

Economics of *Towards 2020: Renewing our Schools*

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1 Introduction

This paper was prepared at the request of the ACT Council of P&C Associations Inc. to provide a conceptual framework for a study on the overall costs and benefits of an ACT Government proposal called *Towards 2020: Renewing our Schools*. The proposal is aimed at improving access to high quality schools, but that is to be achieved only with the closure of some schools.

Cost-benefit analysis is the generally recommended approach to examine such public policy proposals to assist decision makers. It provides a systematic way of enumerating costs and benefits that result from options under consideration. It is therefore adopted as the conceptual framework in this paper.

2 Cost-benefit Analysis

Cost-benefit analysis is a means to systematically analyse *all* the costs and benefits of alternative proposals that meet some specified objective and to determine which alternative has the highest net benefits. It is undertaken from the perspective of the community as a whole, not just the service provider.

Cost-benefit analysis is comparative in nature. The comparison is between the existing situation (the base case) and the proposals being assessed (the options). The base case is what is expected to occur if none of the options proceed.

2.1 Objectives

The first requirement for a cost-benefit analysis is that there is an objective(s) that government policy is aiming to achieve by a proposal. The objective of *Towards 2020: Renewing our Schools* is to give ACT students access to a diverse range of high quality public schools.

Alternative ways of meeting the objective, or options, are then developed and assessed, taking into account the costs and benefits of the potential options. Cost-benefit analysis, in theory at least, provides a way of analysing the best way to achieve an objective. In practice, the specification of the objective may be so broad that it is difficult to design proposals that can unambiguously achieve it and/or measure whether it can be (or has been) achieved.

Public statements by the ACT government seem to suggest that saving costs and reducing the education budget are also objectives of the proposal¹. The government has prepared estimates of savings in school operating costs although savings are not stated as a stated objective in *Towards 2020*. Clarification of the objectives of *Towards 2020*, and reconciliation between conflicting objectives (if required) would be one of the matters to be established as part of a cost-benefit analysis.

2.2 Purpose and Scope

Cost-benefit analysis is aimed at determining the option with the largest excess of benefits over costs, ie the most efficient option or the option that contributes most to improving community welfare.

The scope of an economic analysis or cost-benefit analysis is wider than a financial analysis. A financial analysis adopts the view of the organisation proposing change, consequently only the direct monetary effects on the organisation are included. By contrast, an economic analysis includes these effects plus the effects on all other affected parties such as other organisations (public and private) and individuals.

This means, for example, that considering only the financial effects of school closures on the Department of Education budget is not sufficient. Cost-benefit analysis also requires that the financial effects on other government agencies (eg ACTION), the effects on participants in the education system (eg students, teachers, parents), and the effects on the community more broadly (eg other users/beneficiaries of schools, road users) are assessed.

The aim in preparing a cost-benefit analysis is to value all benefits and costs in monetary terms so that they can be summed and compared using a common unit of value. That is not always possible. If an item cannot be quantified, it should not be ignored in coming to a final view on which option is preferred in economic terms. However, the process of selecting the preferred option will be associated with some subjectivity, and that subjectivity is likely to increase as the number of unquantified items increases.

In most cases, the effects of options subject to analysis will occur at different times and over several years. Two significant implications for any cost-benefit analysis flow from this:

- 1 Forecasts of expected effects of the base case and the options are required, sometimes over a considerable time period. The longer the time period, the more uncertainty associated with the forecasts.
- 2 The cost and benefit streams in future years have to be discounted to convert them to values at a common time, which is generally the year in which the cost-

¹ This objective has been expressed in different ways, eg the ACT government needs to make savings because of its fiscal outlook; or the education system has become too inefficient and costly to operate, implying that the goal is to make the government school system more efficient in the way it uses resources; or there is a large cost differential between schools and the Government needs to distribute resources on a fairer basis by directing them to areas of educational or socio-economic need. These objectives are not mentioned in *Towards 2020*.

benefit analysis is undertaken. Hence, the discounted values are referred to as present values. The discounting process recognises that a benefit today is worth more than the same benefit at some time in the future and that there is an opportunity cost associated with investing in one project or sector as it prevents investment in another project or sector.

The above suggests that there are some practical matters to consider when undertaking a cost-benefit analysis. Firstly, the period over which an evaluation is performed. Perkins (1990:5) uses a 20 year life and Witham (1993:19) suggests 30 years as this a good estimate of the life of school buildings. The uncertainty associated with forecasts of benefits and costs over 30 years suggests a shorter evaluation period. With a shorter period, any unused building value can be entered as a benefit in the last year of the cost-benefit analysis.

Secondly, a discount rate is required. It is common practice for governments to set a specific discount rate for use in assessments of all public sector projects.

Thirdly, the cost-benefit analysis is undertaken in real terms, ie the effects of inflation are ignored by the use of a common price year. If the values applied to costs and benefits are expected to vary in line with inflation, then the same values can be used over the evaluation period. If they are not, then the values need to be adjusted to reflect differences in the rate of change in the value of costs and benefits. The most likely adjustment required will be to wages as they tend to increase in real terms over time.

2.3 Distributional Effects

Cost-benefit analysis is not directly concerned with the distribution of benefits and costs or, put another way, who wins and who loses. That may be able to be determined from the analysis depending on how the benefits and costs are calculated and analysed; generally such an analysis requires a significant amount of data to give totally satisfactory results. Nevertheless, distributional effects are likely to be an important factor in the decision making process, along with the size of benefits and costs. As argued by Fred Argy (1996:68):

... public policy is about distribution just as much as efficiency, and economists who ignore distribution ... are marginalising their contribution to policy; furthermore they run the risk that governments, in an attempt to deal with distributional effects, will adopt a third or fourth best reform option.

Given the importance of distributional questions, a high level of disaggregation of benefits and costs is preferable. The analysis may then not only identify the option with the highest excess of benefits over costs but also the incidence of the benefits and costs on specific groups in the community. If some groups experience net costs and others experience net benefits, options could be refined to change the balance and/or compensation measures devised to redress the imbalances.

3 Forecasting

Two questions need to be answered to assess with any rigour what the costs and benefits of school closure/amalgamation/expansion proposals may be:

- 1 which school will you attend? and
- 2 how will you get to that school?

The answers to the two questions are not independent. For example, a factor in deciding which school to attend will be the modes of transport available to get to school. An extreme choice would be ceasing to attend school, as suggested by Witham (1993:11) in the case of rural school closures².

Forecasting the choices that parents/students are likely to make, both with respect to school choice and transport choice, is not a trivial exercise. It would require data on existing school and travel patterns and some mechanism for estimating future choices based on factors that drive the existing choices and the choices following implementation of options being assessed. Factors that may affect school choice include school size, subjects taught, extra curricula activities, distance from home, and integration with the neighbourhood and/or wider community. Factors that may affect transport choice include costs and travel time of journeys to school.

Choice modelling techniques are available to use in such circumstances. They use the factors affecting choices to make estimates of changes in utility (or consumer surplus) associated with the options proposed. Choice models are data intensive and can be costly to use³. There may be some difficulty in applying the techniques because of the considerable extent of the changes being proposed by *Towards 2020*. An alternative approach could be to test several school choices and their consequent transport implications, eg assume that when a school is closed all the students transfer to the nearest available school.

As choices and forecasts will be subject to some uncertainty, a range of results will need to be reported.

4 Benefits and Costs

The benefits and costs that should be considered for inclusion in a cost-benefit analysis are discussed below. Some items may turn out to be a benefit or a cost depending on the circumstances of a particular school closure. The main categories used for the cost and benefit items concern the timing of their occurrence. Items that are expected to occur only once are referred to as “one-off”. They will generally be of a capital nature. Other cost and benefit items will occur throughout the evaluation period and are referred to as “on-going”.

4.1 One-off Costs/Benefits

4.1.1 Value of the alternative use of schools no longer required

² Presumably, there is a lower likelihood in urban areas where trip distances are shorter. The compulsory school leaving age is probably also a deterrent.

³ Where there is uncertainty about responses, stated choice survey techniques can be used to test combinations (choice set) that include all factors likely to affect individual choices. The choice set is internally consistent to enable testing of responses. Responses are also checked against existing choices (revealed preferences).

If school premises are no longer required then they can be used for other purposes which have some value to the community; if they are not used then there is no alternative use value⁴. The value will depend on the use of the premises and how the community values that use.

In a financial analysis, a value would only occur if the premises were sold and the sale price would be the value. That value would also be the economic value in a cost-benefit analysis but, in addition, there will be a value so long as there is an alternative use that has some value to the community whether or not the premises are sold. So for example, if the buildings are demolished and the land used for recreational purposes, then the value of the recreational use of the land should be included in the cost-benefit analysis; likewise, if the premises are used as offices for another public sector organisation, then the value of that use should be included (in this case it will be more appropriate for the value to be included as rent, as discussed in Section 4.2.1). The only time where no value would be included will be if the premises are not used, eg mothballed and/or are allowed to deteriorate⁵.

The actual value will depend on the alternative use of the premises no longer required for school use. For many uses there are no markets from which a value can be determined. Alternative methods for valuation are to use the value of the site in the existing use or the value of adjacent land or the expected sale price (even though the land is not to be sold); none of these is ideal as the proposed use is not directly valued. A rationale for using such values is that the proposed use must have a value at least equivalent to the existing use or sale of the site, else the existing use would have continued.

The value used in the cost-benefit analysis should be a net value, ie if the new use of a school premises causes the values of adjacent properties to fall then that loss of value needs to be identified and included. A fall in value may occur for residential properties because there is no longer a nearby school or for shopping centres because there are fewer customers. At the same time, land values adjacent to new or upgraded schools could increase, ie the value could be simply transferred from one area to another.

A further complication arises if all or part of school premises are re-zoned for other purposes such as residential use. The value of the land increases significantly but the effects on adjacent property values are likely to be more severe than if the site is used for a currently permitted use.

The value in alternative use could therefore comprise several increases and decreases in value depending on the option and proposed uses of school sites, and is clearly not simply the sale price that accrues to the government. Who incurs the changes in property values should be a factor in the analysis of the distribution of the benefits and costs.

⁴ There may be an existence value if people receive some benefit from knowing that the school site still exists even though it is no longer used for anything. Existence values are often claimed and sometimes estimated for environmental assets.

⁵ Except if there is an existence value (see footnote 3) or some future use is planned. In the latter case, the value should be included in the cost-benefit analysis in the year that the planned use occurs.

4.1.2 Upgrade of expanded schools or construction of new schools

The students and teachers of the closed schools will move to other schools. Except where there is sufficient spare capacity in existing schools, there will be costs to upgrade facilities at the existing schools and/or to build new schools. These costs may include refurbishment of classrooms and associated facilities, expansion of libraries and canteens to cater for a larger student body, and expansion of staff rooms to cater for a larger number of teachers.

The movement of demountable classrooms, furniture and fittings and consumable goods (eg stationery, library books) from closed schools to expanded/new schools may also need to be included.

4.1.3 Staff relocation

The costs of moving school staff between locations as a result of closure will also need to be included. These costs may include relocation of teachers' educational resources, administration records and equipment used by ground staff. Other costs may include:

- redundancy payments if savings in staff are expected;
- counselling of teachers due to the move from one school to another; or
- recruitment costs if existing staff do not have the skills and/or experience required for the proposed new/upgraded schools.

Some of these costs appear to be included in the estimates of savings in school operating costs (see Section 4.2.2).

4.1.4 Student counselling

Counselling for students and teachers (included in Section 4.1.3 for the latter) have been required when schools have been closed in the ACT in the past (Perkins 1990:10). We can therefore expect that counselling will be required to assist with the transition from one school to another.

4.1.5 Educational services

The objective of *Towards 2020* is a diverse range of high quality public schools. This is likely to require a broader curriculum, which may be associated with costs to change from the existing subjects and teaching methods to new ones. These costs could include curriculum development, teacher training and educational resources.

4.1.6 Traffic management

School closures will mean changes in how students get to school, either the route taken or the mode of transport used. If students continue to walk or cycle but need to take a different route, then it is most likely that some changes to traffic facilities will be required to provide safe routes to schools. The need may arise as the trips become longer (due to larger catchment areas) and/or they require crossing main roads. There will be one-off costs to install traffic management facilities to provide

accessible/safe new routes used by students who continue to walk and cycle. These facilities may include new walk/cycle routes and signalised or grade separated crossings.

Changes in the mode of transport to car is also likely to require changes in traffic management at pick up and drop off locations at schools to ensure safety and to minimise congestion.

4.1.7 Buses

Changes in school location may lead to changes in the demand for bus transport to school, and consequently extra buses, ie an increase in the size of the fleet required to perform the transport of children to school. They will be one-off costs, but may recur depending on the length of the evaluation period. The life of a bus is in the order of 15 years. Bus operating costs occur on an on-going basis (see Section 4.2.3).

If a significant number of extra buses is required then costs may also be incurred to expand existing bus depots or to build new ones.

4.1.8 School uniforms

If schools have different school uniforms, there will be a one-off cost for students who are required to change schools.

4.2 On-going Costs/Benefits

4.2.1 Rental income

Rental income may increase or decrease depending on the particular circumstances of any closed schools. If rent is currently earned at schools to be closed, then a cost in terms of the loss of rent should be included. If closed schools are to be used for other purposes on which rent may be earned, then a benefit in terms of the rent earned should be included.

4.2.2 School operating costs

Changes in school operating costs will comprise decreases for closed schools and increases for new/upgraded schools, generally in line with changes in student numbers. The decreases and increases will not cancel out as there are economies of scale with respect to student numbers. Put another way, the average cost per student generally decreases with schools size (measured as the number of students). These decreasing costs occur because there are some costs that are incurred irrespective of the number of students, eg school principal, administration overheads, and some that may be lower per student as they are not perfectly correlated with student numbers (eg cleaning, maintenance of grounds). Whether the latter is true depends on relative school sizes.

Different methods have been used to estimate school operating costs and cost savings from school closure. The regression analysis undertaken by Perkins (1990)

used actual expenditure on teachers' salaries to estimate the marginal costs that could be saved by school closures. Perkins felt that expenditures should have been adjusted for any differences in actual/required staff levels (teaching points) and staff turnover (p 24). Her analysis followed a similar one by the Australian Bureau of Statistics (ABS) for the ACT Government, with significantly different results. The reason given was the size of schools included in the regression analysis; the ABS included all schools while Perkins argued that only those of a similar size to those to be closed should be included (p 27).

Both of the regression analyses gave statistically satisfactory results for primary schools. There were too few secondary schools in the Perkins' analysis to obtain reliable cost coefficients (p 29-30). Even in the case of the primary schools, the statistical confidence levels meant that there was not a single estimate of the marginal cost per student (and resulting savings from school closure) but rather a range. Whether the low or high end of the estimated range of costs is used may be significant in the overall cost-benefit analysis so it is not appropriate to simply use the point estimate.

Building maintenance costs were estimated separately by Perkins (1990) using the actual expenditure on building maintenance. While this is acceptable for a financial analysis, an economic analysis requires the resources consumed. If buildings are not being properly maintained, then there is a decrease in their value, which is properly included in an economic analysis as it is concerned with efficient costs. The decrease in value associated with underspending on building maintenance could be included in the cost-benefit analysis as a cost of the base case or as a cost saving of the options being assessed.

Changes in school operating costs for *Towards 2020* are estimated using actual costs for each school. The *Towards 2020* website gives are total school operating costs for all schools and estimated savings if the proposal proceeds in its current form⁶. The total costs are in the five categories:

- 1 Employees Expenses—salary and superannuation costs for all teachers and administrative staff, including centrally funded relief staff;
- 2 School Based Management (SBM) Payments—site running costs such as cleaning, minor maintenance and utilities;
- 3 Other in School Expenses—Australian Government specific purpose funding and other general expenses incurred in providing educational programs in schools;
- 4 Depreciation—on buildings and plant and equipment; and
- 5 Educational and Corporate Support Costs—the sum of the costs which are centrally funded such as curriculum, and other corporate costs such as finance and human resources.

School operating cost savings are estimated for the first two categories, ie employee expenses and SBM payments. For both categories, adjustments are made to ensure that total costs are not regarded as savings; in particular account is taken of teaching points at closed and new/upgraded schools, and it is assumed that \$200 per student of the SMB payments travels to the new school. Clearly, costs estimated in this way will be lower than total costs (or average costs per student). The costs associated

⁶ http://www.det.act.gov.au/2020/pdf/Financial_costs_school_2004_05.pdf contains total costs and http://www.decs.act.gov.au/2020/pdf/Savings_school_2004_05.pdf the estimated savings.

with closing schools (packing up school resources, removal and transfer or disposal of furniture and equipment, removal of hazardous material and security services) and for establishing and running West Belconnen School are also deducted. A detailed review of the costs would be required as part of undertaking a cost-benefit analysis.

The availability of detailed costs by school appears to preclude the need for statistical analysis and the associated uncertainty. It also means that it is relatively easy to make changes to estimates for assessing the effect of individual school closures; this may be useful as part of the consultation process on the proposal.

4.2.3 Transport to school

Changes in school location lead to changes in transport demand and costs, which can affect students, parents, bus service providers and the community more generally through changes in the external effects of transport services. Estimation of changes in these costs is dependent on forecasts of school and transport choices of individual parents/students. As noted in Section 3, this is not a trivial exercise.

Students and parents

Generally, we expect that personal transport costs will increase as the average distance and time to travel to school will increase, with the increases depending on the transport choice made as a result of a change in school location. Some examples of potential costs and benefits for different mode choices are shown in the table below:

Existing Trip	New Trip	Costs	Benefits
Bicycle	Bicycle	Travel time, bicycle operating costs	Health
Bicycle	Driven by parent	Travel time (parent & student), car operating costs, health	Bicycle operating costs
Bicycle	Bus	Bus fare, time, health	
Walk	Walk	Travel time	Health
Walk	Driven by parent	Travel time (parent & student), car operating costs, health	
Walk	Bus	Bus fare, travel time, health	
Bus	Bus	Travel time	

There are unit costs to value time and operating costs commonly used in transport evaluations. Travel time has a value for two reasons:

- 1 The time involved in travel could be used for other purposes which have a value. It could be used for productive purposes, either work or non-work.

2 There is disutility associated with travel, eg discomfort, which has a cost. The less pleasant the travel the more valuable is any saving in travel time.

Extra travel time to school for students or parents is most unlikely to reduce paid working hours, rather participation in other non-work activities will be reduced. The travel time value should represent the amount that people are willing to pay to reduce their travel time so that they can engage in these non-work activities. In the case of work time, the wage rate is appropriate, but not in the case of non-work time because the labour market is not fully flexible⁷. A large range of willingness to pay values of travel time have been estimated, with much of the variation being related to income levels. As a result, it is common practice is to have a single value (or a limited number of values) that is representative of travellers in general, often referred to as an equity value⁸. In Australia, a value of 40 per cent of the wage rate is applied to all travellers (\$11.05 per person hour in December 2005 price levels).

The question then arises whether this equity value of time is applicable to student travel. Against the use of the equity value is that it is most unlikely to represent a student's willingness to pay as willingness to pay values are correlated with income levels. In favour of the use of the equity value is that it is used for public transport and road improvements in the ACT⁹.

Changes to car operating costs can be modelled based on distances and speed of travel. A simpler, although somewhat less accurate, approach is to use an average unit cost in the order of 30 cents per car km. A bicycle operating cost is 3 cents per bicycle km.

Changes in transport costs to students and parents would benefit from inclusion in a distributional analysis because these costs are borne by individuals as part of the requirement to attend school. Such analysis would be useful in identifying whether some groups experience significant costs while others experience significant benefits simply because they live in a particular location or due to socio economic factors.

Bus services

The operating costs of any extra bus services (relative to the base case) that result from school closures should also be included. Bus operating costs cover such things as drivers, fuel and bus maintenance. If some services can be discontinued, then it is the net increase in costs that is relevant. The costs should also be net of any increase in fare revenue; as there is a flat fare for student travel (ie the fare does not vary with distance travelled), the only increase in fare revenue will result from students who are new users of school bus services.

⁷ For example, people cannot control their hours of work, work may have a disutility associated with it, and the time required for various activities is not constant which may affect the ability to substitute between them.

⁸ The alternative is to use values based on what people are willing to pay to reduce travel time, which is consistent with the willingness to pay basis of cost-benefit analysis. The arguments for equity values are that the same value of time should be applied to all people irrespective of differences in the willingness to pay of users as this will lead to certain projects being favoured over others as a result of the personal characteristics of users, in particular income; and it would be difficult and costly to obtain willingness to pay values specific to each project.

⁹ Witham estimated an implicit value of student time as part of an analysis of rural school closures in SA (www.aare.edu.au/40docth.htm 11/9/6). The reference has not been seen.

External costs

External costs are those that arise from the use of transport services but are not incurred by the users of the services. The main external costs of road transport are environmental (air pollution, greenhouse gas emissions, noise) and road accidents, the costs of which are borne by non-motor transport users or the community more generally; for example, the noxious gases emitted by cars affect people who walk/cycle on roads or who live adjacent to roads.

There are various estimates of environmental unit costs (expressed per kilometre travelled with separate costs for urban and rural areas) used to value the effect of transport improvement projects, although none are ideal as they are mainly derived from overseas studies. Estimates of road accident unit costs tend to be more robust; in the case of school closures it is the effect of school closures on accident rates that will be subject to uncertainty rather than the unit costs of accidents. Accident rates will require adjustment for any traffic management measures aimed at improving or maintaining safe routes to schools (Section 4.1.6).

The car unit costs recommended for use in AusLink projects (ATC 2004) suggest that:

- accident unit costs are about 2 times higher than environmental unit costs; and
- total unit costs are about 30 per cent of car operating costs.

Bus unit costs for externalities are about 5 times higher than car unit costs but the difference is expected to reduce to about 2 times as new diesel fuel standards are implemented and buses replaced¹⁰.

The overall change in accident and environmental costs will therefore depend on mode choices. The changes are likely to be small relative to vehicle operating costs as the unit costs of these externalities represent about 30 per cent of car operating costs and less than 20 per cent of bus operating costs.

4.2.4 Educational outcomes/quality

The objective of *Towards 2020* is to give students access to a diverse range of high quality public schools. The objective is framed in terms of the diversity of school types/curricula and the resulting choices available, and enhanced learning environments for students and teachers. If an improvement in educational outcomes is expected (or, at the very least, no reduction), there is no indication in the ACT government material why that is the case and how it can be determined, ie how educational outcomes/quality can be measured or valued¹¹. There is also no mention of the potential loss of choice caused by the closure of schools (choice may be increased by curriculum diversity within schools and reduced by there being fewer schools or fewer schools of a particular type).

¹⁰ This is on a per km basis. When the number of occupants in cars and buses is taken into account, the cost per person km can be lower for buses, depending on the load factor.

¹¹ Witham (1993:19) suggests that the benefits of education are not usually considered in analyses of school closures *if all options provide the same curriculum and educational opportunities*. This is not the case with the *Towards 2020* in view of the specification of its objectives. There are several papers on these topics available on the *Towards 2020* website. We have not reviewed them to prepare this report (<http://www.decs.act.gov.au/2020/papers.htm> 20/9/6).

A cost-benefit analysis should address the potential benefits or costs of the proposed program of school closures/amalgamations/expansions by clearly stating the forecast effects on aspects of educational quality/outcomes. A particular matter to be considered is the effect of school size given that the proposal, as it stands, favours the closure of smaller schools. The literature seems to suggest that smaller schools are associated with better educational outcomes (measured as test scores) than larger ones, but the results can vary with school type (eg primary or secondary), socio-economic background of the students, and size itself (Cobbold 2006). This means that there are likely to be different conclusions for different components of *Towards 2020*.

The majority of the literature on educational outcomes/quality and their relationship to school size is from North America, where school systems and student bodies are different to those in the ACT. This would need to be taken into account in transferring any results. Ideally, the benefits or costs of the proposal should be based on analyses using data from ACT schools.

The literature concentrates on test scores, a relatively narrow albeit important, measure of educational quality/outcomes. Other factors that may need to be included are increased opportunities for students (eg broader curriculum, more extra-curricula activities), employment prospects of students, the quality of teaching and the teaching experience, and parental involvement (Alsbury and Shaw 2005:113).

Employment prospects may be another way of measuring educational outcomes or an extra benefit/cost. Witham (2002:9) reports that there is some evidence that earnings are related to educational quality and that in turn is related to school size.

Teachers are likely to experience benefits in larger schools. There is the potential for flexibility, greater interaction with other staff, improved teaching resources and facilities, and assistance with students with behavioural problems and administrative tasks.

There is some evidence from the ACT, mainly anecdotal, that parents are more involved in and supportive of their children's education in small schools relative to larger ones, particularly in primary schools. This is likely to have a positive effect on the operation of schools and consequently the quality of education.

In their study based on interviews with superintendents to determine the effects of school district consolidation, Alsbury and Shaw (2005:114) report that the effects change over time:

... once consolidation was completed and two or three years had passed, the key stakeholders involved, including parents who were previously angry or concerned, believed the merger was beneficial for students.

This is an important conclusion with respect to the forecasting of educational outcomes/quality in view of the relatively long evaluation period that would be required for a cost-benefit analysis of *Towards 2020*. How any changes over time are to be estimated is of course another thing.

We consider that it is most unlikely that any quantification of these potential benefits/costs of educational outcomes/quality will be possible. In addition, the effects will vary for the different components of the *Towards 2020* proposal, ie there will be winners and losers. Disaggregation and refinement of the components of the proposal may be assisted by clearly stating and assessing the expected effects, even though the analysis is qualitative.

4.2.5 Effects on local communities

Local communities may be affected by school closure because the loss of a neighbourhood school leads to the loss of other community facilities such as shops, recreational facilities, etc. When assessing these effects, it is necessary to consider whether there are similar positive effects in the communities where schools are expanded. In other words, there may simply be a transfer of activity from one location to another. Transfers do not affect the overall level of community welfare but do affect the distribution of benefits and costs. For this reason it is preferable that they are identified in the cost-benefit analysis.

Closure of a neighbourhood school may adversely affect local communities in several ways that are not the dealt with in a cost-benefit analysis. They may include the loss of a sense of community, social support networks between families, and places for community activities that are not directly related to education. We would expect that these would be considered by decision makers alongside the results of any cost-benefit analysis in developing and implementing proposals.

5 Conclusion

Many costs and benefits are not considered in financial analysis, which is one of the main reasons why significant public policy proposals are often subject to economic analysis, in particular cost-benefit analysis. The ACT government material on the estimated effects of *Towards 2020: Renewing our Schools* is financial in nature. It is limited to the financial effects on the operating costs of schools. There are no estimates of traffic management and school bus service costs or the use of school sites no longer required for education purposes, all of which have financial implications for the government.

Cost-benefit analysis provides a framework and techniques to assess alternative proposals to meet an objective. From the material available, some clarification of the objective of *Towards 2020* is required for a cost-benefit analysis to proceed. The stated objective of *Towards 2020* is to give ACT students access to a diverse range of high quality public schools. And yet there is no discussion of why or how that is expected to be achieved by the proposal. As noted above, the only material relates to school operating cost savings; this together with public statements on cost savings suggests cost reduction may be an objective along with the quality and diversity of education.

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