System *Social Science Quarterly* 76(3), 506—512

Metcalf, K.K. (1998) Advocacy in the Guise of Science. *Education Week*, 23 September 1998, p. 34, 39.

Meyer, R.H. and S. Glazerman (1997) Racial Integration, Social Stratification, and Public School Choice, paper given at the American Educational Research Association Annual Meeting, Chicago

Minister of Education (1994) *New Zealand Schools 1993* Wellington: Ministry of Education

Minister of Education (1995a) *Targeted Individual Entitlement Scheme* Paper to the Cabinet Committee on Education, Training and Employment

Minister of Education (1995b) *Targeted Individual Entitlements: Eligibility Criteria and Options for Delivery* Paper to the Cabinet Committee on Education, Training and Employment

Minister of Education (1998) *New Zealand Schools 1997* Wellington: Learning Media

Ministry of Education (1991) *The Review of Integration Policy* Wellington: Ministry of Education

Ministry of Education (1994) *Education Vouchers in the School Sector*, letter to the Minister.

Ministry of Education (1995a) *Targeted Individual Grants,* paper to the Minister of Education, 9 March 1995

Ministry of Education (1995b) *Note to the Minister of Education on TIE: Asset Testing, Boarding Bursaries and Response from Independent Schools*

Ministry of Education (1997) *Re-assessment of Socio-Economic Indicator for Schools*, press release, 6 November 1997

Ministry of Education (1998) *Payments by parents of students in state and state integrated schools* Circular 1998/25

Miron, G (1996) Choice and the Quasi-Market in Swedish Education, G. Walford (ed) *School Choice and the Quasi-Market* Wallingford: Triangle Books, 33–48

Moe, T.(ed) (1995) *Private Vouchers* Stanford, California: Hoover Institution Press

Moe, T.M. and K.W. Shotts (1995) Computer models of educational institutions: the case of vouchers and social equity, *Politics of Education Association Yearbook* 1995, 69–91

Molnar, A. (1996) *Giving Kids the Business: The Commercialization of America's Schools* Boulder, Colorado: Westview Press

Murnane, R.J. and F. Levy (1996) What General Motors can teach US Schools about the Proper Role of Markets in Education Reform, *Phi Delta Kappan*, 78(2), 108–114

Murnane, R. (1984) A Review Essay: Comparisons of Public and Private Schools: Lessons from the Uproar *Journal of Human Resources* 19, 263–277

Nash, R. (1993) *Succeeding Generations* Auckland: Oxford University Press

National Center for Policy Analysis and CEO America (1998) *Private Vouchers for Educational Choice* Brief Analysis No 265 (www.ncpa.org/ba/ba265.html)

Nechbya, T.J. (1996) *Public School Finance in a General Equilibrium Tiebout World: Equalization Programs, Peer Effects and Private School Vouchers* Cambridge, Mass. National Bureau of Economic Research Inc. Working Paper 5642

_____ (1998) The Economics of Education: Vouchers and Peer Group Effects, paper given to NZ Association of Econonists conference, Wellington, 2–4 September

Nelson, F. H. (1998) Trends in Private School Cost and Tuition: No Immunity from the Cost Disease, paper for the American Educational Finance Association meeting, Mobile Alabama, 12 March (Available on http://www.aft.org.research)

Newmark, C. M. (1995) Another look at whether private schools influence public school quality: Comment *Public Choice* 82, 365–373

Parry, T. (1996) Will Pursuit of Higher Quality Sacrifice Equal Opportunity in Education? An Analysis of the Education Voucher System in Santiago, *Social Science Quarterly* 77(4), 821–841

_____ (1997) How will schools respond to the incentives of privatization? Evidence from Chile and Implications for the United States, *American Review of Public Administration* 27(3), 248–269

Peterson, P.E., Greene, J.P., and C. Noyes (1996) School choice in Milwaukee *The Public Interest* 125, 38–56

Petronio, M. A. (1996) The Choices Parents Make, *Educational Leadership* 54 (2), 33–36

Pyke, N. (1995) Parents appeal for real choice *Times Educational Supplement* 29 December 1995, 1

Roeleveld, J. and J. Dronkers (1993) Differences in Effectiveness of Public and Religious Schools as a Result of the Degree of Competition for Pupils, paper given at the XIIIth World Congress of Sociology, Bielefeld, Germany

Rouse, C. E. (1997) *Private School Vouchers and Student Achievement: An Evaluation of the Milwaukee Parental Choice Program* Cambridge, Mass. National Bureau of Economic Research Inc. Working Paper 5964

Schiefelbein, E. (1991) Restructuring Education through Economic Competition: the Case of Chile, *Journal of Education Administration* 29(4), 17–29

Shumow, L., Vandell, D. L., and K. Kang (1996) School Choice, Family Characteristics, and Home-School Relations: Contributors to School Achievement? *Journal of Educational Psychology* 88(3), 451–460

Skolverket (1998) *Det svenska skolsystemet*
http:www.skolverket.se/b/faktablad/english/complsory.html

Smith, A.B. and M. Gaffney (1997) *Evaluation of the TIE Project: A Preliminary Report* Dunedin: Children's Issues Centre, interim research report to the Ministry of Education

Smith, K.B. and K.J. Meier (1995) *The Case Against School Choice* Armonk, New York: M. E. Sharpe

Te Puni Kokiri (1995) Vouchers/Individual Entitlements and Compulsory Education. Draft paper, Funding Portfolio, April.

The Press (1996) Independent school trial "success" *The Press* 12 June 1996, 4

Thrupp, M. (1995) The school mix effect: the history of an eduring problem in educational research, policy and practice *British Journal of Sociology of Education*, 16, 183–203

_____ (1998) The art of the possible: organizing and managing high and low socioeconomic schools *Journal of Education Policy,* 13(2), 197–219

Toma, E. F. (1996) Public Funding and Private Schooling Across Countries *Journal of Law and Economics* Vol XXXIX, 121–148

Topolnick, D.M. (1994) Why Private Schools are Rarely Worth the Money *Money* 23(10), 89–106,108,110,112

Townsend, T. (1998) School Self-Management and Effective Education - Compatible? *Effective School Self-Management—What's Ahead?* Proceedings of the Annual Conference of NZCER Wellington: NZCER

Tsang, M.C. and W. Taoklam (1997), Comparing the Costs of Government and Private Primary Education in Thailand, E. Cohn (ed) *Market Approaches to Education—Vouchers and School Choice* Oxford: Pergamon, 329–350

Tweedie, J. and D.D. Riley (1990) Should market forces control educational decision making? *American Political Science Review* 84(2), 549–558

Tyack, D. (1992) Can we build a system of choice that is not just a "sorting machine" or a market-based "free-for-all"? *Equity and Choice* 9(1), 13–17

US Department of Education, OERI (1997) *A Study of Charter Schools—first year report executive summary*

Vandenberghe, V. *Functioning and Regulation of Educational Quasi-markets* (1996) Universite Catholique de Louvain, Faculte des sciences economiques,sociales et politiques, Nouvelle-serie-No. 283. Louvain-la-Neuve: CIACO

Viadero, D. (1998a) N.Y.C. Study Weighs Cost of Small Schools, *Education Week* 6 May 1998, 19

_____ (1998b) The Charter Effect, *Education Week* 13 May 1998, 32

Walford, G. (1996) School Choice and the Quasi-market in England and Wales, G. Walford (ed) *School Choice and the Quasi-Market* Wallingford: Triangle Books, 49–62

Walsh, M. (1998) Audit Criticizes Cleveland Voucher Program *Education Week* 15 April 1998

Walsh, M (1998) Group Offers $50 Million for Vouchers *Education Week* 29 April 1998, 1, 22

Wells, A. (1993) *Time to Choose: America at the crossroads of school choice policy* New York: Hill and Wang

West, A., Noden, P., Edge,A., David, M., and J. Davies (1998) Choices and Expectations at Primary and Secondary Stages in the State and Private Sectors, *Educational Studies* 24(1), 45–59

Whitty, G., Power. S., and T. Edwards (1998) The assisted places scheme: its impact and role in privatization and marketization *Journal of Education Policy* 13(2), 237–250

Whitty, G., Power, S., and D. Halpin (1998) *Devolution and Choice in Education—The School, the State, and the Market* Melbourne: Open University Press/ACER

Willms, J.D. and F. Echols (1997) Alert and Inert Clients: the Scottish Experience of Parental Choice of Schools, E. Cohn (ed) *Market Approaches to Education—Vouchers and School Choice* Oxford: Pergamon, 425–442

Winkler, D.R. and T. Rounds (1996) Municipal and Private Sector Response to Decentralization and School Choice *Economics of Education Review* 15(4), 365–376

Witte, J. (1996) School Choice and Student Performance, Helen F. Ladd (ed) *Holding Schools Accountable* Washington: The Brookings Institution, 149–176

Witte, J. (1997a) Private School Versus Public School Achievement: Are there findings that should affect the school choice debate? E. Cohn (ed) *Market Approaches to Education—Vouchers and School Choice* Oxford: Pergamon, 239–274

Witte, J (1997b) Academic Effects of the Milwaukee Voucher Program, paper presented at the 1997 American Economics Association Annual Meeting (http://dpls.dacc.wisc.edu/choice/aea97.html)

Witte, J. F. and C. A. Thorn (1996) Who Chooses? Voucher and Interdistrict Choice Programs in Milwaukee, *American Journal of Education* 104, 186–217

Wood, B. (1995) *The geopolitics of school choice: Auckland secondary school selection* MA thesis, Geography Department, University of Auckland

Wylie, C. (1997) *Self-Managing Schools Seven Years On—What have we learnt?* Wellington: NZ Council for Educational Research

Wylie, C., and J. Thompson (1998) *Competent Children at 6—Families,Early Education and Schools* Wellington: NZ Council for Educational Research

Wylie, C., Thompson, J., and A. Kerslake Hendricks (1996) *Competent Children at 5—Families and Early Education* Wellington: NZ Council for Educational ResearchWylie, C.,Thompson, J., and C. Lythe (forthcoming) *Competent Children at 8—Families, Early Education and Schools* Wellington: NZ Council for Educational Research

Zanzig, B. R. (1997) Measuring the Impact of Competition in Local Government Education Markets on the Cognitive Achievement of Students *Economics of Education Review* 16(4), 431–441