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Competition and Efficiency in Publicly Funded Services

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by
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ABSTRACT/RÉSUMÉ

Competition and efficiency in Publicly funded Services

This paper reviews the extent to which OECD countries have opened the provision of publicly funded services to competition among public and private suppliers. The paper lays out an analytical framework identifying the inherent incentive and efficiency issues associated with the provision of publicly funded services and outlines how they may be addressed via performance-related funding, benchmarking, contracting-out by public agencies and voucher schemes which allow users to choose among suppliers while maintaining public funding. Also, the empirical literature on contracting-out of technical and support services and on school choice is reviewed. In compulsory education, the provision mode is relatively uniform across OECD countries with most students by far attending public schools. However, the involvement of private institutions increase with education level and orientation towards occupational skills, and in many countries funding arrangements for public institutions are being reformed like introducing per-student funding. In childcare and long-term care for elderly and disabled, tax-credits and cash-benefits for purchase of care are frequently used as an alternative to provision by public institutions. Sub-contracting of support services is common, but seems generally to be applied less in public administration than in business services. The overall picture that emerges is that OECD countries use quite different arrangements -- there is no “one way” of providing publicly funded services.

JEL classification: D20, H42, I00, L33.

Keywords: Public expenditure, efficiency and incentives, contracting, public private partnerships, user choice, vouchers, education, childcare, long-term care, employment service.

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Concurrence et efficacité dans les services financés par le secteur public

Cette étude examine dans quelle mesure les pays de l'OCDE ont ouvert l'offre de services financés par l’Etat à la concurrence entre fournisseurs publics et privés. Elle définit un cadre analytique pour identifier les problèmes intrinsèques d'incitation et d'efficience associés à la prestation de services financés par l’Etat et montre brièvement comment ceux-ci peuvent être résolus avec un financement lié aux résultats, des analyses comparatives, des contrats de sous-traitance par les organismes publics et des programmes de coupons, de façon à permettre aux usagers de choisir entre plusieurs fournisseurs tout en maintenant les financements publics. Par ailleurs, le document passe en revue les études empiriques sur la sous-traitance des services techniques et de soutien et sur le choix de l'établissement scolaire. Au stade de la scolarité obligatoire, le mode de prestation est relativement uniforme dans l'ensemble des pays de l'OCDE, la très grande majorité des élèves fréquentant l’école publique. Toutefois, la participation des établissements privés s’accroît à mesure que le niveau d'enseignement s’élève et que les étudiants s'orientent vers des filières professionnelles ; par ailleurs, bon nombre de pays sont en train de réformer les mécanismes de financement des établissements publics, notamment en instaurant le financement par élève. S'agissant des soins aux enfants et des soins de longue durée aux personnes âgées et aux handicapés, les crédits d'impôt et les prestations monétaires pour l'achat de soins remplacent souvent la fourniture directe de soins par des institutions publiques. La sous-traitance des services de soutien est courante, mais elle semble en général être moins appliquée dans l'administration publique que dans les services aux entreprises. Au total, il apparaît que les pays de l'OCDE ont recours à des dispositifs très divers -- il n'existe donc pas de circuit unique pour la fourniture de services financés par l’Etat.

Classification JEL : D20, H42, 100, L33.

Mots clés : Dépenses publiques, efficience et incitations, passation de contrats, partenariats public-privé, choix de l'usager, coupons, éducation, soins aux enfants, soins de longue durée, service pour l'emploi.

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COMPETITION AND EFFICIENCY IN PUBLICLY FUNDED SERVICES

Jens Lundsgaard [1]

1. Introduction and overview

1. The purpose of this paper is to review the extent to which OECD countries have opened the provision of publicly funded services to competition among public and private suppliers. There are sound welfare-economic motives, including insurance market failures, credit constraints and human capital spillovers to society at large, for ensuring the provision of services such as education by public funding. These motives, however, do not always necessitate provision via traditional public sector institutions. Changing the management system within the public sector or introducing competition and involving a broader range of suppliers may often improve service provision and cost efficiency. The paper thus explores instruments allowing a de-coupling of the two issues of funding and service supply. The picture that emerges is that OECD countries use quite different arrangements, involving contracting out and combinations of user choice models -- there is no "one way" of providing publicly funded services.

2. The paper proceeds by setting out an analytical framework in Section 2 which identifies the inherent incentive and efficiency issues associated with provision of publicly funded services, and outlines how they may be addressed via performance-related funding, benchmarking, contracting-out by public agencies and voucher schemes which allow users to choose among suppliers while maintaining public funding. Although assessing the outcomes of the full range of these provision modes is beyond the scope of the paper, section 2 reviews the empirical literature on competitive tendering and contracting of technical and support services and on school choice. Against this background, Section 3 reviews the arrangements applied by OECD countries in major service areas, including education, childcare, long-term care for elderly and disabled, and employment service: it also reviews the use of outsourcing of technical and support functions and contracting, including private finance of infrastructure investments. Core health care is left aside, as it is covered by the OECD health project.

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1 . OECD Economics Department. This paper is based on documentation originally produced for the Working Party No. 1 of the Economic Policy Committee, March 2002. However, the author is writing in a personal capacity and the paper does not necessarily reflect the view of the OECD or its Member countries. It is part of a work programme on public expenditures set out by Atkinson and van den Noord (2001) and followed by special chapters in the OECD Economic Surveys of which Mexico, Japan, Canada, Czech Republic, the United Kingdom, Italy, Denmark, Switzerland, Hungary and New Zealand have been completed so far while others are under preparation. More generally, the paper is related to work by different OECD directorates, notably PUMA, on public expenditure and management reform, including OECD (1993, 1997 and 1998), Cave (2001) and Kristensen *et al.* (2002).

The author is indebted to Robert Price for drafting contributions and to Jørgen Elmeskov, Michael Feiner, Paul Atkinson, Paul van den Noord, Isabelle Joumard and other colleagues at the OECD Economics Department, Public Management Service, Directorate for Education, Employment, Labour and Social Affairs and Directorate for Science, Technology and Industry for valuable comments and help accessing data. Thanks to Sarah Kennedy, Anne Eggimann and Marie-Christine Bonnefous for technical assistance.

2. Alternative ways of providing publicly funded services

3. Public funding may be economically warranted by the need to promote the use of services by citizens beyond their individual self-financed demand. Yet, making services free of charge at the point of delivery can entail well-known problems of excessive demand (in part supplier-induced) and does not guarantee an efficient, or even equitable, allocation of resources. Moreover, the narrow operational flexibility of a traditionally organised public sector may amplify these costs. The reward for public institutions and their employees for searching out innovative ways of solving tasks may be limited, for example, and the monopoly position of public institutions may imply that employees and management risk little by resisting changes. These intrinsic problems have no simple solutions, but pose a challenge of designing organisational mechanisms for provision of publicly funded services that can mitigate their impact. In the following the main alternatives to traditionally organised public production are described with regard to their applicability, advantages and disadvantages, and main design issues. A more rigid microeconomic analysis of the incentives from competition and non-government ownership is contained in the Annex.

4. Innovations in areas like management styles, public budgeting frameworks, human resource issues and use of ICT play a key role in the efforts to improve the provision of publicly funded services including their cost efficiency, but are not dealt with separately in this paper. Innovations in the internal operation of service suppliers can be thought of as either alternatives to expose to competition or as improvements that may be spread and implemented more rapidly if service provision is exposed to competition thereby raising the incentives for suppliers to improve management and work practices.

5. Elements of competition and alternatives to public ownership can be introduced through a broad range of institutional combinations, as shown in Table 1. Where governments have to rely on monopoly provision through an incumbent public agency, such as a local police department, instruments like benchmarking may help agencies improve efficiency. Where provision is through municipalities and local governments, these can agree on joint supply of a service to exploit economies of scale. Some publicly funded services can be provided based on competitive tendering, giving market access to both private and public suppliers. Even without prior competition, non-profit organisations can be given grants to carry out certain functions. Users may be given a choice of supplier, thereby spurring competition among public institutions for market share, or among public and private suppliers as is the case for regular voucher systems. Common to all these arrangements is that public funding is maintained, either from tax revenues or mandatory insurance contributions.

[Table 1. Typology of service provision modes]

Internal contracts with government agencies, performance-related funding and benchmarking

6. Within the framework of government agencies serving fixed user constituencies, OECD countries use a range of instruments to focus activities and reward improved performance. Clarifying the goals and outcomes to be achieved by government agencies and institutions by stipulating internal performance contracts within an outcome-focused budgeting framework, while expanding the institutional autonomy on how to achieve these goals, can improve performance by giving more room for innovation and by limiting political interference in the detailed operations of government agencies. However, shifting budget focus from inputs to outputs and outcomes requires that tangible output measures can be defined.

7. The inherent information asymmetry nevertheless remains between government and service suppliers, as to the true resource requirements to fulfil policy objectives. In the absence of competition from alternative suppliers willing to take over, agencies may gain by concealing the true level of necessary

costs in order to avoid funding being tightened in the future. Also, incumbent public agencies may risk little from cost overruns, as governments may find it difficult to impose hard budget constraints.

8. Benchmarking of activities and performance across agencies can improve performance assessment and go some way towards mimicking competition. For instance, comparing police departments in different districts can facilitate performance measurement by reducing the statistical noise from common changes such as in crime rates. Also, making comparisons available may spur internal processes and help managers identify where their departments differ and could improve.

Competitive tendering and contracting

9. Service provision can be opened to competition by specifying and announcing service requirements, calling for tenders and contracting with the supplier submitting the most favourable bid for some fixed term. For this type of competition to be effective, services and quality must be carefully specified and the information made public so as to facilitate entry from potential new suppliers. Indeed, the distinguishing feature of competitive tendering, compared to intergovernmental agreements and grants earmarked for specific non-profit organisations, is the openness of market access, supported by a transparent procedure for selecting the contractor, (Table 1). In-house teams can be allowed to submit bids. However, this requires very transparent separation of units within government agencies to avoid cross-subsidisation, and rules on cost calculations and auditing to assure a credible and neutral competitive tendering process. Consideration may be given to current staff by making re-employment a condition for contracting.

10. Sub-contracting for support functions like cleaning, administrative functions, computer services, legal services etc. may allow economies of scale and specialisation to be realised – reflecting better use of specialised equipment as well as better management of human resources within an organisation focused on the competencies needed for the particular service. Indeed, support functions may often be easier to define and more marketable than final services. Sub-contracting can expose these elements to competition, even if final services are delivered by a public monopoly.

11. Empirical studies document that appropriate use of competitive tendering and contracting can raise efficiency and thereby allow a constant quality of service to be provided at lower costs, especially for technical services like garbage collection and cleaning (see Box 1). Lower wages and less favourable work conditions could play a role in achieving economies, but evidence is mixed on this point, as wages may as well rise in fields where competition weakens public sector monopsony in the labour market.[2] Some OECD countries have used competitive tendering and contracting for human services such as the operation of public day-care facilities for children, but the effects are less documented so far.

12. The openness of competitive tendering to new entrants makes it a stronger mechanism than benchmarking for revealing the true level of necessary costs. When benchmarking public agencies serving separate user constituencies, differences in performance can reflect either differences in productivity or local conditions for which the agency is not responsible. It can thus be difficult for outsiders to ascertain what the efficiency differences are, and consequently politically difficult to implement changes when faced

2 . If avoiding changes in wages and work conditions is considered a policy goal, this can simply be specified as a contractual term. In the Netherlands, legislation guarantees unchanged employment conditions when public employees are transferred to the contractor winning a competitive tender. Indeed, where public employees have civil servant status and enjoy special job protection and pension rights, transformation into private law employment relations and funding accumulated pension obligations is an important prerequisite to making contracting-out feasible, as reviewed by Debande (1999). See also Brendan (2002) for successful and unsuccessful examples of building good labour relations into the contracting process.

with protests from interest groups. In a competitive tendering process, by contrast, bids relate to the same tasks under the same conditions, with entering contractors being ready to take over operations and continue service operations.

Box 1. **Studies of competitive tendering and contracting**

The savings obtained through competitive tendering and contracting have been documented in a series of studies using large data samples and econometric techniques to test the significance of results. While covering a broad range of countries and time periods, these systematic quantitative studies typically cover only a limited range of services, in particular waste collection and cleaning (see Table 2). *Cross-section studies* compare the cost of providing a given service under differing organisational arrangements across agencies/geographical areas, such as the cost of waste collection across municipalities some of which use traditional in-house production not being exposed to competition, and some of which have contracted the waste collection through competitive tendering. To avoid misinterpreting cost savings that really derive from other characteristics correlated with the use of contracting and competitive tendering, these studies include control variables, such as the size of a waste collection district, whether it is in an urban or rural area and the collection method used. *Before and after studies* compare the cost of providing a given service before and after a shift to contracting and competitive tendering. The comparison thereby is made for each unit given its characteristics. A large number of *case studies* exist as well, but are not reviewed in Table 2. They are too selective for assessing average changes in cost levels etc., but may be useful for indicating best practices of how to implement contracting and competitive tendering (see OECD, 1997).

The estimated cost savings vary strongly across studies, with the majority showing positive savings and some concentration in the range of 10-30 per cent. Savings may also vary over time reflecting changes in market concentration and contractor interest (see Milne, 1997), as fewer bidders is found to imply higher price in procurement auctions, as would be expected (see Gomez-Lobo and Szymanski, 2001). There is some evidence that private contractors have underestimated the actual costs and submitted non-viable low bids in early tendering rounds, or conversely, prices can fall over time when the frictions at times caused by interest groups when introduction of contracting are passed (see Reimer, 1999). Still, the 10-30 per cent interval seems robust. Cost savings from competitive tendering and contracting may stem from both the introduction of competition and the involvement of private ownership. The relative importance can be difficult to assess, as most studies do not clearly distinguish between different ways of choosing the supplier, *i.e.* whether a formal competitive tendering procedure was carried out prior to contracting or not. A cautious statement would be that competition seems to be a stronger driver of efficiency gains than private ownership, as concluded by the survey of Domberger and Jensen (1997) and others.

Sceptics of competitive tendering have argued that cost savings may simply correspond to lower service quality. Indeed, cases occur where inappropriate contractual specification results in declining standards. The systematic empirical studies, however, find that *a given level and quality* of service can be provided at lower costs using competitive tendering. Domberger, Hall and Li (1995) find that tendered private school cleaning is significantly less expensive than non-tendered public school cleaning, while at the same time quality is rated equivalent or significantly better by an independent team of controllers examining the schools. Christoffersen, Paldam and Würtz (1999) are able to include the actual quality specifications used in school cleaning contracts as a control variable and still find cost savings of 24-29 per cent from contracting out.

Some studies try to explain the origin of the observed savings. Reorganisation of work activities and production units matter, as Christoffersen, Paldam and Würtz (1999) find that private suppliers are better able to realise economies of scale in school cleaning. Moreover, private suppliers tend to substitute among inputs towards more capital, as found by Walsh (1991), but simply raising effort or productivity with a given input-combination may contribute more to savings as found by Cubbin, Domberger and Meadowcroft (1987). Consequently, reduced employment may contribute substantially to savings in cases of overstaffing, in line with the finding of Szymanski (1996) that local authorities having above average employment and wages in waste collection prior to competitive tendering gained the largest cost savings. That is, lower wages and less favourable work conditions do play a role, as found by Eskott and Whitfield (1995), as does a shift towards employing the least qualified personnel capable of doing the job (see Stevens, 1984). However, in service areas where public employers hold a quasi-monopsony in the labour market, involving external suppliers may have the opposite effect. Thus, Vedder and Hall (2000) find that salaries for teachers in public schools are higher in school districts where public schools are exposed to competition from private schools. Finally, some savings may derive from cheaper procurement of non-labour inputs, as Ohlsson (1996) finds that public sector enterprises pay 10-15 per cent more than private firms for similar garbage trucks.

Only few studies have specifically tried to assess the size of transaction costs. Walsh and Davis (1993) find that the costs for local authorities of preparing for competitive tendering of cleaning, waste collection, catering and maintenance of vehicles and grounds on average amount to 1.8 per cent of total contract value, and the Audit Commission (1995) finds that monitoring costs rarely exceed 3-4 per cent. Nelson (1997) finds that variation in transaction costs reflecting varying complexity of service needs can explain why some local governments choose a larger share of in-house production than others.

[Table 2. Empirical studies of savings from competitive tendering and contracting]

13. A drawback is that the efficiency gains from stronger performance incentives come with a transaction cost, associated with specifying contract terms, monitoring compliance and eventually changing supplier. To avoid disputes with an external service supplier, notions such as "roughly the same standard as usual" must be translated into precise contractual terms. This can be both time consuming and costly, especially until public managers have gained experience and standardised specifications have evolved; but even then there will be areas where it is very difficult to write sufficiently complete contracts.

14. In areas like infrastructure, where large-scale investment is needed, so-called public private partnerships (PPP) may be an option, where private investors design, build, own, maintain and operate facilities like highways under long-term contracts. By deferring payment and by making it contingent on facilities being operable through the contract period, PPP contracts transfer investment risks to the private investors, such as those arising from delays in construction projects, and ensure a life-cycle perspective on costs. Private contractors may be better equipped than government for managing construction projects, especially where there is considerable scope for reducing maintenance and operation costs through innovative design. However, PPP usually entails a higher cost of capital than if the risks were carried by the general government budget and investment were financed via public lending. Moreover, complex financial contracts, involving commitments to future payments, may reduce transparency, requiring strong institutional checks. And while PPP contracts shift investments off the government's balance sheet, the commitments to pay for future service-flows have largely the same macroeconomic effects as public debt. Most importantly, the inherent long-term character and complexity of PPP contracts may pose a number of problems. It may have adverse effects on the effectiveness of competition, as fewer firms are able to make a bid, and contracts must be able to accommodate changes in future needs which are inherently difficult to foresee. As far as large-scale infrastructure is concerned, achieving co-ordination among alternative routes and means of transport is crucial and having a range of different private owners may entail complicated and costly negotiations to accommodate changes. Furthermore, insofar as the government may ultimately be held responsible for outcomes, the transfer of risks to private contractors may be partial, with the government having to step in if something goes wrong.

Vouchers and user choice among public and private service suppliers

15. Allowing users individually to choose among alternative suppliers is another way of opening service provision to competition. Choice can be restricted to public institutions with their funding being a function of the number of users, as in the case of some school choice programmes. Or users can be given a more explicit claim on public funding *via* a voucher allowing them to "spend" it only for a particular service, but with a wide range of potential suppliers -- making markets accessible to entry (Table 1). In practice, explicit voucher schemes with physical coupons are very rare, but OECD countries use a set of arrangements that function in a similar way, including per-user subsidies for private nursing homes, income-dependent benefits earmarked for the purchase of child care in approved centres and tax credits for documented private school fees. All of these arrangements allow users to choose among different suppliers of publicly funded services. The resulting intensity of competition, however, depends much on whether public funding per user is levelled across public and private suppliers, which may often not be the case.

16. There is less empirical evidence on the effects of user choice on efficiency, costs and other outcomes than for competitive tendering and contracting. Learning outcomes are typically found to improve when schools are exposed to competition, but depending on funding and other arrangements these gains can be unevenly distributed (Box 2). In service areas like long term care for elderly and disabled,

childcare and employment services, there are still too few systematic studies to draw firm conclusions, but there is some indication that incentives from funding systems matter more than ownership.[3]

17. In cases where publicly funded services are distributed only to low-income groups, as is the case with housing in most countries and long-term care and childcare in many OECD countries, voucher-type programmes could potentially realise economies of scale, since service provision can rely on the arrangements serving the rest of the population, without a need for separate public housing, residential institutions for elderly, etc. For services such as compulsory education, by contrast, economies of scale may be better exploited in public schools based on strict zoning, than under user choice schemes entailing smaller schools and uneven capacity utilisation.

18. The focus on individual needs, as suppliers compete to attract users, is often considered an important advantage of user choice. This includes job agencies targeted at disabled job seekers and publicly funded private schools. However, if users are very different with regard to the amount of resources needed, problems of "cream skimming" may arise, with suppliers trying to select the "easy" subjects and reject "difficult" users like school children coming from deprived backgrounds. Avoiding this may require cautious attention and regulation, such as differential funding depending on user characteristics.

19. While vouchers can be considered a demand side instrument, accompanying policy initiatives on the supply side can be essential to ensure that changes in voucher subsidies entails changes in capacity and services supplied rather than changes in price. Supply side initiatives should address entry and exit barriers[4] as well as training of professionals in services requiring specialised labour such as teachers or medical personnel. Moreover, voucher schemes can be introduced gradually to facilitate establishment and expansion of suppliers.

3 . Analysing employment service provision under the Job Training Partnership Act in the United States, Heinrich (2000) finds that non-profit suppliers were *not* more likely to serve disadvantaged clients, and that there were no consistent difference in the effectiveness in increasing participants' earnings and employment rates across for-profit, non-profit and public suppliers. Conversely, funding incentives improved the performance for all forms of service suppliers. Analysing long-term care for elderly in Switzerland, Crivelli *et al.* (2001) find considerable variation in cost efficiency across long-term care homes with many operating at an sub-optimal small scale. However, the study finds no systematic explanation for these differences from ownership type (for-profit, non-profit and public providers) nor from differences in regulatory and funding systems. Note that these studies so analyse effects from user choice in isolation, as contracting play a key role in both cases.

4 . For housing rent vouchers to low-income groups, these mechanisms can be particularly complex if there is a large stock of old worn-down buildings. This can be the case if rent regulation makes refurbishment economically unattractive to landlords, or in poor and deteriorating neighbourhoods where market clearing rents fall below the level necessary to cover the fixed costs of new construction works, but remain sufficient to cover the operating costs of existing buildings. Under such circumstances, the effect of housing vouchers to low-income groups may be higher rent levels with little improvement in the actual housing conditions for low-income families. In fact, Susin (2002) finds that housing vouchers distributed to some low-income groups, but not all, in the United States, have increased market rents to an extent that implies an increase in rent expenditure for non-recipient low-income families that more that offset the subsidy voucher recipients.

Box 2. **Studies of school choice in primary and secondary education**

The empirical literature indicates that introducing competition by allowing parents to choose among schools improves the learning outcomes of students on average as measured by test scores, accomplishments of post compulsory education degrees and subsequent employment outcomes. However, the effects of school choice get complex and difficult to assess because learning depends not only on what schools provide, but just as much on the motivation and support parents provide their children and on the interaction of peers as students learn from each other. Therefore, giving parents an option of choosing a school outside their neighbourhood may affect learning outcomes not only through the changed incentives faced by schools, but also because students from different backgrounds are grouped differently in schools. Below, the first part reviews the findings from studies of average performance and the next part reviews the design characteristics found to affect student sorting and thereby the distribution of learning outcomes.

Effects on average performance

Across OECD countries, students in private schools typically achieve better results than students at public schools, as shown by the PISA study (OECD, 2001*b*) based on standardised tests of reading literacy among 15-year-olds. This is so, notably for private schools funded by tuition fees, but for a number of OECD countries the difference is significant also for private schools funded by government subsidies. In parallel, however, students in private schools on average come from more advantaged socio-economic background, notably in private schools funded by tuition fees.

Empirical studies give mixed answers as to whether these better achievements at private schools are simply explained by the differences in student intake or whether indeed similar groups of students learn more in private schools. A number of studies exist using data for the United States. Analysing test scores, Gamoran (1996) and Goldhaber (1996) find no significant difference in achievements between public and private schools above what is explained by student background. Analysing high school graduation rates and subsequent college attendance, however, Evans and Schwab (1995) and Neal (1997) find that the better outcomes for students in private schools remain significant when elaborating statistical controls. Fully controlling for the motivation and support from parents, however, is difficult merely based on observable socio-economic characteristics. In this regard the Milwaukee scheme, the first publicly funded American school voucher programme established in 1990, is interesting. By allotting the vouchers by lottery to low-income families that apply, it creates a control group of public school students from low-income families wanting to attend private schools. Still, Greene *et al.* (1999) find that the students attending private schools achieve better results in reading and math than the control group of students in public schools supposedly having the same degree of motivation and support from home. Rouse (1998) finds similar, but less strong effects, while Witte (2000) finds no significant difference in results in public and private schools and criticises the methodology used by Greene *et al.*

Another type of studies find that public schools improve when exposed to competition. By analysing the Tiebout process whereby parents choose in what school district to live in American cities, Hoxby (2000) is able to assess how choice affects long term outcomes like attainment of post compulsory education and income. In areas with many separate public school districts implying mutual competition for residents, education outcomes and productivity are both statistically and economically significant. Comparable students in public schools get 2 per cent better test scores, complete more post compulsory education and earn 4 per cent more at the age of 32 years, when contrasting school districts differing by one standard deviation on the choice measure. Moreover, average school expenditure is 2 per cent lower in the area with many smaller school districts -- the strongest effect being observed in states where the share of school district funding coming from local taxation is large. The improvement in outcomes associated with greater choice is less strong, but still positive for students from low income and minority families (black and Hispanic). Analysing the effects of competition from private schools, Dee (1998) finds that students in public schools are less likely to drop out in areas of the United States where the share of private schools is high, after controlling for socio-economic factors influencing drop out rates. Also, a number of American studies find that public school test scores improve where exposed to competition from private schools, as summarised by Teske and Schneider (2001). Similarly, analysing the outcomes of the recent Swedish school reform described later in Section 3, ESO (2001) concludes that students in public schools achieve better overall examination results and better results in the standardised math test in areas where public schools are exposed to competition from a large fraction of private schools.

The empirical literature also shed light on through what mechanisms competition among schools may be a source of improved learning outcomes:

-- *The operational freedom of non-government schools and competition may provide incentives to improve school performance*. Based on a questionnaire among managers of upper secondary schools providing professional skills and teacher training colleges, the Danish Ministry of Education (1998) finds that the change from state institutions to independent trusts and the introduction of funding pr. student has made the management style more professional and business-like, put focus on users and made the internal allocation of resources more responsive to needs. Likewise, the PISA study (OECD, 2001*b*) finds that 15-year-olds on average perform better

Box 2. **Studies of school choice in primary and secondary education** continued

on the combined reading literacy scale in countries where schools have autonomy in areas like budget allocations within the school and where schools and teachers have at least some responsibility for deciding which courses are offered and for determining course content. Comparing the relative achievements in mathematics in public and private schools in Canada, New Zealand, the United States, France and Belgium, Toma (1996) finds that the operational freedom in private schools is a precondition for their better results. For the Netherlands, where private schools are subject to some of the same regulation as public schools, Hofman *et al.* (1996) find that private schools are able to reduce their costs a bit in areas like administrative overhead, but more importantly the private schools have stronger informal relations between school boards and teachers facilitating smooth management. Moreover, parents may be more inclined to contribute to teaching and spare time activities on a volunteer basis in schools organised as private non-profits with a clear identity based on common values. Finally, school choice is found by Rapp (2000) to make teachers work more diligently.

-- *Parents are forced to get more involved in the learning process of their children when having to choose school.* Since the motivation and support that families provide their children is a strong determinant of achievements in school, part of the observed effects on learning outcome may relate to the interaction of what goes on at home and during school hours. Based on interviews in New York and New Jersey, Schneider *et al.* (1997) conclude that parents to children attending public schools in districts allowing choice engage in more school related discussion in the local community, are more likely to trust teachers, and are more involved in parent-teacher associations and voluntary activities than parents living in districts maintaining automatic assignment to neighbourhood schools. Similar results have been found by a set of studies, as summarised by Teske and Schneider (2001).

-- *Schools exposed to competition and notably private schools have more intensive learning processes and maintain a more disciplined environment.* Hoxby (1999) finds that parental choice among public school districts enhances the share of students taking advanced courses during their upper secondary programmes and the average time spend on homework, and makes public schools maintain a more disciplined environment, presumably contributing to student achievements. These characteristics may be pronounced notably for private schools, as reported by Peterson (2001) and Dijkstra *et al.* (2001) for the United States and the Netherlands respectively.

The benefits in terms of better learning outcomes should be weighed against any transaction costs involved with school choice, but measures of the latter are scarce. An extreme calculation based on the situation in the Netherlands in the 1980's referred to by Dijkstra (2001) concluded that too many small schools below the minimum efficient scale implied extra costs equivalent to one tenth of total expenditure in primary education -- the policy response since then having been to promote mergers into larger schools. Judging about the net effect of better learning outcomes and increased transaction costs is difficult, but it should be noticed that Hoxby (2000) concludes that the better achievement by students resulting from more choice among public schools is associated with lower public expenditure.

Composition of pupil peers at different schools and equality of education outcomes

In public school systems based on assignment of students to the school nearest to their home, students are in reality sorted across schools reflecting the ethnic and socio-economic characteristics of different neighbourhoods. And indeed, parents who can afford it have the option of school choice through their choice of residence. The outcomes of extending the range of school choice options by introducing explicit programmes may therefore be more integration of students with different background or more segregation, depending on the initial composition of neighbourhoods and the detailed design of choice programmes. In the United States, private schools are on a national average *more* racially and ethnically *integrated* than public schools, as shown by Greene (1998). Rather, as Teske and Schneider (2001) conclude, school choice often results in sorting of students by parental involvement and motivation. The consequence may be that the introduction of school choice expands existing gaps between successful and unsuccessful schools in urban areas, as found for New Zealand by Ladd and Fiske (2001). On the other hand, competition and increased awareness of differences in school performance may be helpful for troubled schools as it attracts political attention. For the United States, Arum (1996) finds that a larger share of private schools makes the public schools improve as a result of increased policy focus aimed at improving the competitiveness of the public sector. Of course, this may imply that competition produces a pressure for increased public expenditure.

In a number of aspects, school choice programmes can be designed in ways that will limit tendencies for sorting and increased variation of learning opportunities and outcomes across students and schools:

-- *Prohibiting tuition fees while giving private schools the same level of public funding as public schools will limit sorting of students among schools.* Allocating school vouchers to talented students from low-income families or allowing private schools to give tuition discounts to such talented students may contribute to inequality of education outcomes, since if motivated and bright students raise the performance of other students in their peers,

Box 2. **Studies of school choice in primary and secondary education** continued

any such policy that allows above average talented students to attend elite schools will reduce the achievement of students in the remaining schools. In the United States, propensity to attend private tuition-charging schools rises with income and ability, as documented by Epple *et al.* (2000). One reason for this is the tuition discounts given by some expensive private schools to particularly talented students. Considering this as a trade whereby high-ability students from low-income families sell their positive contribution to their peers in exchange for access to the superior teaching provided at elite schools, Epple and Romano (1998) point out that it may be inefficient as the loss for pupil peers in public schools is not priced. Partial voucher programmes may exacerbate this allocative inefficiency, as the size of the private school sector increases. One way of avoiding this problem would be to give private schools the same level of public funding as public schools and prohibit tuition fees, as in the Netherlands and Sweden. As shown by Nechyba (2000) in a general equilibrium model, such general funding may improve educational equity also through changes in the choices of residence made by parents.

-- *National examinations can level the playing field among schools.* National examination systems may be important for students from different public and private schools to have equal opportunities of entering further education programmes. Moreover, as concluded by Bishop (2000), national systems with externally prepared and assessed exams may improve the outcome from competition among schools, by making evaluations of schools more transparent.

-- *Making school performance public along with other relevant information improves the ability of all parents to choose.* Marshall (2000) finds that access to information is an important determinant of the likelihood of parents sending their children to alternative schools. Consequently, in district 1 of New York City white parents having much education are more likely to use the option of the newly introduced school choice. In district 4 having a long tradition of school choice, race and education matter less while parents having lived for a long time in the district are more likely to choose alternative schools. In other words, providing information may be important for expanding the active use of school choice options across socio-economic backgrounds.

-- *Funding formulas may weigh students from disadvantaged backgrounds positively.* To avoid cream-skimming of the most talented students and exclusion of resource-demanding students from disadvantaged backgrounds, per-pupil funding can be differentiated on the basis of socio-economic characteristics, as in the Netherlands where some students elicit 90 per cent more funding than others.

-- *By offering attractive opportunities in selected schools while requiring a balanced composition of pupil peers, school choice can be a vehicle of social and ethnical integration.* This is the concept of magnet schools in the United States described in Box 3 below.

-- Procedures for intervention of authorities when school quality gets below standard are vital to avoid that some students are left behind in poorly performing schools. The publicly funded programme in Florida giving vouchers to students in public schools judged by the state to have dropped below the required minimum standard, is an interesting case of how school choice programmes can be designed to help students that may otherwise be left behind in poorly performing schools. Though the experience with the programme is short, it shows examples of public schools reacting by substantial changes including Saturday and after school tutoring, school staff visiting parents at home to discourage pupil absence, intensified training with new teaching methods in reading and writing. In other cases management and parts of staff have been replaced, as reported by Peterson (2001). Indeed, the attention and ultimately intervention of authorities is crucial to avoid schools dropping into a downward spiral with parents moving their children to other schools leading to decreased funding and still poorer teaching for the remaining students -- being the children of less attentive parents.

Selecting provision mode based on service characteristics

20. There is no single correct model of service provision. Indeed, the appropriate provision mode depends heavily on service characteristics, including whether the service is used collectively or individually, whether users of services are able to signal their preferences effectively, and the degree of market power which service provides can exercise.

Services used collectively and support functions

21. In defence, police and core public administrative functions that require some discretion and entail legally binding decisions for individual citizens, introducing competition is hardly feasible, and instead benchmarking and to some extent internal performance contracts can be used. Still, support functions in the production of these services can be exposed to competition through competitive tendering and contracting, provided that clear service specifications can be made. This includes cleaning, wage administration and maintenance of buildings and equipment, to mention a few examples. Likewise, services like waste collection and operation of urban transport systems etc. can be submitted to competitive tendering and contracted for.

Services used by individuals

22. For services used by individuals, like education and long term care, there is a wide range of feasible arrangements, since contracting as well as user choice can be implemented. Notably three issues must be considered:

- *Important aspects of services can be hard to assess.* Services like education and care are inherently hard to measure and specify in quantitative terms. Nonetheless, when intangible quality aspects may be experienced, allowing users to choose among suppliers can be an effective mechanism. Recipients of home-care or their relatives may shift supplier if dissatisfied and parents may rely on the experience of others when choosing among day-care facilities. In other circumstances, service assessment may require professional insight, and central and regional government agencies contracting, for instance with hospitals, may entail more effective competition than if patients choose individually. Alternatively, published professional evaluations can enhance the ability of users to choose, for example among universities, leaving room for individual needs to matter in the choice of supplier. Ultimately, if services are really hard to assess for others than suppliers, in-house public production maintaining soft incentives using benchmarking and internal performance contracts is likely to be superior to the introduction of competition.

- *Some user segments may be unable to guard their own interests*. Even if average users are able to assess services offered by different suppliers, some segments like very frail elderly with no relatives may have difficulties comparing offers from different residential institutions. Some procedures for approving suppliers may therefore be needed to ensure a minimum level of quality for all users. If many users are passive, and do not evaluate offers from different suppliers, competition is only effective if ensured through the process of approving suppliers. This is important in the provision of employment services, as job seekers receiving assistance may lack motivation.

- *Service suppliers may have some market power in their local areas, and changing supplier may entail considerable sunk costs*. Local monopolies in services like compulsory education can be strong in rural areas because of transportation costs, impeding competition even if parents exert an active and informed choice of school. This calls for both regulation of charges paid by users and procedures for approving suppliers. However, where services and quality can be assessed by professionals, competitive tendering and contracting with one supplier for a defined geographical area may entail more effective competition than the alternative of user choice.

23. If service provision is opened to competition through contracting or user choice, the question of what range of suppliers to allow arises. If users are expected to respond only little to differences in service quality, private firms might engage excessively in marketing or offer side benefits that may attract and catch the attention of users but are not warranted for public funding. In that case, restricting market access to existing public institutions or non-profit organisations may be advisable. Otherwise, allowing both public institutions, non-profit organisations and private firms to compete for tenders and offer services under user choice programs creates a platform for a natural selection process, determining the appropriate form of ownership. Indeed, involving some private firms as suppliers may make competition more dynamic, as they are more likely than public agencies and private non-profit institutions to seek an aggressive expansion of their activities.

Reconciling demand and spending pressures

24. Allowing users to choose among suppliers may increase supply efficiency, but may also reinforce the upward pressure on demand resulting from public funding. An improved and more diverse service supply, with more aggressive marketing, could mean that competition increases the number of service users, increasing budget pressures.[5] In areas like compulsory education this would not apply since service coverage is at 100 per cent, but it could have a strong effect on post-compulsory education and long-term care for elderly. In the latter case this would call for clear procedures for individual need assessment by a separate agency, which should determine eligibility before users and suppliers interact. Also, fixing the public subsidy per user (at a level reflecting their individual characteristics) as in voucher schemes while allowing users to top up with additional payments can be a way of cutting off excess demand, since users carry the full marginal costs. For services such as home care for elderly, this suits well, but for services with tendencies to local natural monopoly, there is a trade-off between letting users carry the marginal costs in order to balance excess demand and fixing prices paid by users in order to avoid monopoly pricing. Ultimately, if supplier-induced demand is deemed to be strong, the scope for user charges to curb excessive demand can be limited, and governments may have recourse to capacity controls, including the number of service licences and restrictions on the training of professionals.[6] The complexity of trade-offs involved should not be underestimated and what mechanisms are appropriate to balance spending pressures therefore depends crucially on the specific conditions in different service areas.

25. More generally, while user charges may work well for services like waste collection and issuance of permits and licences, their scope in compulsory education, care and other social services may be limited by both economic concerns and social preferences. For example, user charges for childcare cannot be seen in isolation from the marginal after-tax income of the second earner in a family. Long term care insurance and provision, by nature, are intended to relieve the users of part of the costs associated with the private benefit of receiving care, where they are in a situation of need. Moreover, service provision is often in practice used politically as an instrument of income redistribution.

5 . Also, where governments hold a monopsony position, being the only employer, changes in demand following from the introduction of user choice programmes may lead to price and wage movements rather than changes in service supply. This should be taken into account when undertaking reforms.

6 . The importance of the number of professionals for supplier induced demand has mostly been researched for health care, with Richardson (2001) giving a recent overview. Often, the number of doctors is found to be a stronger determinant of demand than user charges.

3. Patterns of service provision in OECD-countries

26. Countries vary considerably with respect to *how* they provide services, and the different patterns of service provision are reviewed in this section. There is a general lack of internationally comparable data for publicly funded services and therefore, in some cases, information may not be entirely up to date. A notable difficulty is that competition is complex to measure, and this paper therefore relies on data for the share of public *versus* private institutions, funding flows and descriptions of allowances, voucher schemes, etc. Focusing on publicly funded services, the section reviews education, childcare, long-term care for elderly and disabled, employment service, outsourcing of support functions and contracting, including public private partnerships with private finance of investments.

Education

27. In most OECD countries, the majority of education institutions are public. Among the private institutions, some can be classified as government dependent in the sense that more than half of their costs are covered by public funding, while others are financially independent as they rely mostly on funding from tuition fees and other private sources. In broad terms, government dependent private institutions are mainly found in Europe, while independent private institutions are most strongly represented in Japan and Korea (see Figure 1).

[Figure 1. Public and private education institutions, 1999]

Compulsory education

28. For cultural and historical reasons, many countries have traditionally offered parents a choice between public schools and private schools receiving partial public funding -- resembling a voucher scheme.[7] The level of public funding for private schools ranges from zero in the United States, through little or moderate financial support in the United Kingdom, Greece, Italy and Portugal, to substantial grants in France, Germany, Austria, the Nordic countries, Spain, Belgium, the Netherlands and Australia. In the latter four the result is that private schools accommodate over a quarter of enrolment in compulsory education (see Figure 1, panel A). These arrangements imply some competition between schools, but having evolved in response to other concerns, they are often designed in ways that limit the resulting competition. First, where the public funding which users can take along when choosing a private school is less than that provided to public schools, there is not a levelled playing field. Also, the tuition fees charged by private schools make them unaffordable to low-income families which in turn weakens competitive pressures and may result in undesirable sorting of students depending on their family background. Second, as a precondition for receiving public funding, governments have often required private schools to apply similar student-teacher ratios, staffing rules and management systems as the public school sector. Applying such input controls limits operational flexibility and reduces the potential gains from competition.[8]

29. There have been recent reforms in many countries aimed more clearly at introducing competition, by allowing parents a choice among public schools, although competition is, in practice, limited by

7 . Most private schools in OECD countries have religious roots while a smaller share of private schools have been founded based on specific pedagogic ideas.

8 . Considering public and private schools jointly, the PISA study (OECD, 2001*b*) shows that schools in OECD countries (attended by 15-year-olds) typically have relatively wide autonomy on budgetary allocation issues, but limited autonomy on teacher salaries, while the autonomy on appointment and dismissal of teachers varies much across countries.

capacity constraints and lack of mobility across school districts. In the United States, private school vouchers have been introduced to expand choices for low-income families and expose public schools to competition, but so far only on a limited scale. In Sweden, competition has been strengthened, partly by ensuring private schools have the same level of public funding as public schools while prohibiting tuition fees (as also in the Netherlands) and partly by allowing a broader range of schools to establish, including some operated by private firms (Box 3.) Contracting with private firms for the operation of public schools or entire districts is an alternative way of introducing competition that may circumvent the potential

Box 3. **School choice in the United States, the Netherlands and Sweden**

Although attending the local public school is by far the most common pattern in the ***United States***, a range of new choice programmes have been introduced in primary and secondary education over recent decades. *Magnet schools* are ethnically and socially-integrated schools, attracting students from different neighbourhoods by offering distinctive, improved education programmes based on above-average public funding. With 3 per cent of total school enrolment, magnet schools represent the most common form of public school choice. Allowing parents an *inter-district* choice among public schools is growing more common but still involves less than 1 per cent of students. *Charter schools* are publicly funded non-government entities recruiting students from a wide catchment area and currently catering for 1-2 per cent of total enrolment. *Vouchers* represent a subsidy to low-income families paying part of the tuition fees at private schools. In total merely 0.2 per cent of students receive school vouchers, of which the majority is funded from private sources. *Tax credits for private schooling* operate in a similar fashion and cover 0.1 per cent of students. Consequently, unsubsidised *private schools charging tuition*, covering a stable share of around 11 per cent of primary and secondary school enrolment for half a century, still represents the main form of school choice not associated with change of residence. Most private schools have a religious affiliation and as a national average, expenditures *per* pupil amount to half of those in public schools. Finally, the number of children *schooled at home* has grown rapidly to a current level estimated at 1-3 per cent.

The ***Netherlands*** has a well-established and extensive system of public and private schools, ensuring equal terms of funding, examinations, etc. Since 1917 the Dutch constitution has guaranteed financial equality between public and private schools. Groups of parents that want to found a school according to their own vision (religious, pedagogical, etc.) can do so and receive public funding. Schools are subject to extensive controls on salaries, capital investment, etc. covering both public and private schools, and to avoid a hierarchy of prestigious *versus* poor schools, tuition fees are prohibited. The terms of examination are the same across schools, but the schools are left with much freedom in terms of course materials and how to teach. Private schools are typically organised as non-profit foundations with a high degree of self-selection of new board members, and no primary schools are run by private firms. National umbrella organisations of Catholic and Protestant schools respectively exist, but function mainly as lobby organisations while not having discretion over the individual schools. In 2000, 68 per cent of students in primary education attended a non-government school, the vast majority being Catholic and Protestant schools. As Dijkstra *et al.* (2001) point out, it is remarkable that this is almost the same as half a century ago, despite the general shift towards organisations not based on religion in Dutch labour unions, newspapers, clubs and hospitals, and a secular society in general. The reason may be that while the origin of these private schools is religious, today they mainly distinguish themselves by a reputation for offering educational quality, which is an important motive in parental choice. Although the constitution only stipulates the rules for funding of primary education, equal funding of public and private education institutions has been extended to all levels of education, including universities by 1972.

Despite having virtually no tradition for private schools, **Sweden** in 1992 introduced a Dutch-style funding system in compulsory education (primary and lower secondary level) leading to a rapid expansion of private schools and improved performance in public schools in areas where competition is pronounced. Private schools (*fristående grundskolor*) are now guaranteed public funding on the same basis as municipal schools in the same area, but are not allowed to charge tuition fees. Equally, the funding to public schools respond automatically to changes in attendance. Choice among public schools across municipalities is allowed, but limited in practice as students living nearby are given preference. The share of students attending private schools has grown from 1 per cent in 1992 to 4 per cent in 2000/1. Unlike elsewhere, schools with a religious affiliation represent only a minority, namely 15 per cent of private schools. The majority of schools, 60 per cent, either consider themselves as non-specialised or adhere to certain pedagogical ideas. The remaining 25 per cent put emphasis on special topics like arts, teach in other languages or have specific ethnic orientation. Much of the growth since 1992 reflects students moving into private schools competing with public schools on offering a non-specialised programme. Schools organised like private limited companies play an important role in this process and have grown from nothing to a share of 34 per cent of the private schools, the remaining part being organised as teacher -- or parent -- co-operatives, associations and non-profit foundations. In upper secondary education (*gymnasieskolor*) parallel reforms have been implemented with the share of students attending private schools growing from below 1 per cent to 3 per cent in five years.

Sources: P. E. Peterson (2001), Dijkstra (2001), ESO (2001) and national sources.

problems of student sorting associated with individual school choice. It may also facilitate the adjustment needed for extra resources to be provided in disadvantaged areas. So far this has only been tried on a limited scale in OECD countries, primarily the United States, covering around 0.3 per cent of enrolment in compulsory education. Private tuition taking place after school hours is not reflected in the enrolment numbers of Figure 1, but matters in some countries, including Korea where it has grown rapidly over the latter decades.

Post-compulsory education

30. The share of private institutions increases with the level of education and the degree of orientation towards specific professional skills.

- In tertiary education with an orientation towards practical, technical or occupational skills, government-dependent or independent private institutions are present in most OECD countries (Figure 1, panel C). And within Europe, it is at this level that private institutions are most widespread. Examples include the Czech Republic, Finland, Germany and Switzerland, where 20-55 per cent of students in technically or occupationally-oriented tertiary programmes attend private education institutions, compared with 10 per cent or less at other levels of education. Being better able to liase with industry is an important motive for institutions to be organised as private at this level.

- Independent private universities play a large role in Japan and Korea where four out of five students in tertiary education attend private institutions, while the traditional top universities are typically public. The United States exhibits a pattern of its own, in that the share of enrolment in private institutions is much larger in theoretically-based tertiary education and advanced research programmes than in other types of education (Figure 1, panel D).

31. Generally, there is a move towards private institutions and towards giving public institutions more operational freedom while increasing competition. The private American universities increased their share of total tertiary enrolment over the 1990s by one third to 35 per cent. Poland, Hungary and the Czech Republic have all actively pursued establishment and expansion of an independent private university sector as a means of increasing capacity, although this is not yet reflected in the enrolment data for the Czech Republic. Similarly, private universities specialised in MBA and ICT-related programmes for in-work students have increased their role in Germany and France. In Austria the authorities have developed a system of accreditation for local and foreign private institutions of higher education, thereby lowering entry barriers and widening the scope of education on offer to students. In upper secondary as well as tertiary education, some OECD countries, including the United Kingdom and Denmark, have implemented reforms transforming hitherto public schools and universities into private trusts, allowing them more operational flexibility.

32. In parallel, there has been a move towards efficiency-enhancing incentives in formulas channelling funding to public and private institutions. This change has been more widespread than in compulsory education, since students in post-compulsory education are more mobile and potentially better informed about study programmes on offer, facilitating competition among institutions. By allocating funding automatically on the basis of student enrolment, Belgium, the Netherlands, New Zealand, Australia, the United Kingdom and Denmark operate implicit voucher systems, where universities are

rewarded for attracting students by improving their education programmes, and for reducing drop-out rates when, as in Denmark, funding is based automatically on the passing of exams. Sweden, Norway and Finland have adopted mixed funding schemes, weighing different performance measures including degrees earned.

Early childhood education and care [9]

33. Provision for children below compulsory school age cover a wide range from pre-primary schools focused on learning through centre-based day care to informal family-based day care. The extent and form of public involvement varies across these different categories. For pre-primary schools, public funding is predominantly channelled through public institutions rather than subsidies to parents purchasing services. Public institutions therefore account for a somewhat larger share of enrolment than private pre-primary schools and day care centres in most OECD countries (Figure 2). For family-based day care, public funding, for natural reasons, is typically channelled through subsidies and tax-credits, allowing users more choice. In practice, the degree of competition among suppliers of (partially) publicly funded early childhood education and care therefore depends not only on provision modes within each category but also on the relative weight of these different categories and on whether public funding levels provide a levelled playing field across categories. Direct public spending (not including tax credits) on early childhood education and care arrangements for children from three years to compulsory school age vary in the range 0-1 per cent of GDP (Table 3). Data for public expenditures on childcare services for 0-2 year olds are not available, but may be of a comparable magnitude.

[Table 3. Early childhood education and care, 1998]

[Figure 2. Public and private institutions in early childhood education and care, 1999]

34. Comprehensive voucher-type reforms aimed at equalising the level of public funding per child across public and private institutions by channelling *all* public funding through users have been introduced in a few countries. Australia has implemented the most comprehensive reform, replacing the previous system based on grants to non-profit organisations and local governments. Now, public funding is distributed to families via the Child Care Benefit earmarked for childcare provided in Commonwealth-approved services.[10] Thereby public subsidy is levelled across different institutional settings -- including for-profit and non-profit community based day care centres and to some extent family-based day care. All families are eligible for a minimum amount, and assistance increases as family income decreases. The Netherlands and Norway are currently considering similar comprehensive reforms, but elsewhere, explicit vouchers are used more as one instrument among others. In the United States, childcare vouchers have gained ground in federal family support programmes since the early 1990's. Where under this programme services were previously provided through direct funding to public institutions or through grants or contracts with selected private childcare institutions, recipients are now entitled to a voucher or cash benefit giving access to a wider range of care facilities.

35. Tax credits and cash benefits conditioned on documented expenses for private childcare, however, resemble voucher systems and exist in many OECD countries (Table 4). Tax credits and cash benefits are similar to vouchers in the sense that users can take the public funding they represent along, spending it with a supplier of their own choice. In some cases these subsidies and tax credits are targeted at

9 . The description draws on OECD (2001*d*), Rostgaard and Fridberg (1998), Besharov and Samari (2000) and national sources.

10 . Some operational grants still exist for institutions that are deemed part of the education sector and in some states.

low income and working families to improve their work incentives. This is the case in Australia, Canada, Germany, the United Kingdom and the United States.[11] Indirect public funding through tax credits and other support for employer contributions to childcare expenses play a role in some countries including Belgium, Italy, the Netherlands and the United States (Table 4). If the individual employers have some leverage over how their contribution is spent, this may contribute to competition in childcare services.

[Table 4. Subsidies and tax credits for early childhood education and care]

36. Among private institutions, both non-profit organisations and private firms play a role. In the Netherlands and Belgium publicly funded non-profit institutions account for more than half of enrolment in pre-primary education, while in other OECD countries public institutions dominate (Figure 2). In day care for the youngest children aged 0-2 years, the role of non-profit organisations receiving public funding is generally larger, like with the welfare associations in Germany and voluntary non-profit organisations in France. Looking at early childhood education and care as a whole, private firms play the largest role in Australia, where the share of day care centres operated on a for-profit basis has grown during the 1990s to currently 73 per cent. In the United States, private firms supply 30 per cent of childcare services. For-profit childcare also exists in most European countries, including Belgium, Italy, the Netherlands and Portugal, primarily for children under three years, and to a much more limited extent in Finland and Norway.

Long-term care for elderly and disabled [12]

37. The provision of publicly funded long-term care for elderly and disabled is growing in OECD countries and includes public and private residential institutions and help at home as well as subsidies for informal employment of personal attendants and tax credits and income support for relatives or friends acting as carers. At a level around 3 per cent of GDP, public expenditure on long-term care is highest in the Scandinavian countries, reflected in a large share of old people living in nursing homes and other residential institutions, as well as a large share receiving formal help at home. Conversely, in southern Europe and Asia public and mandatory insurance expenditure is limited, as families retain a larger role in long-term care (Table 5).

[Table 5. Long-term care]

38. Providing publicly funded long-term care in private nursing homes and residential institutions typically takes the form of subsidies resembling voucher systems -- either reimbursing part of the fees paid by residents or paying a subsidy directly to the institution, based on the number of residents. Consequently, the effectiveness of competition hinges on the choice of institutions made by the individual elderly or their relatives. In Australia, the government has sought to control the prices charged by private residential institutions, making compliance with price controls a condition for receiving federal nursing home funding. In the OECD countries for which data are available in Figure 3, private residential institutions typically supply 25-50 per cent of total capacity. The exceptions are Finland, Norway and Sweden, with only 10-15 per cent private residential institutions and the United States, United Kingdom and Germany where few residential institutions are public. While many private institutions are organised as non-profit

11 . But it is not the case in Denmark, and Finland. In the latter countries a larger share of the youngest children are in publicly funded day care institutions (see Table 3) and therefore subsidies for private care may be regarded more as a competitive alternative to these institutions made available to all parents. The childcare benefit in Norway is not earmarked to purchase of private care and in practice works much as an income replacement while parents look after their own children.

12 . See ECO/CPE/WP1(2002)7, "Policy reforms to deal with ageing: Recent progress and future needs" distributed for this WP1 meeting for an analysis of the broader fiscal implications of ageing.

organisations, such as the welfare associations in Germany, for-profit firms operate a substantial share of institutions in Ireland, Portugal, New Zealand, the United Kingdom and the United States, accounting for 69 per cent of nursing homes in the United States.

[Figure 3. Public and private institutions in long-term care for elderly, 1998]

39. A growing range of programmes provide allowances for the families of the elderly and disabled to retain their role as caregivers, or for the elderly and disabled to employ personal attendants of their own choice. Table 6 presents a range of care allowance schemes in OECD countries, several of which have been introduced during the 1990s. Most are cash benefits without restrictions on their use, while others come close to being vouchers. The French scheme, introduced in 1997, allows the user to choose among different forms of care, including employing a personal attendant, with the restriction that family members can only be hired if currently unemployed. Likewise, the Finnish informal carer's allowance introduced in 1993 allows the user to employ a personal attendant, with the allowance being paid directly to that person. The German scheme introduced with the separate mandatory insurance for long-term care in 1995 allows users a choice from a menu of service provision and cash benefits. The experience from some of these programmes has raised concerns about the employment conditions of the personal attendants. Indeed, in Austria only few have a formal contract and many are paid on an irregular basis, as seen from the last column of Table 6. Conversely, in Finland those employed as informal caregivers have now gained pension rights through municipal institutions.

[Table 6. Subsidies and tax credits for long-term care]

40. Contracting with a limited number of private firms and non-profit organisation for the provision of publicly funded formal help at home is occurring in some countries, including the United Kingdom, Netherlands, Finland and Sweden. In some cases, contracts are awarded based on a standard competitive tendering process, where suppliers bid on the price. In other cases, contracts are made with a set of suppliers allowing users a choice of supplier as with an implicit voucher scheme, but with an option for government to select among suppliers in subsequent contracting round thereby adding to the competitive pressure on suppliers. Supplying formal help at home through public institutions nevertheless remains the dominant mode of service provision in the Nordic countries as well as the United Kingdom, as seen from the last column of Table 5.

Employment service

41. Most OECD countries involve private suppliers, to some extent, in publicly funded training of job-seekers. Australia has gone so far as to separate the function of determining eligibility from service supply in training as well as individual assistance and matching of job-seekers with available job vacancies. It also allows job-seekers to choose among suppliers approved in a competitive tendering process. Consequently, Australian public employment services are provided through a variety of different firms and non-profit organisations, some of which have specialised to meet the needs of particular user segments (Box 4). The Netherlands has implemented a similar general split of the purchaser and provider roles for employment services, but with less competition among suppliers. In the United States federal programmes have given local authorities the option of contracting for all kind of employment services through competitive tendering but not made it a general rule. Other OECD countries typically provide individual assistance and matching of job-seekers with vacancies only through public employment agencies, while many rely on a range of public and semi-public education institutions as well as private firms for training of job-seekers. In the United Kingdom as well as Sweden and other Nordic countries

former public agencies supplying training for job-seekers have been transformed into independent institutions, and in France associations play a large role in publicly funded training of job-seekers. Finally, to improve the management of employment services within the public sector, Switzerland has developed detailed performance measures facilitation benchmarking.

Box 4. **Public Employment Service in Australia**

In May 1998 the public Commonwealth Employment Service (CES) was replaced by Job Network. Under this scheme a broad range of non-profit organisations and private firms now provide publicly funded employment services, including the matching of job-seekers with existing vacancies, job search training and individually-tailored intensive assistance to more disadvantaged job-seekers. To access Job Network services, job-seekers must be referred by Centrelink, a national agency that also processes claims and payments for a range of benefits including unemployment assistance. Having been referred, job-seekers may choose individually among the suppliers already approved in a competitive tendering process.

The wish to push the system towards focusing more on outcomes and less on procedures and the instruments used was a main motivation underlying the reform. Providers are paid according to their performance. For instance, commencement of a job training course entails some payment to the provider while a larger fee is paid if a participant gets a job afterwards and if he or she succeeds in keeping the job for at least 13 weeks. For some fees, the level has been determined by bids made in the competition for tenders.

Opening the provision of employment services to competition has entailed a marked restructuring through entry of new providers, some aiming at narrow user segments, others being broader in coverage.[1] In the second contract period stretching from 2000 to 2003, Job Network counts over 200 providers. Community-based and charitable organisations have a market share of 45 per cent, and private companies have a share of 47 per cent. The public agency succeeding CES, called Employment National, now primarily plays a role in the traditional function of matching job-seekers with vacancies, while its market share of intensive assistance to disadvantaged job-seekers has dropped to 1 per cent. Moreover, the number of sites in regional Australia from which the employment service is available has doubled with the second contract period, resulting from a shift towards smaller geographical tendering blocks, allowing providers to recover the costs of operating in remote areas through more differentiated subsidies.

With a field of providers as broad as the 200 Job Network members, it is important to ensure appropriate mechanisms for transparency and quality control. A set of procedures has been developed for this purpose, including a central Customer Service Line open to complaints from users. Interestingly, the re-tendering in 2000 following the first two years of the Job Network, allowed the authorities to select among the market participants, thereby removing the poorest performing ones. Consequently the average performance of successful providers in the second tender of intensive assistance was 25 per cent above the average for all providers in the first Job Network. This illustrates that while user choice among providers can play a role in shifting activity towards better providers, the "market organisers" may play an important role in managing the exit of ineffective units. Recently, personal advisors have been introduced at Centrelink assisting disadvantaged job-seekers in choosing among services and suppliers.

Compared with other countries, the present system in Australia is less equipped to enforce active participation by unemployed lacking motivation. In many countries the public agency has the authority to withhold the payment of unemployment benefits if job-seekers do not show up for training or other assistance appointments in which they are obliged to participate. In Australia, private providers are only able to report events that may indicate grounds for a sanction, and given the need for cross-checks by public authorities to avoid unjust treatment of job-seekers, processes which enforce job-seeker obligations of this kind can become relatively cumbersome.

1. 15 per cent of the providers have specialised in providing services only to targeted groups on the labour market, including disabled and indigenous people.

Sources: OECD (2001*a*), Riggs (2000) and Webster and Harding (2001).

Outsourcing of support functions, contracting and public private partnerships

42. Outsourcing of support functions by the institutions supplying publicly funded services plays some role in all OECD countries -- but retaining support functions in-house tends to be more common than in business service sectors. Based on input-output statistics, Figure 4 shows what inputs are used by different sectors. For example in France, input from other sectors account for 27 per cent of production value or output from public administration and defence. Around half of these inputs come from service sectors, while the other half is commodities, power and construction inputs.[13] The 73 per cent of production value not reflecting inputs is the value added of the public administration and defence sector. On average across the countries in Figure 4, public administration and defence buy support services from firms in telecommunication, transport, catering, insurance, IT, real estate, and other business service sectors with a volume corresponding to roughly 10-20 per cent of their production value. Australia, which has actively pursued contracting out as a policy of public management reform stands out with a higher share. Comparing the input composition of different sectors is inherently difficult where production processes are not alike. Still, business services including accounting, auditing, consultancy, architecture, engineering and legal services may resemble the activities of public administration and therefore its input composition (shown in the first columns) may be used as a rough benchmark. Indeed, in all the countries analysed, the production of these business services involves a larger share of sub-contracting for support services. The magnitude of the difference may indicate a scope for increased sub-contracting in the public administrations of OECD countries.

[Figure 4. Sub-contracting]

43. Support functions can be outsourced also *via* inter-governmental contracting. An example that is growing more common among OECD countries is to transfer the buildings and facilities used by public agencies to a separate public real estate entity responsible for maintenance, cleaning and security services. In Austria most government-owned buildings used by universities and federal ministries have been transferred to the fully government-owned corporation *Bundesimmobiliengesellschaft* (BIG), and in other countries including the Netherlands, Sweden, Norway and Denmark similar reforms have been implemented during the last decade. Such inter-governmental contracting may promote economies of scale and specialisation but also improve the allocative flexibility for public institutions as long as the buying agency has discretion to decide on where to buy the service. Indeed, charging a rent reflecting the market value may raise the effective utilisation and, for instance, induce a change to more adequate facilities in situations where public agencies for historical reasons occupy buildings that match their current needs poorly. Transferring assets to a separate government-owned corporation is not recorded as revenue and therefore does not affect general government deficit/surplus, but subsequently funding construction projects by borrowing within such a separate government owned corporation is off the balance sheet of general government. However, this in itself does not reduce future re-payments and therefore should be expected to have largely the same macroeconomic effects as public debt.

44. Across OECD countries, cases of contracting with private or public suppliers can be found in virtually any service area. In Australia, contracting for information technology, building maintenance, security, management and library services is common. In New Zealand, half of the activities previously

13 . Institutions in public administration also pay for/purchase some services from each other, but these have been eliminated from Figure 4, as statistical methods differ across countries.

handled in-house by the national audit office was taken through competitive tendering during the 1990s and were contracted out. In the United States, the contracting cities in California[14] represent an extreme case since, as their point of departure, they have contracted out virtually every service they provide to their citizens to external suppliers, while only directly employing a small secretariat for the city council. In street maintenance, accounting, city engineering, legal services, waste collection and water supply private firms play a large role, while for fire protection and libraries, the contracting cities typically choose between in-house production and provision by the larger special districts set up for these two services. In law enforcement, cities use two options: either setting up its own police department or contracting with the county sheriff. Consequently, virtually no producers of publicly funded services have a complete monopoly stemming from legally defined entry barriers.

45. For some countries, information on the involvement of external suppliers is available at a detailed service level or can be extracted from government accounts data, complementing the more aggregate statistics reviewed so far. Comparing the United States with Sweden, Norway and Denmark shows that the differences across OECD countries are not as one-dimensional as one might have expected (Box 5).

Public private partnerships and comprehensive contracting involving private finance of investments

46. Some services involve large assets, such as roads or the buildings used by a prison. Across OECD countries public agencies rarely undertake the construction of such physical assets, but rather contract with private construction companies. Some countries are developing new forms of comprehensive contracting where private investors design, build, own, maintain and operate facilities, meaning that government buys a service-flow rather that an asset and pays according to a formula depending on availability and maintenance state of facilities.

47. The United Kingdom is using this model to the greatest extent among OECD countries, having now concluded deals with a total net present value of more than 2 per cent of GDP (Table 8). Most deals have been made since the mid-90s. While construction and maintenance of physical assets, such as roads, railways and buildings for hospitals and schools account for most deals, the Public Private Partnership programme has been broadened to other types of assets, like IT-systems, and to encompass the full operation of services such as prisons. Construction and maintenance of buildings and employment of staff etc. are under one long-term financial contract. Many other European countries are systematically exploring the options for comprehensive private-finance contracts in relation to new infrastructure investment, and some, notably the Netherlands, are preparing and contracting a number of large-scale projects. In Australia and the United States private prisons are in several cases run as long-term contracts, with government payments based on criteria similar to those used in the United Kingdom under the PPP approach.

14 . The negative incentive effects from the ratchet and the low likelihood of bankruptcy being executed may co-exist despite the fact that the two effects rely on opposite expenditure stance from government. The disincentive effect from the ratchet arises from government being unable to commit to not being “tough”, while the disincentive effect from the soft budget constraint arises from government being unable to commit to not being “lean”. However, they elicit the same type of behaviour from the agency: stay inefficient with slack hidden as overstaffing, fringe benefits etc. If the slack is not revealed, the benefits from funding in excess of true costs continue to accrue to the agency. If the slack is revealed in some way or the other, and the budget is tightened by the (bureaucratic) principals this may limit these benefits but not entirely displace them, since ultimately the (political) principals find it prohibitively cumbersome to actually close the agency.

Box 5. **Comparing the United States with Sweden, Norway and Denmark using detailed surveys and government accounts data**

Information on the involvement of external suppliers at a detailed service level is shown in Table 7 for the United States, based on a nation-wide survey of cities and counties, and for Sweden, Norway and Denmark, based on the accounts of municipalities and counties. Given the differences in sources, described in the notes to Table 7, numbers should be compared across countries with caution. Still, the following picture emerges:

-- In basic technical service areas, such as waste collection, street repair and maintenance, the average extent of contracting out is similar in the United States, Norway and Denmark, although in Norway much of this is inter-governmental contracting. For waste collection, more than half of service provision is contracted out in the three countries, while for repair and maintenance services the average share contracted out by cities and counties is around one quarter or below.

-- Some technical services reveal interesting cross-country differences. For public bus transport systems, the involvement of private operators appears to be considerably higher in Norway than in the United States. For fire protection, voluntary (non-profit) fire brigades are common in the United States, but contracting with private firms is largely non-existing in both the United States and Norway. On the contrary, one quarter of fire protection is contracted for in Denmark, most of it with a private firm.

-- In public administration, contracting is used in the United States for a range of services, including tax collection and support functions like data processing and secretarial services, but in-house public production is most common.[1]

-- In recreation and culture, there is a tendency for more involvement of private suppliers in the United States than in the Scandinavian countries, including private firms maintaining and administrating cemeteries and non-profit organisations operating museums and libraries.

-- In social services and protection a similar pattern is found. In day-care for children, the difference is pronounced between the United States, where cities and counties rely on public production, private firms and non-profit suppliers in roughly equal shares, and the Scandinavian countries where private firms play only a limited role. Sweden differs from the other Scandinavian countries, however, as contracting for operation of day-care facilities and care for elderly and disabled has increased to a level close to 10 per cent, much of this being with private firms.[2]

[Table 7. Provision of publicly funded services in local governments, cities and counties]

1. Figures for the United States can be compared to Denmark, but not to Sweden, where data only cover functions narrowly connected to policymaking bodies, nor to Norway, where contracting out support functions may not be included in data.
2. Non-profit institutions organising publicly funded day-care for children play some role in Denmark, as documented earlier by Figure 2, but are not recorded as purchases of services in the local government accounts data of Table 7.

48. Seen in a historical perspective, these comprehensive contracts involving private finance follow a long tradition in many countries of giving concessions to private companies to develop, construct and operate infrastructure utilities while charging the users and not necessarily involving government in any financial transactions. For example in France, when channels, railways, city transport and gas and electricity utilities were initially constructed during the 19th century, it was largely based on private equity finance, and by 1 860 infrastructure companies accounted for almost 70 per cent of the total capitalisation at the Paris stock exchange. In more recent history, private finance has played a role in the construction of French highways as toll roads (Table 8). What is new about the infrastructure projects under the public private partnership programme is that services are now "sold" to government. Instead of collecting tolls from drivers, the contractor of a PPP-highway receives "shadow-tolls" from government, as, for example,

in the case of the *Järvenpää-Lahti* highway in Finland. The issue of giving the operators incentives to efficient design, construction and maintenance is thereby de-coupled from the question of funding.

[Table 8. Public private partnerships involving private finance of investments]

49. Some public private partnerships are based on joint public and private ownership. Such joint ventures may produce innovation by combining different categories of skills and realise business opportunities related to the core activities of public agencies, such as e-business based on information resources held by a public agency. Retaining a public ownership share is also thought of as a way for government to appropriate part of the gains from better performance and eventually windfall gains from refinancing of debt. However, the long-term effects could turn out to be mixed, if the involvement of government as an owner makes competition less strong and regulation less neutral among different players.

4. Conclusions and policy implications

50. The picture that emerges from this paper is that in OECD economies the two issues of public funding and public production are being increasingly de-coupled in the interests of enhanced efficiency of service provision and that a range of different institutional approaches are used to that end. Such arrangements may include the introduction of performance criteria to in-house public production, contracting out, and combinations of user choice models to introduce competition in service supply. At a technical and practical level, whether and to what extent competition and user choice can be introduced, and by what instruments, depends on the characteristics of the service provided.

- *Benchmarking and internal performance contracts* have to be used for core collective services, including public administrative functions, since introducing competition is hardly feasible; in-house public production using such soft incentives may be also appropriate for providing individually-consumed services where these are hard to assess except by suppliers.

- *Competition through competitive tendering and contracting* can be introduced for support functions in the production of core services, such as maintenance of buildings and equipment. Likewise, services such as waste collection and operation of urban transport systems etc. can be submitted to competitive tendering and contracting. Competitive tendering and contracting, with one supplier for a defined geographical area, may also be appropriate for publicly funded services used by individuals, if service suppliers would have substantial market power in the local area, where changing supplier entails large sunk costs for individual users, or where service quality can be best assessed by professionals.

- *Competition through user choice with subsidised provision* can be introduced by using subsidies, *via* tax credits or vouchers. In post-compulsory education, users can typically choose among different public institutions. Competition is also possible in the case of early childhood education and care and long-term care for elderly and disabled, where countries may rely on a mix of suppliers and give subsidies/tax credits for the purchase of private care, making service supply open to competition and entry. However, where service assessment requires professional insight, restricting the choice to a limited number of approved suppliers may be advisable.

51. Involving private firms as suppliers may make competition more dynamic, as they are more likely than public agencies and private non-profit institutions to seek an aggressive expansion of their activities. However, private firms might have incentives to engage excessively in marketing or offer side benefits that may attract and catch the attention of users but are not warranted for public funding. In that

case, restricting market access to existing public institutions or non-profit organisations may be advisable. Fixing the voucher value while allowing users to top up with additional payments can be a way of cutting off such excess demand, since users carry the full marginal costs of service improvements, but in many service areas welfare-economic arguments as well as social preferences limit the applicability of user charges. Governments may therefore have recourse to capacity controls, including on the number of service licences, and to restrictions on the training of professionals.

52. With respect to the actual innovation in service provision processes among OECD economies, the analysis in the paper gives the following picture:

- While most students by far attend public schools during *primary and secondary education*, the share of private institutions increases with education level and the degree of orientation towards professional skills, with privately-owned and privately-funded *tertiary education* institutions being more common than public institutions in Japan and Korea, while accounting for around one third of university students in the United States.

- *Childcare* for all parts of the population is considered a public service in only a few countries, although cash-benefits and tax credits to cover childcare expenses play a wider role. By contrast, governments typically intervene for pre-school education and then typically through public institutions.

- The extent of public involvement in *long-term care for the elderly and disabled* varies greatly across countries, although there is a general tendency for formal care to expand in response to ageing. Many countries subsidise long-term care through a spectrum of cash benefits and voucher-like arrangements, the former method facilitating informal employment of attendants or within-family care.

- In *employment services*, most OECD-countries involve a broad set of suppliers in training of job-seekers, and Australia has gone particularly far, combining user choice with contracting to ensure effective competition.

- *Sub-contracting of support services* is widespread, but generally applied less in public administration than in business services.

Overall, the pattern of private sector involvement in publicly funded service provision appears to be as yet a heterogeneous one, but the process of introducing competition does seem to have become important, in many cases, to public expenditure reform.

Table 1. **Typology of service provision modes**

	Strategic planning of sector development	Unit choosing the supplier	Market access	Range of potential suppliers	Funding	Example
Publicly funded services						
Public agencies serving fixed user constituencies	Government	Government	Restricted	Only the incumbent government agency	Public	Municipal police department
Intergovernmental agreement	Government	Government	Restricted	Government agencies	Public	A municipality buying administrative services from an agency of a neighbouring municipality
Contracting based on competitive tendering	Government	Government	Open	Government, non-profit organisations or private firms	Public	School cleaning contracted out
Grant	Government	Government	Can be unclear to potential entrants if not clearly specified	Non-profit organisations	Public	Subsidised theatres
User choice among public suppliers (implicit voucher)	Government	Users	Restricted	Government agencies	Public	Students may apply to the public university they prefer, which funding depends on the number of students
Voucher	Government	Users	Open	Government, non-profit organisations or private firms	Public	Vouchers for housing
Mandatory insurance	Government	Users or insurance agencies	Restricted or open	Government, non-profit organisations or private firms	Users via insurance contributions	Mandatory insurance in long term care for elderly
Broader government involvement						
Government enterprise	Government	Users	Restricted or open depending on market	Government	Users	Government owned airlines or government agencies selling by-products
Franchise in natural monopolies	Government	Government	Restricted	One private firm	Users	Waste collection by private firms charging users directly
Non-public parts of the economy						
Private sector market	n.a.	Users	Open	Private firms	Users	Food markets
Voluntary service	Voluntary organisations	Users	Open	Voluntary organisations	n.a.	Soup kitchens for homeless
Household production	n.a.	n.a.	n.a.	Households	n.a.	Child and elderly care within family

Table 2. **Empirical studies of savings from competitive tendering and contracting**

	Service	Method and data	Estimated cost savings	Other findings
Australia				
Domberger, Hall and Li (1995)	Cleaning services	Cross-section estimation with data for cleaning in a total of 61 schools, offices and hospitals in the Sydney region	Tendered cleaning by private firms is found to be 49% lower for ordinary schools and 53% lower for special schools than for non-tendered cleaning by public employees	The quality of tendered cleaning by private firms in special schools is measured by an independent team of controllers to be 35% higher that non-tendered public cleaning.
Farago and Domberger (1994)	Various services	Before and after analysis with data from New South Wales Government Trading Enterprises	4 to 47%	
Rimmer (1993)	Various services	Cross-section estimation with data from 327 local governments in New South Wales and Victoria	1 to 53%	
Domberger, Farago, Hall and Li (1993)	Various services	Before and after analysis with data from New South Wales budget sector	4 to 51%	
Albin (1992)	Various services	Cross-section estimation with data from 58 local governments.	Not statistically significant	
Australian Chamber of Commerce (1988)	Various services	Cross-section analysis with data from local governments in South Australia and Tasmania	9 to 46%	
Rimmer (1988*a*)	Household waste collection	Cross-section analysis with data from local governments in Victoria	17%	
Canada				
McDavid (1985)[1]	Waste collection	Cross-section estimation with data from nation-wide survey covering 109 cities	29%	
Denmark				
Blom-Hansen (2000)	Road maintenance	Cross-section estimation with data from 264 municipalities.	16 to 31% depending on model specification. (Calculated as the savings if changing from minimum to maximum involvement of private contractors for a municipality with average characteristics)	The effect of contracting out services was found to be stronger when controlling for changes in service quality.
Christoffersen, Paldam and Würtz (1999)[1]	School cleaning	Cross-section estimation with data from 1081 primary schools.	Private firms are 29% cheaper than de-centrally organised public cleaning	Private suppliers are found to be better able to exploit economies of scale in large schools. And in accordance with this public cleaning organised centralised by the municipality is found to be 6% cheaper than public cleaning organised de-centrally at each school.
Kristensen (1983)	Fire protection	Cross section with data from municipalities	20-40% despite the fact that there is only one private contractor.	

1. It is unclear what kind of competitive process preceded the contracting out of the service. The authorities may have conducted a competitive tendering process, simply bought the services at prevailing market prices or negotiated the price.

Table 2. **Empirical studies of savings from competitive tendering and contracting** (continued)

	Service	Method and data	Estimated cost savings	Other findings
Netherlands				
Dijkgraaf and Gradus (1997)	Waste collection	Estimation with data from 85 municipalities	Contracting reduces costs. Size varies depending on collection technique	
Sweden				
Ohlsson (1998)[1]	Waste collection	Cross-section estimation with data from 170 units in 115 municipalities	–14% (that is public production is cheaper, conditioned on the choice of technology)	
Ohlsson (1996)	Procurement			Finds that public sector enterprises pay 10-15% more than private firms for homogeneous garbage trucks.
Switzerland				
Pommerehne and Frey (1977)[1]	Waste collection	Cross-section estimation with data from 103 cities	20%	
United Kingdom				
Szymanski (1996)	Waste collection	Panel estimation with data from 315 local governments covering 1984-94.	For the period when authorities have implemented the *compulsory* competitive tendering: 21% for contracts won by outside operators and 10% for contracts won by in-house teams	
Citizen's Charter (1995)	Various services	Before and after analysis with data for central government departments	16 to 33%	
Szymanski and Wilkins (1993)	Waste collection	Cross-section and panel estimation with data from 149-318 local governments covering 1984-88 (the sample size declines over the period). However only 11-25 authorities contract out and 2-8 have in-house production following competitive tendering	Around 20% savings. Weak tendency for larger savings when contracts are won by outside operators rather than in-house teams following competitive tendering.	The lower costs from contracting out are associated with lower employment rather than lower direct wages, indicating that true productivity gains are realised.

1. It is unclear what kind of competitive process preceded the contracting out of the service. The authorities may have conducted a competitive tendering process, simply bought the services at prevailing market prices or negotiated the price.
2. In these studies savings are simply calculated as an average for each type of service without testing the statistical significance.

Table 2. **Empirical studies of savings from competitive tendering and contracting** (continued)

	Service	Method and data	Estimated cost savings	Other findings
United Kingdom (continued)				
Walsh and Davis (1993)[2]	Waste collection, cleaning of streets and buildings, catering, maintenance of vehicles and grounds, and leisure management	Before and after analysis with data from 40 local authorities covering the implementation during 1989-92 of the 1988-act on compulsory competitive tendering	–3 to 13% depending on service. These figures represent total costs including the costs incurred when preparing for competitive tendering	Examining cost overruns it was found that in 17% of the cases payments turned out to be higher than the original tender price, while for 11% payments turned out to be lower.
Milne and McGee (1992)	Hospital services	Cross-section estimation with data from regional health authorities	Not statistically significant	
Walsh (1991)[2)]	Waste collection, cleaning of streets and buildings, catering, and maintenance of vehicles and grounds.	Before and after analysis with data from 24 local authorities covering the first years implementation of the 1988-act on compulsory competitive tendering	–6% (in the case of street cleaning, where the local authorities state that service levels have been raised) to 17% depending on service. These figures represent total costs including the costs incurred when preparing for competitive tendering	Production becomes more capital intensive. Following competition around 5 percentage points of total costs are shifted from labour to capital
Confederation of British Industry (1988)	Various services	Before and after analysis with data for central government and the National Health Service.	9 to 23%	
Domberger, Meadowcroft and Thompson (1987)	Hospital domestic services	Cross-section estimation with data from hospitals for two years	34% for competitive tendering won by outside operators 22% for competitive tendering won by in-house teams	
Cubbin, Domberger and Meadowcroft (1987)	Waste collection	Calculation of average distance from technical efficiency frontier based on data on physical inputs and outputs for the same sample as Domberger, Meadowcroft and Thompson (1986)	17% for competitive tendering won by outside operators (17 cases) 7% for competitive tendering won by in-house teams (9 cases)	These figures represent only the effect from raising effort or productivity with at given input-combination, indicating that this contributes more to savings than changes in the combination of inputs and reductions in wages, overhead costs etc. reflected in the difference between these figures and the total savings estimated by Domberger, Meadowcroft and Thompson (198).
Domberger, Meadowcroft and Thompson (1986)	Waste collection	Cross-section estimation with data from 317 local governments pooled for 1984 and 1985	22% for competitive tendering won by outside operators (17 cases) 17% for competitive tendering won by in-house teams (9 cases)	

2. In these studies savings are simply calculated as an average for each type of service without testing the statistical significance.

Table 2. **Empirical studies of savings from competitive tendering and contracting** (continued)

	Service	Method and data	Estimated cost savings	Other findings
United States				
Mehay and Gonzalez (1985)[1]	Law enforcement	Cross-section with data from Californian counties	9 to 20%	
Stevens (1984)[1]	Various services	Cross-section estimation with data from 20 cities in the Los Angeles region	27 to 49% except for payroll preparation where the cost difference was not statistically significant.	
Bennet and Johnson (1980)	Various services, including debt collection, ship repair and weather forecasting	Cross-section comparison	Find high savings, but small samples.	
Edwards and Stevens (1978)[1]	Waste collection	Cross-section estimation with data from 77 cities	29% and 9% when adjusting for possible economies of scale.	
Savas (1977)[1]	Waste collection	Cross-section estimation with data from nation-wide survey of cities.	9%	
Spann (1977)[1]	Waste collection	Cross-section estimation with data from Monmouth County	Average of 30% savings from contracting.	
Hirsch (1965)[1]	Waste collection	Cross-section with data from 24 cities and municipalities in the St. Louis area, Missouri.	Finds no significant cost difference between public and private firms.	

1. It is unclear what kind of competitive process preceded the contracting out of the service. The authorities may have conducted a competitive tendering process, simply bought the services at prevailing market prices or negotiated the price.
2. In these studies savings are simply calculated as an average for each type of service without testing the statistical significance.

Sources: Based on Borcherding *et al.* (1982), Industry Commission (1996) Appendix E and own compilations of the literature.

Table 3. **Early childhood education and care, 1998**

	Public and social security spending on family cash benefits	Children aged 0, one and two years	Children aged from three to compulsory school age[2]		
		Share served in (partly) publicly funded institutions[1]	Public spending[3]	Private spending	Share of four year olds served
	% of GDP	*%*	*% of GDP*		*%*
Australia	2.2	5			73
Austria	1.9		0.5	0.0	75
Belgium	2.1	30	0.5	0.0	99
Canada	0.8	5	0.2	0.0	38
Czech Republic	1.6		0.5	0.1	82
Denmark	1.5	48	0.9	0.3	91
Finland	1.9	21	0.4	0.0	40
France	1.5	23	0.6	0.0	100
Germany	2.0	2	0.4	0.2	78
Greece	1.2				56
Hungary	1.1		0.7	0.0	89
Iceland	1.2		0.3	0.0	91
Ireland	1.6				
Italy	0.6	6	0.4		100
Japan	0.2		0.1	0.1	65
Korea	0.0		0.0	0.1	27
Mexico	0.0		0.3	0.1	95
Netherlands	0.8	8	0.4	0.0	98
New Zealand	2.6		0.2	0.0	95
Norway	2.2	20	0.6	0.0	77
Poland	0.9		0.5	0.0	31
Portugal	0.7		0.2	0.0	68
Spain	0.3		0.3	0.1	98
Sweden	1.6	33	0.6	0.0	69
Switzerland	1.2		0.2	0.0	30
Turkey	0.9		0.0	0.0	3
United Kingdom	1.7	2	0.4	0.0	96
United States	0.2	5	0.3	0.1	64

1. Data refer to mid-1990s.
2. Data include pre-primary education and organised centre-based programmes designed to foster learning and emotional and social development in children from three years to compuslory school age as recorded in the OECD Education Database. Some types of day care like play groups and home-based programmes are not included.
3. Public expenditure includes direct funding of institutions as well as subsidies to households, but not tax-expenditures arising from tax credits for child care expenditure.

Sources: OECD Social Expenditure Database, Meyers and Gornick (2000), Rostgaard and Fridberg (1998), OECD Education database and national sources.

Table 4. **Subsidies and tax credits for early childhood education and care**
Arrangements by mid-1990s or latest available information

	Subsidies for purchase of private care	Tax relief for purchase of private care	Government incentives/support for employer contributions
Australia	Child Care Benefit earmarket for childcare provided in Commonwealth-approved services. All families are eligible for a minimum amount, and assistance increases as family income decreases		
Belgium		Deduction to reduce taxable income by 80% of actual costs to maximum of BF 345 per day (US$9) (employed), by up to BF 11 000 (US$299) per year (nonemployed)	Employers provide 0.5% of wage bill for development of services for children 0-3
Canada	Limited number of subsidies for low-income families, paid directly to providers, subsidy for low-income parents in training program of CN$20 (US$17) per child to maximum of CN$65 (US$54) per diem	Deduction of childcare expenses for working parents to a maximum of CN$5 000 (US$4 137) *per* child under seven and CN$3 000 (US$2 482) per child 7-14	
Denmark	Local authorities can give a cash grant to parents with a child 24 weeks-3 years if unable to provide services, half the actual cost to a maximum of DKK 20 000 (US$2 372) per year		
Finland	Allowance for purchase of private centre-based or family-based day care paid directly to the provider. Basic flat-rate payment of FIM 700 (US$130) per child per month, with earnings supplements		
France	Subsidies for parents using registered family day carers of up to FF 800 (US$134) per month (child under 3) and FF 400 (US$67) per month (child 3-6) or subsidies for social security contribution for in-home carers	Tax reductions for employed parents of up to 25% of childcare costs to a limit of FF 3 750 (US$626) (per child) annually, and 50% of costs up to FF 45 000 (US$7 514) annually for in-home care	

Note: Amounts are expressed in national currency units, followed, by the equivalent amount in 1996 US$, PPP-adjusted.
Sources: Meyers and Gornick (2000), OECD (2001*f*), Rostgaard and Fridberg (1998) and national sources.

Table 4. **Subsidies and tax credits for early childhood education and care** (continued)
Arrangements by mid-1990s or latest available information

	Subsidies for purchase of private care	Tax relief for purchase of private care	Government incentives/support for employer contributions
Germany	Limited number of subsidies for low income parents using private family day care services approved by local authorities, paid directly to the family day carer or the centre	Tax deduction available for working lone parents and for married couples only if one parent is sick or disabled	
Italy			Employers contribute 0.1% of wages for social services, which may be spent on nurseries for children under three
Luxembourg		Tax relief for the costs of (public or private) services for children under 14, reduce taxable income by documented costs or maximum of LF 24 000 (US$616) per child annually	
Netherlands		Deduction of portion of actual amount of private arrangement to maximum of NLG 20 000 (US$9 847) annually, employers can deduct employer-provided care from taxable earnings	Stimulative measure on childcare to encourage employers to sponsor centres for younger children. Estimate employers now subsidise 25% of costs
Norway	Cash benefit of NOK 3 000 (US$316) monthly per child aged 1 or 2 years not enrolled in day care centre receiving state grants. The benefit is not meanstested and not taxed		
United Kingdom		Low- and middle-income families can deduct daycare cost up to £100 (US$135) per week for one child and £150 (US$203) for two or more children	
United States	Limited number of subsidies for low-income parents in welfare employment programs or employment, maximum amount varies by state	Non-refundable tax credit for actual childcare expenses for employed parents, maximum credit of $800 for one and $1 600 for two children	Employers can deduct portion of costs of childcare from taxable payroll

Note: Amounts are expressed in national currency units, followed, by the equivalent amount in 1996 US$, PPP-adjusted.
Sources: Meyers and Gornick (2000), OECD (2001*f*), Rostgaard and Fridberg (1998) and national sources.

Table 5. **Long-term care**

	Public and mandatory insurance spending on formal long term care for elderly (1992-1995)[1]	Public and mandatory insurance spending on formal long-term care for elderly and disabled (1997)[2]	Share of population aged 65 and over in institutions[3]	Share of population aged 65 and over receiving formal help at home[4]	Suppliers of formal help at home
	Jacobzone (1999) estimate	*OECD Health Data*			
	Per cent of GDP		***Per cent***		
Australia	0.7	0.7	6.8	11.7	
Austria		0.5	4.9	24.0	
Belgium	0.7	0.4	6.4	4.5	
Canada	0.8		6.2 to 7.5	17.0	
Denmark	2.2	3.1	7.0	20.3	Mainly public
Finland	0.9	1.6	5.3 to 7.6	14.0	Public (90%), voluntary org. and private firms (10%)
France	0.5	0.7	6.5	6.1	Non-profits and some public
Germany	0.8	0.7	6.8	9.6	Non-profits and private firms
Greece		0.3			
Ireland		0.4	5.0	3.5	
Italy		0.2	3.9	2.8	
Japan	0.2/0.6[5]	0.3	6.0[6]	5.0	
Luxembourg		0.4	6.8		
Netherlands	1.8	0.4	8.9[6]	12.0	Mainly non-profits, some private firms
Norway	2.8	3.0	6.6	26.0	Public (99%) and private (1%)
Portugal		0.2			
Spain		0.3	2.9	1.6	
Sweden	2.7	3.8	8.7	11.2	Public (92%) and private contractors (8%)
Switzerland		0.3			
United Kindgom	1.0	0.6	5.1	5.5	Public (77%), private firms (19%) and voluntary org. (4%)
United States	0.7	0.0	5.7	16.0	

1. Long-term care spending refers to the care needed to help older persons leading an independent life, at home or in an institution. It excludes informal help. For home care, it should include all home care services, including district nurses services, excluding medical visits. For institutions, it includes all the costs related to care and lodging, including help for all self-care activities, but excluding medical costs. Public costs includes all costs incurred by public institutions, municipalities, sickness funds or old age funds. Definitions are not fully homogenous across countries as Jacobzone (1999) has drawn the information from different sources.
2. Estimates for long-term care expenditure in OECD Health Data 2001 differ from the figures estimated by Jacobzone (1999) as they include long term care for disabled, but exclude a considerable share of long-term care programmes.
3. Estimates may vary according to the concept chosen for institutions (sheltered housing, hotels for the elderly, medical homes). Normally, the concept described should include only staffed homes. For Denmark the concept of older persons refers mostly to over 67.
4. Proportion of older persons receiving formal help at home, including district nursing, and help with Activities of Daily Living. For Australia, this does not include the population receiving carer payment.
5. The data of 0.2 corresponds to present spending for care to the older person in 1995 (not including hospitalisation costs) while 0.6 corresponds to the additional spending involved by the current long-term care insurance adjusted with the 1995 population.
6. Some of the residential accommodation is provided within hospitals.

Sources: Jacobzone (1999), OECD Health Data, Rostgaard and Fridberg (1998), Hansmann (1996) and national sources.

Table 6. **Subsidies and tax credits for long-term care**
Arrangements by 1998/99 or latest available information

	Name of programme	Programme category and conditions	Rate of take up among the frail elderly	Amount per period	Patterns of use
Australia	Carer Payment (formerly Carer Pension)	Means tested income support to carer who can only take other work for a maximum of 20 hours a week		462 euros per month for a single person. 386 euros per month for a member of a couple. These rates are close to unemployment insurance minimum	
	Carer Allowance (Replaced Domiciliary Nursing Care Benefit and Child Disability Allowance)	Cash benefit paid to relatives caring at home for an elderly who would otherwise be eligible for nursing home		98 euros per month, equivalent to one-fifth of age pension	
Austria	Attendance Allowance *Pflegegeld*	Cash benefit paid to the disabled with no restrictions on its use	About 60% of disabled older persons, with a mild definition of disability	Payments according to level of dependency: level 1: 145 euros, level 7: 1 530 euros	Of those caring for recipient of an Attendance Allowance
			About 100% of eligible persons, based on the 7-level disability criteria		1.2% have a formal contract. 25% receive pay regularly. 23% receive pay irregularly. 33% have no explicit
Canada	Caregiver Tax Credit	Tax credit for low-income individuals living with or providing care for an infirm relative over 65		21 euros per month	
	Quebec-respite for Carer's	Subsidy to care-giver to purchase respite care without restriction on who is hired.		33 euros per month	
Finland	Informal Carer's Allowance *Omaisloidon Tuki*	Benefit paid to the care-giver who may be anybody the elderly chooses	1.8% of total elderly persons (estimated to be 20% of the potential eligible persons)	Range: 42 – 925 euros depending on degree of dependency	
	Pensioner's Care Allowance *Eläkkensaajien hoiotuki*	Cash benefit paid to disabled or frail pensioners with no restrictions on its use	4% of total elderly persons (estimated to be 40% of the potential eligible persons)	3 levels: 46 euros, 116 euros and 232 euros	
France	Dependency Allowance *Prestation spécifique dépendance*	Benefit to the elderly which may be either channelled to a residential institution or used for hiring a personal attendant. Relatives except spouses may be hired on the condition that they are unemployed	1% of total elderly persons (estimated to be 10% of the potential eligible persons). 12% of the frail elderly over 65 receive support	Ceiling: 869 euros per month Average: 488 euros. Payment varies by level of dependency and by income of the recipient	From an experimental assessment, patterns of hourly use: 38% hired an employee at home; 31% contracted with an employment service; 22% paid a relative; 9% used for housekeeping help

Table 6. **Subsidies and tax credits for long-term care** (continued)
Arrangements by 1998/99 or latest available information

	Name of programme	Programme category and conditions	Rate of take up among the frail elderly	Amount per period	Patterns of use
Germany	Long-Term Care Allowance *Pflegegeld*	The elderly can choose between services and a cash benefit. There are no restrictions on the use of the cash benefit	9.4% of elderly (over 60) receive benefits or services, around 100% of the eligible population	Level 1: 204-383 euros per month Level 2: 409–920 euros per month Level 3: 664-1 431 euros per month The higher amounts are available if the payment is used to purchase formal services	The domiciliary home care option is taken by 71% of recipients of which the overwhelmingly majority take cash, with the rest taking combinations of cash or services or the domiciliary care package
Japan		Tax crdit for individuals living with and supporting elderly aged 70 years or more		4 100-5 000 euros annually deducted from taxable income	
Netherlands	Carer Leave *Loopbaanon-derbreking*	Benefit paid to carer		Maximum: 417 euros.	
Sweden	Carer Leave *Närståen-depenning*	Benefit paid to relative or friend caring on full-time for a terminally ill person		Maximum: 1164 euros per month. Average: 236 euros per month	
United Kingdom	Invalid Care Allowance	Benefit paid to carer who must have low income and not a full-time student		247 euros per month	

Note: Amounts have been converted from national currencies to euros based on nominal exchangerates.
Sources: Jenson and Jacobzone (2000), Rostgaard and Fridberg (1998) and national sources.

Table 7. **Provision of publicly funded services in local governments, cities and counties**

United States				Sweden			Norway				Denmark		
	Involvement of external suppliers			Involvement of external suppliers replacing in-house production		Public expenditure		Involvement of external suppliers replacing in-house production		Public expenditure		Contracting and purchase of final and intermediate services from private suppliers	Public expenditure
	Other parts of government	Non-profit	For-profit	Other parts of government	Private firms and non-profits			Other parts of government	Private firms and non-profits				
	%	%	%	%	%	% of GDP		%	%	% of GDP		%	% of GDP
Technical and infrastructure services													
Residential waste collection	3	0	56				Waste collection	40	27	0.1	Waste collection, treatment and disposal	75	0.3
Commercial waste collection	3	0	67										
Solid waste disposal	19	0	44				Waste treatment	44	16	0.1			
Sewage collection and treatment	24	0	8				Sewage collection and treatment	19	7	0.2	Sewage collection and treatment	48	0.2
Water distribution	14	1	7				Water supply and distribution	24	1	0.1	Water supply and distribution	28	0.1
Water treatment	21	1	5										
Buildings and grounds maintenance	1	2	21										
Building security	2	1	17										
Vehicle maintenance	1	2	26										
Street repair and maintenance	5	1	26				Road and street maintenance, snow plowing and sanding	23	2	0.7	Road and street maintenance, snow plowing and sanding	39	0.4
Street and parking lot cleaning	3	1	18										
Snow plowing and sanding	5	0	12										
Traffic sign/signal installation and maintenance	12	0	19										
Parking meter maintenance and collection	8	2	10										
Operation of parking lots and garages	7	2	15										
Vehicle towing and storage	4	3	77										
Public bus transport	40	8	21				Public bus transport	7	83	0.2	Public bus transport	16	0.1
Public order and safety													
Crime prevention and patrol	6	3	0										
Prisons and jails	37	1	2										
Traffic and parking control	7	2	1										
Fire protection	9	16	1				Fire and accident protection	12	3	0.2	Fire and accident protection	28	0.1
Ambulance service	12	18	27				Ambulance service	5	59	0.1			

Table 7. **Provision of publicly funded services in local governments, cities and counties** (continued)

United States				Sweden				Norway				Denmark		
	Involvement of external suppliers				Involvement of external suppliers replacing in-house production		Public expenditure		Involvement of external suppliers replacing in-house production		Public expenditure		Contracting and purchase of final and intermediate services from private suppliers	Public expenditure
	Other parts of government	Non-profit	For-profit		Other parts of government	Private firms and non-profits			Other parts of government	Private firms and non-profits				
	%	%	%		%	%	% of GDP		%	%	% of GDP		%	% of GDP
Public administration														
				Policymaking bodies	1	1	0.2	Policymaking bodies and administration	2	1	1.8	Policymaking bodies and administration	16	2.0
Payroll	1	0	6											
Tax assessing	36	0	6											
Data processing	3	0	13											
Collection of delinquent taxes	26	1	13											
Secretarial services	0	1	7											
Personnel services	1	1	6											
Recreation and culture														
				Culture and leisure programmes	0	2	0.8							
Maintenance and administration of cemeteries	6	11	13					Maintenance and administration of cemeteries	4	2	0.01	Maintenance and administration of cemeteries	5	0.01
Operation and maintenance of recreation facilities	9	8	9									Operation and maintenance of sports facilities	22	0.1
Park maintenance	7	5	15									Park maintenance	13	0.1
Museums	20	49	5					Museums	3	24	0.02	Museums, theatres and cultural events	18	0.1
Cultural and arts programs	12	41	6					Cinemas, theater and cultural activities	2	5	0.2			
Public libraries	33	10	1					Public libraries	1	0	0.1	Public libraries	12	0.2
Social services and protection														
Daycare for children	13	27	39	Daycare and leisure programs for children	1	8	2.3	Daycare and leisure programs for children	0	5	0.9	Daycare and leisure programs for children	4	1.9
Child welfare programs	40	19	6	Child and family protection including residential institutions	8	19	0.8	Child and family protection including residential institutions	11	14	0.3	Child and family protection including residential institutions	4	0.3
Programs for elderly	21	27	6	Care and other programs for elderly and disabled	3	9	5.2	Care and other programmes for elderly and disabled	1	3	3.1	Care and other programmes for elderly and disabled	5	3.2
Homeless shelters	29	60	5											
Drug and alcohol treatment	31	29	16					Drug and alcohol treatment	18	33	0.1	Drug and alcohol treatment	5	0.05

Table 7. **Provision of public services in local governments and counties** (continued)
Notes

	Data source	Coverage	Notes
United States	ICMA survey; data for 1997 Morley (1999)	All US cities with population over 10 000, all counties with population over 25 000 and a sample of smaller cities. 32% answered the questionnaire	In the ICMA-survey, cities and counties are requested to mark the mode of service provision they use in different areas without giving information on the relative share in cases where several modes are used. The aggregate relative weight of different provision modes is estimated -- roughly -- by re-calibrating results so the sum of shares is 100% and by aggregating so private non-profit suppliers includes "private non-profit" and "volunteers", and private for-profit suppliers includes "private for-profit" and "franchises/concessions".
Sweden	Accounts of local governments only; data for 2000	Complete coverage	The data reflect both supply of final public services and larger-scale contracting for support functions like catering ("entreprenader"), but excludes purchases of smaller-scale services like telephone and travel (and also housing rent and purchases of goods). Both contracting with other parts of government (40% of total contracting) and with private suppliers (60% of total) is included. Figures show share of operation costs excluding transfers.
Norway	Accounts of local governments and counties reported to KOSTRA; data for 2000 www .odindep.no and www .ssb.no/kostra	For 2000 around half of local governments and one third of counties reported to KOSTRA. The table shows national figures presuming that the participating local governments and counties are representative.	KOSTRA distinguishes between purchases of goods and services to be used in own production versus services that replace own production. The numbers on Norway in the table therefore reflect the share of external supply of final public services, and do not include sub-contracting for support functions. This is calculated as final service purchased suppliers (art 370) as a share of the total operating expenditure, i.e. wages (art 010-099) and purchases of intermediate inputs, etc. (art 100-290), excluding transfers (art 400-480). The measure on inter-governmental contracting includes purchases from other part of government (art 300-350) and municipal corporations (art 380). In the case of leisure and sports, the involvement of non-profit organisations may be understates compared to the survey method used for the United States, as public funding may be recorded as transfers rather than purchases and therefore excluded.
Denmark	Budgets and accounts of local governments and counties; data for 2000 budgets. The index numbers in the table refer to the ordering in the local government budgeting and accounting plan	Complete coverage	The share of private service supply is calculated as the ratio of purchases of services (art 45 and 49) in the total operating expenditure *i.e.* wages, purchases etc. excluding inter-governmental payments, pensions, subsidies and transfers. That is, inter-governmental contracting is not included in data. Moreover, accounts data do not facilitate distinguishing between levels of contracting -- it treats the contracting of final public service like fire protection and the contracting of service inputs like cleaning needed for the public production of it in the same way. This method measures a higher share of contracting of final public services than direct surveys, where contracting of support functions used in public production of services is treated separately. Publicly funded non-profit institutions like in childcare are often part of the local government accounts and therefore are not counted as external purchase. Service provision organised entirely outside local governments is not measured, as data from accounts and budgets only reflect activities that result in economic flows within the local governments. Consequently, in public utilities like water, the data does not cover cases where services are supplied by private entities to users paying directly to the supplier – instead the budgeting and accounts data show the share of sub-contracting in the cases where local governments organise production.

Table 8. **Public private partnerships involving private finance of investments**
Contracts concluded up to and including 2000

	Value of contracts (Net Present Value of projected payments over the entire contract period)		Examples and comments
	Billion of euros	As per cent of GDP	
Australia			Private prisons
Austria/ Hungary			The Budapest-Vienna superhighway completed in 1996 was build and operated by a private consortium and financed by private funds backed by a government guarantee. Originally revenues were to be generated exclusively from tolls, but later intervention has been made to reduce the level of tolls implying a public subsidy
Finland			The Järvenpää-Lahti highway including re-construction and maintenance of 69 km highway for 15 years. Payment to the private consortium is based on the traffic volume (shadow tolls), but with a fixed upper limit to the total payments. Current policy, however, it not to use private finance arrangements. Consequently, for the first 60 km section of a new motorway between Helsinki and Turku currently – at 0.3 billion euros currently the biggest infrastructure investment under preparation – it is envisaged only to make a design-and-build contract with a private part, while the public road administration will be in charge of maintenance
Transport	0.2		
Total	0.2	0.1	
France			While not using the term PPP, the construction of French toll roads by private companies may be considered a comparable program. Today, out of total 8 800 km of highway, 7 300 km is toll road. 800 km thereof is run by private companies. Within the previous original framework established in 1970, concessions have been granted without competition but according to the financial position of the respective companies, thereby financing new investments by toll receipts from older roads. The figures here include only projects under the new framework with concessions now being granted on the basis of competitive tendering, making them comparable to UK PPP-projects. Both the latest concessions (the A28 highway in Normandie and Millau bridge) were won by new private consortia. Moreover, in the case of the A28 government pays a subsidy to cover part of the construction costs
Transport	1		
Total	1	0.1	
Germany			PPP projects are developing primarily in military procurement
Ireland			The National Road Authority has implemented some PPP projects and is now developing a set of schemes
Netherlands			Going beyond infrastructure, the use of PPP's is expanding to cover urban development, including the areas surrounding the Amsterdam World Trade Centre and the Hague Central Station, and research/knowledge centres, including the Quality Impulse project aimed at developing environment and agriculture in the souht and east sand areas.
Transport	1.4		Presently the first elements of the High Speed Line South railway from Amsterdam to the Belgian border to be completed in 2005 and the A59 Rosmalen-Greffen road are being contracted. More large scale rail and road projects are likely to be organised as PPP's.
Other infrastructure	0.5		Water purification in Delfland is currently being contracted
Total	1.9	0.5	

Table 8. **Public private partnerships involving private finance of investments** (continued)
Contracts concluded up to and including 2000

	Value of contracts (Net Present Value of projected payments over the entire contract period)		Examples and comments
	Billion of euros	As per cent of GDP	
Poland			In 1994, a program for a total of 2000 km motorway was initiated giving concessions to private firms to construct and operate toll-roads, while government being involved only with partial loan-guarantees. Until 2000, only 100 km of new motorway has been built, reflecting too optimistic GDP and trafic projection. Therefore, toll-revenues are now supplemented with public funding through road-availability payments to the consessionaires and government loan-guarantees are expanded.
Portugal			Beginning with roads the application of private finance has expanded rapidly with 14 deals being concluded in 2000 across the areas of transport, water and energy
Sweden			Railway from Arlanda airport to Stockholm
Switzerland			For the new Transalpine Railway Lines, totalling Euro10bn, PPP models have been considered, but for the basic construction of tunnels etc., work is now starting in a traditional publicly financed framework. The institutional arrangement for operation and maintenance will be decided later
Turkey			Concessions to private operators have been given in electricity production in order to boost investment. The extensive long term government guarantees given in order to attract private investment are now causing problems
United Kingdom			The PPP model is used to an increasing extent in a wide range of areas, including roads, railways, IT-systems, prisons and buildings for schools and hospitals. By 2001 more than 400 deals representing a total value of over 30 billion euros had been completed -- the bulk of which since 1996. A considerable number of deals are announced and being prepared that will ad to the values shown here.
Transport	19.9		
Health	4.3		
Education	1.7		
Public order and safety	0.7		
Defense	4.1		
Total	30.7	2.3	
United States			While toll roads are fairly common in the United States typically they are constructed by publicly-owend companies -- to some extent benefiting from favourable tax exemptions. Consequently, private capital is typically involved only through debt finance. However, there are a number of instances of contracting out the operation of toll collection. Private prisons hold around 3 per cent of prisoners
Developing countries			Private finance also plays a role for infrastructure in developing countries. However typically through concessions to private companies operating infrastructure utilities -- eventually with a stipulated date of handing over assets to the government. Recent examples include: Thailand: Bangkok Mass Transit System railway China: Highways in Shanghai and Hong Kong area. Ecuador: Toll-road Sri Lanka: Colombo Port Facility Argentina: Water and sewerage services for Greater Buenos Aires region Project finance plays a considerable role in channelling private investments to state owned enterprises more broadly in developing countries. According to the World Bank/IFC, just over half of the total global value of project finance transactions went to developing countries in 1997 and 1998

Note: To illustrate the magnitude of PPP contracts accumulated during the last decade, the table shows the total net present value of projected future payments throughout the duration of these contracts. Comparing these stocks to the flow of annual GDP illustrates how *broad* PPP contracts cover and for *how long* they have been used. Notice that contract net present values include both investment and costs of maintenance and other services.

Source: OECD based on national sources.

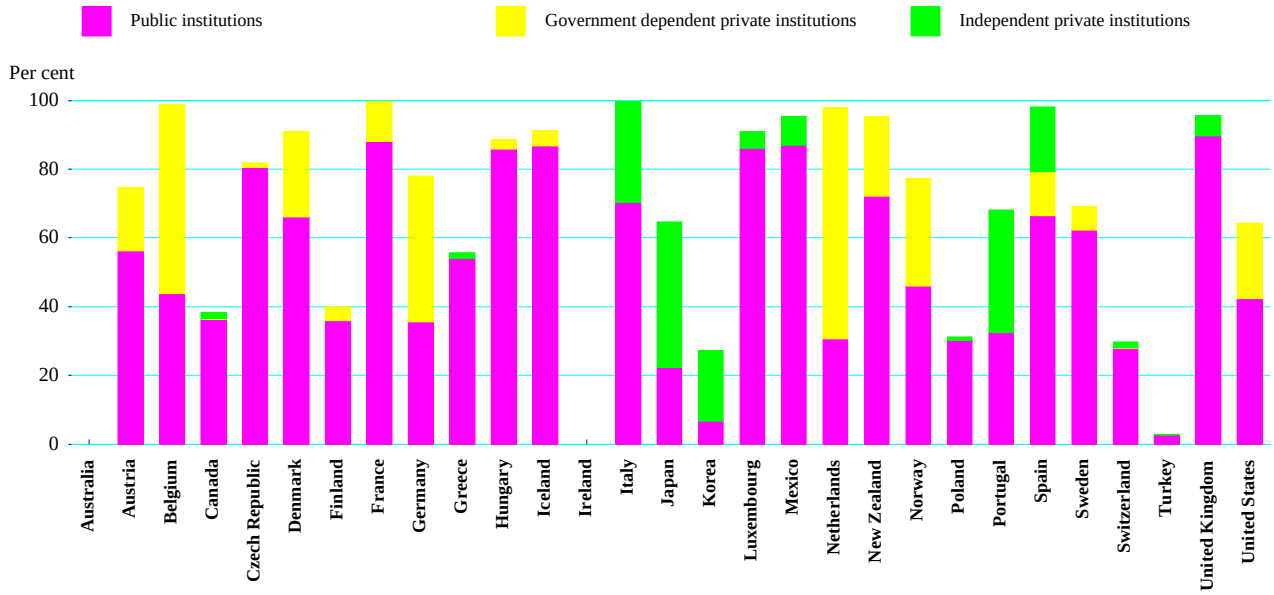
Figure 1. Public and private education institutions, 1999
Share of students enrolled

1. Flemish Community.
2. Representing 61% of total primary, secondary and tertiary enrolment across OECD countries. Primary education typically begins at age 5-7 and lasts 6 years, while lower secondary education typically lasts around 3 years.
3. Representing 20% of total primary, secondary and tertiary enrolment across OECD countries. Includes both preparatory and terminal programmes, lasting 2-5 years
4. Representing 4% of total primary, secondary and tertiary enrolment across OECD countries. Tertiary type B programmes have a minimum duration of 2 years full time equivalent at the tertiary level.
5. Representing 14% of total primary, secondary and tertiary enrolment across OECD countries. Tertiary type A programmes have a minimum duration of 3 years full time equivalent at the tertiary level including first and second degrees and have a theoretical orientation qualifying for research education and for entry into professions with high skill requirements such as medicine and law.

Note: Education institutions are classified as either public or private according to whether a public agency or a private entity has the ultimate power to make decisions concerning the institution's affairs. Private education institutions include both self-contained non-profit institutions, institutions controlled by churches or trade unions such institutions run as private business firms. A private education institution is classified to be government dependent if more than 50 per cent of its funding for basic educational services is received from government. For Norway and Germany data do not allow calculation of the precise share of government dependent and independent units among the private education institution, but as they are predominantly government funded, they are classified as such in the chart. The shares are based on the sum of full time and part time enrolment.

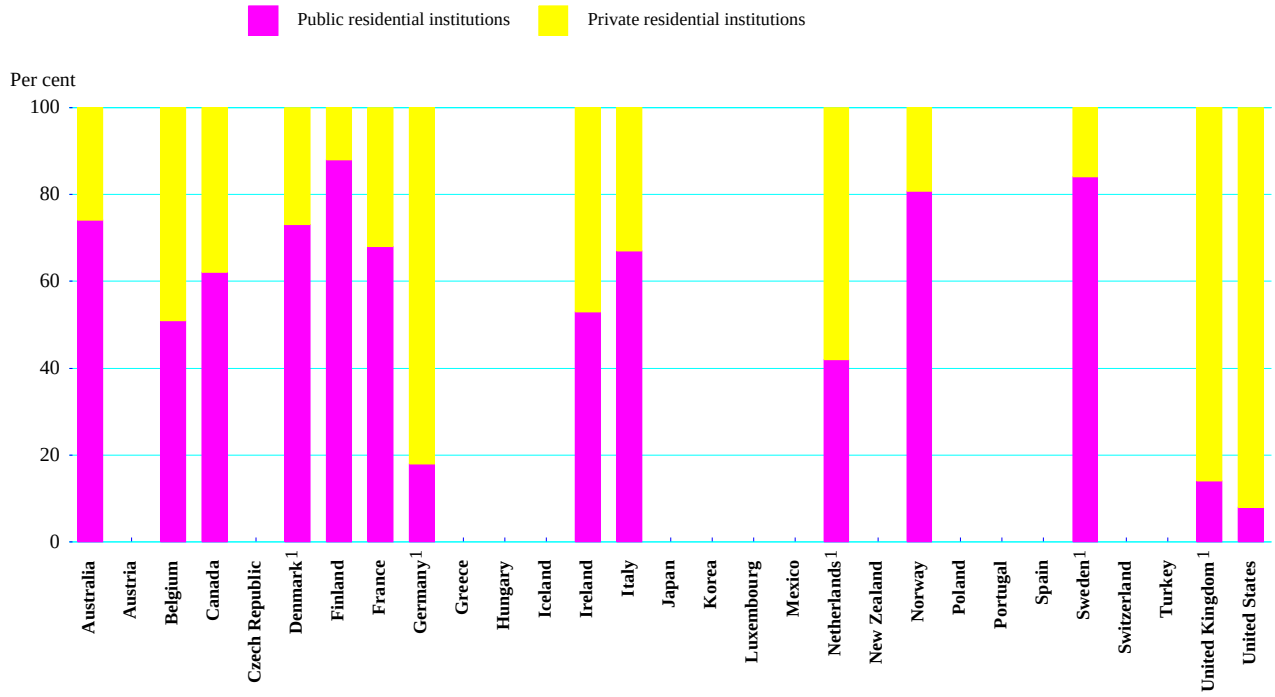
Source: OECD Education Database.

Figure 2. Public and private institutions in early childhood education and care, 1999
Share of children enrolled in pre-primary education and centre-based day care for children from 3 years



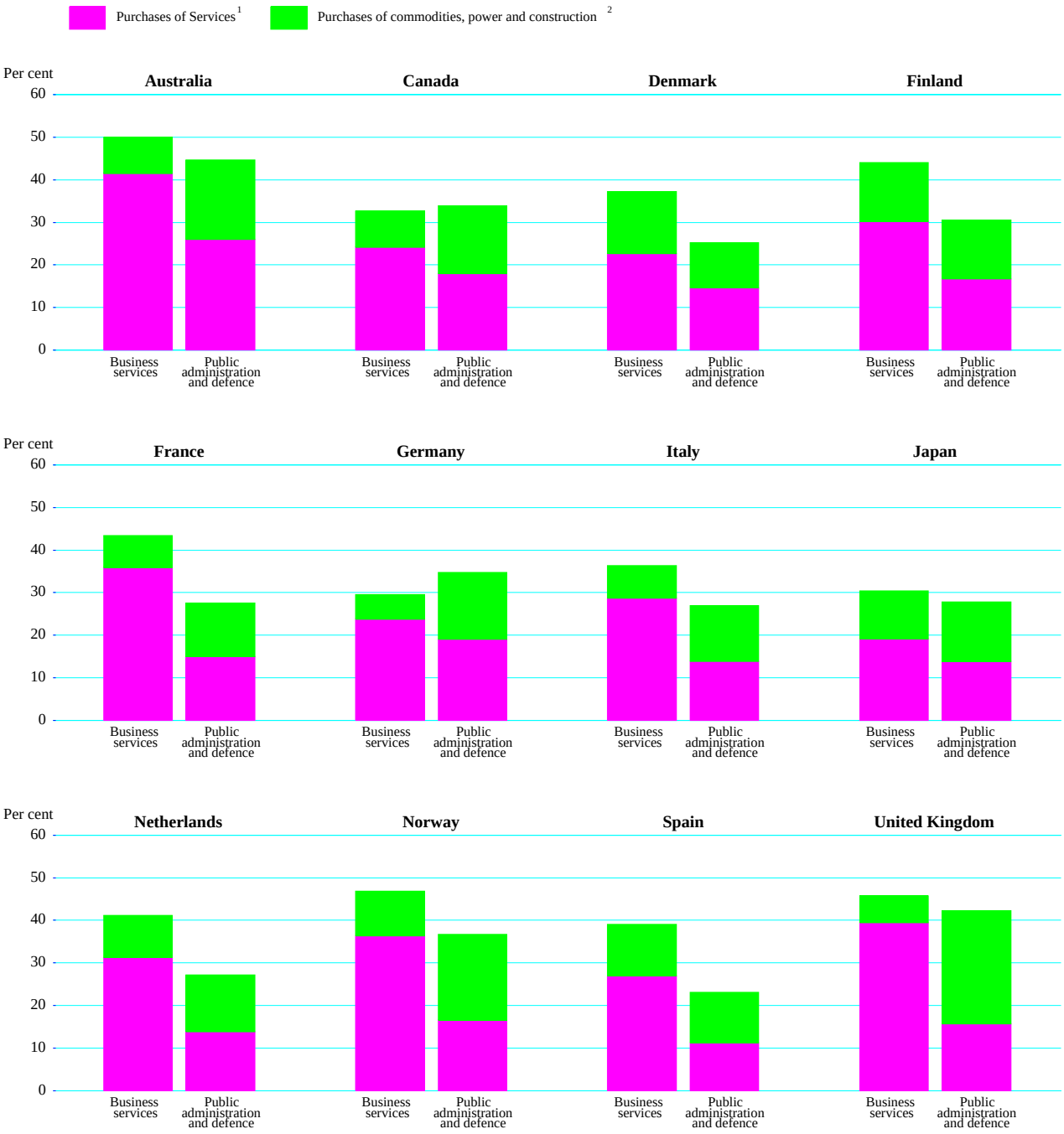
Note: The total size of columns shows the share of 4-year olds covered. Data refer to pre-primary education and organised centre-based programmes designed to foster learning and emotional and social development in children from 3 years to compulsory school age as recorded in the OECD Education Database. Some types of day care like play groups and home-based programmes are not be included in these data. For Norway and Germany data do not allow calculation of the precise share of government dependent and independent units among the private education institution, but as they are predominantly government funded, they are classified as such in the chart.
Source: OECD Education Database.

Figure 3. Public and private institutions in long term care for elderly, 1998
Share of beds in residential institutions



1. data refer to around 1996.
Sources: OECD Health Data 2001, Rostgaand and Fridberg(1998) and national sources.

Figure 4. Sub-contracting
Composition of inputs as a share of production value



Note: The figure shows what sectors supply the inputs used by business services and public administration and defence respectively. The remaining part of production value reflects value added in the firms and institutions internally, i.e. wages and surplus. Purchases from / payments to and among public administration, education, health, care and social and community services have been eliminated, as statistical methods differ across countries. The business services sector shown for comparison in the first columns include accounting, consultancy, architecture, engineering and legal services, ISIC 36. Public administration includes also agencies for compulsory social security schemes.
1. Services refers to input from telecommunication, transport,insurance and other kinds of business service sectors ISIC 27-36
2. Commodities, power and construction refers to input from ISIC 1-26.
Source: OECD, STI/EAS based on Input-output tables from national accounts.

Annex

Incentives under different institutional arrangements: Effects from competition and non-government ownership

53. The traditional view on the economic role of government has focused on the implications of externalities and the role for government to supply certain services. During the 1930's and 1940's virtually all economists conjectured that achieving allocative efficiency by overcoming pricing problems of natural monopoly would be the decisive criteria necessitating public ownership, as Shleifer (1998) points out. Practically none of the later Nobel laureates prominent in the debate had envisaged the extend of productive inefficiencies stemming from low-powered incentives and the allocative inefficiencies stemming from political interference in business management that by now stand out clearly from the subsequent experience with state owned enterprises across OECD, transition and developing countries.

54. In some way, that is not surprising given the complexity of institutional mechanisms, information asymmetries and inter-temporal incentives, but it underscores that the first and maybe most important point is to understand the magnitude of our ignorance: Probably we still know very little about the likely outcome from alternative provision modes for publicly funded services. Because of the richness of trade-offs and interactions between different mechanisms there is rarely a decisive theoretical answer to what organisational form is appropriate, as it depends on the weights of different objectives and circumstances and on the relative strength of effects -- about which we can only learn from trying. Moreover, this learning process is restrained by the inherent difficulty of measuring subtle institutional mechanisms and the poor availability of data on publicly funded services across countries, and of course it is limited to what countries have actually tried so far.

55. The purpose of this paper is to highlight the economic forces at work across different models for introducing competition and involving non-government owned suppliers of publicly funded services -- thereby helping to assess whether savings represent simple transfers or true efficiency gains to society as a whole.

56. The basic question is how efficiency of service provision can be enhanced by altering the system design on the dimensions of ownership and exposure to competition. That is efficiency both in the sense of productive efficiency, reducing the quantity of resources used to produce a given output, and allocative efficiency, providing the type and quantity of publicly funded services needed by users.

57. If ownership and competition matter for efficiency it is primarily through meeting the basic agency problem of monitoring and motivating the organisations delivering services to perform efficiently and pursue the public or political interests and objectives motivating public funding of the service.

58. In principle, there would be no scope for increasing efficiency through changing institutional arrangements and incentives, had there been no self-interest *what-so-ever* among the organisations delivering publicly funded services and their employees, or if the public principal had been *fully* informed about the conditions of service provisions and could monitor the operations without cost. In real life, however, public institutions like all other organisations may tend to develop their own agendas and interests including the wish to sustain their own existence and develop favourable conditions for their employees and other stakeholders. This is not to disdain the role played by a civil service ethos in public organisations. Indeed, public employees typically hold a professional pride in their work and consider it to be particularly important for society. It is merely to say that along with these social motives public

employees and managers -- like other employees and managers -- are likely to follow some degree of self-interest, meaning that in sum public agencies and institutions are not simply benevolent. Also, it is evident that those agencies and employees actually delivering publicly funded services are much better informed about the true costs and particular circumstances affecting their work than their political and administrative principals responsible for allocating public funding. This prevents ministries and local government administrations from simply instructing the agencies on exactly what to do, as these principals cannot fully observe what is happening. And usually, the principal would want the agency to take the particular circumstances into account when carrying out their functions.

59. Interests being opposite between those who supply and those who pay for a good or service is well known from the market place. The realistic assumption is that the same applies – to some extend – also between suppliers of publicly funded service and government. Therefore, like markets require regulation aimed at making the pursuance of individual interest by market participants socially beneficial, so could the introduction of competition and other institutional rearrangements reviewed in this paper be thought of as pragmatic frameworks for ensuring that the inherent tendency of public agencies to follow some degree of self interest becomes socially productive.

Performance oriented funding

60. A first way of meeting the agency problem is to let funding depend explicitly on some measures of performance or outcomes. Examples of such formula funding include payment to employment service agencies based on the number of training courses they provide and on the subsequent employment outcome for job-seekers in Australia and payment to schools and universities based on the number of pupils enrolled and the number of students passing exams in Denmark. Properly designed, result oriented funding formulas reward good performance and thereby indirectly high effort. Moreover, letting funding follow outputs and outcomes rather than inputs rewards not only effort, *i.e.* "working harder", but also improvements in work arrangements and production processes, *i.e.* "working smarter". This may relate to the combination of inputs, internal structure of institutions or management techniques.

61. Developing such result oriented funding formulas and the performance measures they build on is a major challenge of its own. The performance measures must be clearly defined, and easy to observe and audit thereby keeping administrative costs low. Moreover, the performance measures must be hard to manipulate artificially and directly in line with the objectives underlying the provision of the publicly funded services in question, in order to avoid that agencies sub-optimise on those aspects of their tasks that are measured. One of the problems typically encountered is that quality is inherently harder to measure than quantity, and thus, some of the performance based funding schemes in place in OECD countries have been criticised for leading to deteriorating quality of publicly funded services. Whether this criticism is warranted or not is too early to judge, since the incentives for agencies to increase output on the expense of quality may be offset by their concern for maintaining a reputation for good quality. Alternatively, such adverse incentives may be softened by relying on performance measures only for part of the funding to agencies. Currently, many countries put substantial effort into the development of performance indicators.

62. Setting the parameters of the funding formula involves a central trade-off between risks and incentives. For all practical purposes, the available performance measures will contain some components of uncertainty stemming from factors outside the agency's control. Basing funding on these measures exposes the agency to some degree of pure risk that is likely to be counterproductive, as it makes it difficult to plan activities, capital expenditure and staffing. Consequently, there is a trade-off between the benefits from incentives and the cost from risk exposure, and this is a major determinant of the optimal power of incentives implied by the relative share of fixed versus performance dependant funding. In fact, this trade-off is important for all of the choices among different organisational modes discussed below.

One way of responding to the problems associated with risk exposure is to include more indicators in the performance measures used thereby improving their information content. However, this in turn may increase administrative costs, limiting the scope for such broadening of the formula's base.

Box A1. **Principal-agent relationships**

The theory on principal-agent relationships addresses how a principal can use economic incentives to improve the performance of an agency in carrying out a given task on behalf of the principal. The focus is on the effects of information asymmetries while considering the feasible production techniques as given and well known at least to the agent.

In simplified terms, the agency and its employees can be expected to choose their level of work effort, e, in a way that optimises their payoff in the funding available for wage and employment increases and non-wage benefits, less cost or disutility associated with the work effort, $u(y–c(e))$. The principal is unable to observe the degree of effort directly and therefore cannot hinder the moral hazard of agency shirking. However, she can provide the agency with incentives by letting funding, y, depend on the outputs or outcomes that can be observed, x_{obs}, for instance like $y=\alpha+\beta x_{obs}$. The problem is that not only effort but also a range of non-observable stochastic factors influence the outcomes from the agency's work, $x_{obs}=f(e)+\varepsilon$. Consequently, a high β implies a true socio-economic cost, since risk averse agencies have to be compensated for the non-controllable $var(y \mid e)=\beta var(\varepsilon)$ in order to be willing to carry our their tasks. Oppositely, a low β implies a dead-weigh loss, since the agency will choose a socially inefficient level of effort, where $\beta=c'(e)/f'(e)<W'(x_{obs})$ and gains to society from increased effort exceed the associated costs for the agency. When deciding on the parameters of the incentive scheme, the principal will find that the *stronger* the risk aversion of the agency and the *more* noise, $var(\varepsilon)$, the *weaker* the optimal incentives determined by β – implying a less efficient relationship between the two parties. Finally, for incentive schemes to be worthwhile in the first place, the agency must be responsive to changes in the slope of reward functions as reflected by $c''(e)$. See Milgrom and Roberts (1992) for a review of the principal-agent literature combined with a series of practical examples.

Developing the performance measures by including more variables, x_{obs2} in the funding formula can enhance the scope for incentives, as long as the variables provide additional albeit imperfect information about the agency's effort – either directly $cov(x_{obs2},e)\neq 0$ such as by looking at alternative indicators of performance, or indirectly by reflecting the noise component $cov(x_{obs2},\varepsilon)\neq 0$, since in both cases this allows designing an improved incentive scheme $y_2(x_{obs},x_{obs2})$ for which $var(y_2 \mid e)<var(y \mid e)$, as analysed by Holmström (1979). An example is to let performance based funding to employment service agencies depend negatively on the state of the business cycle compensating for the easier job they have in upturns. If several agencies deliver the same type of service and are exposed to strong common disturbances $x_{obsA}=f(e_A)+\varepsilon_A+\nu$ and $x_{obsB}=f(e_B)+\varepsilon_B+\nu$, relative performance funding based on benchmarking may be better since $y=\alpha+\beta(x_{obsA}-x_{obsB})=\alpha+\beta(f(e_A)+\varepsilon_A-f(e_B)-\varepsilon_B)$ where ν disappears. A necessary condition, of course, is that the disturbances affecting the agencies individually are not too strong compared to the common disturbances $var(\varepsilon)<var(\nu)$.

If the principal wants the agency to take care of a multitude of tasks, the outcome being easy to observe for some of them, $x_{obs}(e_1)$, and difficult to observe for others, $x_{non\text{-}obs}(e_2)$, powerful incentives may be harmful since they divert the effort of the agency towards oversupplying e_1 while under-supplying the equally important e_2, as analysed by Holmström and Milgrom (1991). That is, in the case of multitasking the principal may opt for weaker incentives, alternatives to economic incentives as means of motivating agencies, or search for ways of offsetting the bias towards neglecting e_2. As Dewatripont *et al.* (2000) show splitting tasks among several agents while grouping those tasks having similar degree of measurability and separating those that could conflicting is another alley to be pursued.

63. Sub-contracting for support functions like cleaning and accounting may produce gains from a more streamlined organisation with incentives more in line with task characteristics. The larger the number of tasks an agencies must attend to the more difficult it gets to monitor the agency's overall performance. Reducing the number of tasks and focusing on core activities through contracting out support functions therefore makes it easier to evaluate the performance of agencies and to provide incentives. The scope for

providing incentives also increases if the tasks that are contracted out can be measures reasonably well and therefore are suited for stronger incentives than those remaining in the agency in question. Moreover, joining similar activities like cleaning in larger units makes it possible to exploit economies of scale associated with both using specialised equipment and management expertise.

64. Setting budgets through negotiations with a view to the performance indicators and benchmarking among agencies is a softer form of performance oriented funding, allowing some discretion to judge on the reliability of indicators. This may be preferable if performance measures truly in line with the objectives underlying service provision are hard to find, if the available measures contain a large component of stochastic noise or if exposure to funding risks causes severe problems for agencies.

65. Performance-related pay to individual employees may be an important element in transforming incentives at the agency level into improve performance. In publicly owned organisations performance-related wage schemes may partially substitute for the absent profit motive by giving each employee a very tangible share in the gains from increased work effort and contributions to group performance and innovation. Over the 1990's the use of such performance-related pay has grown in a at least some of the OECD countries although other countries have statutory rules fixing the pay levels for civil servants making this development difficult. However, maintaining overall efficiency also requires reorganisations and changes in staffing that will not result from the incentives faced by individual employees. Consequently, there has been a parallel trend in some countries to introduce management contracts in public organisations stipulating objectives for the current work of the organisation and linking wages of top management to the achievement of results. As a side effect, performance-related wage schemes may also help in the recruitment of specialists that may be vital for the public sector to deliver services of high quality.

Slack and adverse strategic incentives to conceal savings potentials

66. Along with creating incentives for an agency to perform efficiently, a government faces the questions of what level of total payment is appropriate to fund the operations thereby avoiding slack, *i.e.* funding in excess of the costs that are actually necessary to produce the service in question. Notably when the level of taxation is high, transfers to the suppliers of publicly funded services in the sense of unnecessary funding entail a loss of aggregate economic efficiency as they aggravate the distortionary effects from taxation on general economic activity.

67. In a simple way, agencies having monopoly on their field may be forceful enough simply to demand excessive funding and notably so if government is weak. With a limited number of agencies able to supply a given publicly funded service or with many agencies designated to serving each their fixed constituency, laying out the budget will contain some element of bargaining, as the agency has some degree of monopoly power. The resulting level of slack depends on the relative bargaining power of the two sides. Notably, the bargaining power of government is weakened if the public agencies or their employees are strongly represented via the political assemblies where government needs to get approval for its bargaining position.

68. More interestingly, even a strong government may be unable to avoid slack if it cannot get reliable information about the costs that are necessary for agencies on average. In practice, governments have limited information not only about the uncertainties affecting the work of individual agencies but also about how the general conditions of supplying different publicly funded services evolve: Are schools right, when they claim that rising expenditure is necessary because of changing pupil attitudes making teaching difficult? Could the present level of elderly care be provided with fewer employees through improved organisation and innovations in work schedules, or would staff reductions necessarily hurt service quality?

And so on. Of course, a government that is strong enough to have parliament pass the legislation they desire, could simply cut spending if it considers that agencies could supply services at lower cost if forced to do so. However, the government could be mistaken and runs a risk of squeezing the system financially to an extend that it starts falling apart with good employees finding the opportunities in other economic sectors to be more attractive and service quality dropping. Obviously, such a development would hurt the government's own objectives, and therefore to avoid it, even strong governments will find themselves better off by accepting some degree of slack in publicly funded services on average.

69. Since keeping government uninformed may sustain high funding levels, agencies delivering publicly funded service have incentives to under-perform in order to conceal what cost reductions could be achieved by following best practice. Striving to keep slack at a minimum, government is likely to demand agencies to implement the best known technical and organisational methods in their activities thereby improving operational efficiency and reducing costs. Contributing to development efforts in agencies and collecting experience from other countries can improve the information available to government about best practice, but observing the actual outcome from the agencies' activities is what ultimately proves what is feasible under local conditions. Therefore, while improving performance by simplifying procedures or cutting unnecessary costs benefits the agency in the short term it may come back as a boomerang as government is likely to tighten the funding scheme in the future in order to reflect the improved standards. This adjustment of funding terms over time in light of past performance is known as the ratchet, since it behaves like a ratchet-wheel able to turn in only one direction. Realising this mechanism, concerns for the long term may lead agencies to pretend being low-productive, in spite of the short term incentives provided by the performance related funding. Reducing waiting times to have a case considered in court or not referring elderly capable of caring for themselves to publicly funded elderly homes may not be rewarded since it may have adverse effects on future funding. On the contrary, keeping waiting times high in courts and having a cue of elderly waiting for a place in elderly homes may protect agencies against budget cuts.

70. The problem of strategic under-performance may be more or less strong depending on circumstances, but even if government would claim never to adjust funding in response to past performance, the problem is likely to persist. In the planned economy of the Soviet regime, ratchet rules automatically adjusting prices received by enterprises on the basis of performance in previous years were common and led to pronounced ratchet effects of strategic under-performance, as described by World Bank (1996). But even without such explicit mechanisms agencies are likely to expect governments to respond to improved productivity by reducing piece-rates since after all what should otherwise determine funding in the long run? Fixing the funding scheme for a prolonged period may mitigate the ratchet effect by extending the period during which the agency enjoys a benefit from improving its performance. However, promises by government not to adjust funding schemes are inherently weak since once the information is revealed, adjustment is clearly optimal, rendering commitment time inconsistent. The difficulty of commitment may be reinforced by the fact that governments have a limited term in office and are not alone about devising policies.

71. The key point to be taken from this is that there is an upper limit to how far performance related funding can motivate efficiency in a closed environment of a limited number of agencies where tangible outside comparisons are absent. Strategic behaviour of agencies trying to sustain funding in excess of the necessary costs imply a loss of efficiency, since when pretending to be low-productive agencies forego potential gains from trade since their cost of increasing effort is below the reward they would get from the performance related funding and considerably below the gain to society from improving the particular publicly funded service, as shown in Box A2. Likewise, the informed kind of bargaining over budgets -- wrestling over rents associated with monopoly -- will always absorb some resources representing a cost.

Box A2. **Revealing slack and the ratchet effect**

As discussed above, uncertainties affecting the output from each agency, ε, prevents government from monitoring the effort of each agency, *e*. However, this does not as such entail slack, since as long as the principal knows the mean of ε the block grant α can be fixed at a level where slack is extracted, but the agency still gets an average payoff that makes it just willing to participate and continue its function.

The problem of slack arises when the principal cannot know the average level of costs or productivity, as if $x_{obs}=\theta f(e)+\varepsilon$ where the productivity index θ is constantly either high θ_H or low θ_L, but only known to the agency. If the principal wants to be sure that both types are able to survive it must set the parameters α and β such that the low-productive type is able on average to cover its expenses. However, this creates slack if in fact the agency is high-productive since achieve any level of funding $y=\alpha+\beta(\theta_H f(e_H)+\varepsilon)=\alpha+\beta(\theta_L f(e_L)+\varepsilon)$ requires a smaller level of effort for the high-productive type, $e_H<e_L$.

In the short term, the existence of the incentive schemes motivates the agency to reveal its type since the marginal payoff from increased effort depends on the productivity of the agency, $\partial y/\partial e=\beta\theta f'(e)$. The high-productive agency will therefore prefer a higher level of effort $e_H>e_L$ and output $y_H>y_L$.

In a dynamic context the principal will of course, use the revealed information and adjust the funding scheme in order to reduce the level of slack. Foreseeing this, a high-productive agency is likely to try conceal its true type by pretending to be low-productive supplying an effort yielding an output equal to y_L.

This strategic under-performance by the high-productive agency implies that substantial gains from trade are foregone both for the agency since $\partial y/\partial e<c'(e)$ and for society as long as the incentives given to agencies understate the welfare gain from increased supply of *x*, *i.e.* $\beta<W'(x)$ as is typically the case.

The principal may try to induce a separating equilibrium by offering an incentive scheme that expands the initial gain to the high-productive type from revealing itself. Generally this is an argument in favour of letting funding respond strongly to changes in performance.

The strength of the ratchet effect is shaped by circumstances in a number of ways, but presumably it is strong in publicly funded services. If agencies could contract with alternative principals they might choose to show their productivity level openly – like an employee caring for her future career with other employers. Looking at labour relations within factories Carmichael and MacLeod (2000) find some cases where firms succeed in limiting the ratchet effect while keeping piece rates fixed for longer periods. Chaudhuri (1998) finds that players in an experiment predominantly behave naively revealing their type as agents and not exploiting this information as principals. However, in publicly funded services where the principal and agency typically interact repeatedly in a steady and closed environment the future loss incurred by a high-productive agency when revealing itself weighs heavily, and a pooling equilibrium with strategic under-performance seems likely to prevail. See Freixas et. al. (1985) for a thorough treatment of the ratchet effect or Laffont and Tirole (1993).

Soft budget constraints

72. In a parallel way the difficulty for government to commit about future payments may render the threat of bankruptcy obsolete and consequently weaken the incentives to improve efficiency as the agency realises that it faces a soft budget constraint.

73. If legal constraints limit the extend to which agencies can benefit from funding in surplus of the true minimum cost of providing a given service -- since public agencies cannot simply take it out in the

form of profits but only enjoy it in the form of in work benefits, easier workloads, more flexible working hours etc. -- this is likely to imply that the motivating factor stemming from the threat of bankruptcy would be stronger than that from increased funding. Since in the event of bankruptcy both managers and employees are likely to incur considerable costs associated with loss of prestige, costs of adjusting to institutional changes, eventually loss of income during a period of unemployment, and as well distress from uncertainty and possible internal disagreements during the closing down of their workplace. Therefore, if public agencies and their employees prefer continuing business as usual this may be an entirely rational response to the constraints they are facing on their possible benefits. Consequently, the strongest effect from performance related funding should be expected when situations occur that prevent the agencies and their employees from continuing their standard mode of operation, that is when funding declines. And reductions in the allocated funding only really matters if ultimately there is a threat of bankruptcy if management do not succeed in reducing costs thereby avoiding budget overruns.

74. The problem is that the cost to a political principal of going through the closing down of an agency delivering publicly funded service can exceed the perceived financial costs of "bailing out" the agency by accepting budget overruns. Like in the case of state aid to specific sectors and non-competitive segments of the private sector, this may be so because closing down the agency imposes a highly tangible loss on a very well defined constituency, as opposed to the cost of funding the budget overruns that are typically borne my a much broader group in the form of tax increases or slow improvements in publicly funded services more broadly. Also, the costs of closing down an inefficient agency are likely to be concentrated in the short term, while the gains from restructuring of activities accrue only gradually over a longer time horizon. For publicly funded services the imbalance between political and financial costs may, however, be even stronger than for state aid. Closing down an agency may create a political coalition between the employees and their unions on the one side and the current users of the publicly funded service on the other side, since they as well are likely to incur some adjustment costs during the reorganisation of the provision – while not necessarily perceiving the potential gains that might accrue to future users of the service.

75. Foreseeing that bankruptcy is unlikely to carry through in the case of budget overruns, managers and employees realise that they face limited incentives to improve performance. The managers of agencies are not forced to implement unpopular cost reductions and if they try their internal strategic position is weak as employees and their unions realise that they risk little by being non-co-operative about such attempts of reducing costs.[15]

76. It is difficult for government as the principal to commit itself not to "bail out" agencies producing budget overruns, but since society would benefit from commitment, it is a key challenge for institutional design. Achieving government commitment to let bankruptcy carry through is difficult for two reasons. Firstly, such commitments are time inconsistent since once the situation occurs the political costs do indeed exceed the financial costs of covering the deficit, and therefore government claims about not wanting to bail out are unlikely to considered credible by the agencies and their employees. Secondly, the inherent multiplicity of government in democratic societies following from limited periods in office and

15 . The negative incentive effects from the ratchet and the low likelihood of bankruptcy being executed may co-exist despite the fact that the two effects rely on opposite expenditure stance from government. The disincentive effect from the ratchet arises from government being unable to commit to not being "tough", while the disincentive effect from the soft budget constraint arises from government being unable to commit to not being "lean". However, they elicit the same type of behaviour from the agency: stay inefficient with slack hidden as overstaffing, fringe benefits etc. If the slack is not revealed, the benefits from funding in excess of true costs continue to accrue to the agency. If the slack is revealed in some way or the other, and the budget is tightened by the (bureaucratic) principals this may limit these benefits but not entirely displace them, since ultimately the (political) principals find it prohibitively cumbersome to actually close the agency.

changing coalitions makes commitment inherently difficult. However, introducing competition and changing ownership may affect the ability for government to commit, and therefore the effects running through commitment are key to understand how these institutional arrangements work in the provision of publicly funded services.

Unclear or distorted objectives

77. The efficiency of publicly owned firms will also depend on the character of objectives held by the politicians who control them. If these objectives evolve around the interests of constituencies including employee trade unions they may favour business strategies implying for instance excess employment relative to strategies focused solely on productive efficiency. In this perspective the problem is not one of weak control of public enterprise management but rather the opposite: a problem of excessive political influence on business management. Boycko et. al. (1996) argue that the pursuance of political rather than business oriented goals by public enterprises is the primary reason why they have been found to be inefficient. Privatisation, in turn, can raise the cost to politicians of influencing activities, since subsidies to private firms necessary to maintain inefficiencies are politically harder to sustain than wasted profits of public firms.

78. In publicly funded services, distorted objectives are harder to distinguish from legitimate political concerns, since from the outset the provision of publicly funded services is supposed to respond to a political demand for education, care etc. However, assuming that constituencies are as important in shaping policies on publicly funded services as in other policy areas, the problem is no less than with public enterprises.

Competition

79. Introducing competition into publicly funded service provision is never uniquely "good" or "bad". Rather it has a lot of complex effects on operational efficiency, service characteristics and other outcomes. Whether the negative or positive effects dominate obviously depends on their relative weight and can only be determined empirically. But to interpret and evaluate the experience gained by countries that have introduces competition in publicly funded services through various schemes, it is essential to have a clear picture of the key mechanisms through which competition can work under the conditions characterising publicly funded services.

80. While some of the effects of competition are straightforward, others are subtle as they work through limiting the adverse incentives from information asymmetries outlined in the preceding sections. Indeed, allowing competition among suppliers may serve as a tool by which the public principal may circumvent its lack of information and thereby reduce the problem of controlling and motivating providers to enhance efficiency. All effects arise from the potential and actual shifting of activity towards better performing units and the improved ability of government to commit to following straight rules.

81. Irrespective of the question of ownership, introducing competition among suppliers of publicly funded services may entail a range of positive and negative effects. As summarised in Table A1, the **positive effects** or **"pros"** being ...

- **A:** ... *by reallocating activity to more efficient suppliers*. Apart from the effects through the incentives faced by agencies, reallocation of activity towards better performing units matter directly as a separate component in aggregate productivity growth. To matter substantially,

this selection process must involve both reallocation among existing units, entry of new units and exit of inefficient units.

- **C:** *... by focusing the attention of service suppliers on core objectives and user needs.* Defining clearly the services to be delivered is an obvious prerequisite to submitting a call for tender. And in practice it appears that this process of getting precise can be a major side benefit. It may enhance allocative efficiency as it calls for reconsidering whether the habitual way of meeting the objectives underlying service provision is the best. And it may enhance operational efficiency for the supplier of publicly funded service, as it clarifies what objectives should be pursued – transforming unclear political objectives in areas like staffing into more operational requirements. In a parallel way, allowing free user choice forces agencies to focus more on the actual needs of different user segments and to respond flexibly to changes in these needs.

- **D:** *... by giving suppliers clear incentives to operate efficiently within their current field as improved performance is rewarded.* As long as agencies and their employees have something to gain from attracting more activity – or loose if activities are shifted to other suppliers – they will be motivated to make their best effort to improve performance and if price competition is involved also reduce costs.

  In this respect competition works much like a performance based funding scheme that can be put in place even with only one supplier.

- **E:** *... by revealing best practices so slack cannot be hidden.* Pretending that cost reductions are impossible by constantly holding productivity at a low level and rejecting to supply the publicly funded service at moderate costs is unlikely to be an advantageous strategy for agencies under competition. Firstly, each agency is not sure to be given the same task in the future and therefore may not be around to enjoy the benefits of sustained slack. Secondly, the option of expanding its market share may enhance the agency's gain from improving performance. Thirdly, other agencies might reveal what is best practice within the sector leading to a tightened funding scheme in the future for all agencies. In other words, in the end agencies cannot avoid the turning of the ratchet wheel and therefore don't waste resources trying to avoid it. Moreover, if a universal funding scheme is used across agencies paying all the same rates this may serve as a commitment towards each agency individually not to tighten the budget in light of improved performance, as funding rates are only adjusted slowly in response to average developments. This again eliminates the benefit from hiding best practice.

  Notice how these effects depend critically on having multiple agencies pursuing their individual interest and therefore cannot be attained through an incentive scheme when there is only one agency capable of supplying the service.

- **F:** *... by making budget constraints harder.* If administrative rules require governments to submit tasks for competitive tender and select the best offer, it can be easier for politicians to resist pressures for "bailing out" agencies with budget overruns. In that situation at least it is clear, that abstaining from rescuing the public agency does not mean that services will not be delivered. Having universally defined funding schemes for public agencies, applying the same rates across different agencies may work in a parallel way, but presumably the system is more prone to political pressure as there is no immediate answer to who should replace the financially troubled agency.

82. And the **negative effects** or **"cons"** being ...

- **G:** ... *by increasing tangible transaction costs in cases where publicly funded services are hard to describe, measure and evaluate.* Publicly funded services include a broad range of different elements. Some are really hard to describe and evaluate while others are much easier to quantify and asses than services like hairdressing and auditing that are never the less traded in competitive markets. Whether of large or small magnitude, introducing competition in publicly funded services is, however, likely to increase the tangible transaction costs compared to a traditional hierarchical form of organisation: Describing services offered to users by different suppliers or writing specific contracts, eventually adjusting them along the way, and enforcing them in the case of disputes is costly. Albeit, clearer specifications may in it self be an important side benefit from introducing competition as mentioned just above.

- **H:** ... *by diverting activity if services are very hard to describe, measure and evaluate.* In the cases where publicly funded services are really hard to describe and regulatory institutions cannot make up for this in other ways, the effective link between good effort and reward is weakened and competition may not work fruitfully. Agencies could be expected to respond by engaging excessively in marketing or divert their activity or offer side benefits that may attract and catch the attention of users but are not warranted for public funding. Notice however, that it is in some respect the same that happens in a traditional form of hierarchical public organisation, as discussed in the preceding section on politically diverted objectives.

[Table A1. Pros and cons of introducing competition and involving non-government owned suppliers]

83. Of course, the relative number of positive and negative elements cannot be taken as a measure of whether the net outcome from introducing competition is positive or negative as their relative weight varies dramatically across different services.

Ownership

84. Alternating the ownership of the agencies supplying publicly funded services involves three types of fundamental changes. *i*) Unlike public agencies, private for-profit and non-profit institutions can choose whom to work for. When the budget to fund a given publicly funded service delivery is set -- either through negotiation or bidding in a competitive tender -- they may therefore consider outside opportunities. This limits the ability of government to exploit a monopsony position, although of course in practice the number of alternative buyers is not the same in education as in city transportation. *ii*) Investment is a responsibility of the institutions and firms themselves. This affects the cost of capital and raises a number of complex issues regarding the incentives faced in the case of transaction specific investments. *iii*) In the case of privately owned firms a profit motive is introduced while in the case of private non-profit institutions the objectives may often remain approximately the same as under public ownership.

85. Relying on a broader range of ownership form for the suppliers of publicly funded services including private firms or non-profit institutions may entail a series of positive and negative effects along some of the same lines as does competition. As summarised in Table A1, the **positive effects** or **"pros"** being ...

- **B:** ... *by facilitating economies of scale and innovation through re-organisation of production processes and in organisational structure*. The prospect of attracting more activity or the threat of loosing it may motivate agencies to try develop the frontier of best practice. Having

more operational flexibility by being an independent (non-profit) organisation and being allowed to alter organisation and firm structure, like through mergers of firms, may be an important element in implementing innovations. Essentially this is what happens in voucher schemes when users choose to go outside the standard range of agencies and "buy" service from other types of suppliers – who's organisational form and affiliation may prove to be better suited for delivering the service in question to the particular user.

- **C:** ... *by focusing the attention of service suppliers on core objectives and user needs.* Independent (non-profit) organisations can be more specialised and better involved with particular user groups and give services like long term care for disabled an intimacy that is not easily achievable for public institutions.

- **D:** ... *by giving suppliers clear incentives to operate efficiently within their current field because of the profit motive, take-over threats and additional monitoring instruments.* A shift to private ownership may introduce a management more dedicated at developing and implementing changes that can enhance efficiency. In principle the gain to private owners in the form of profit generated from a given increase in efficiency is no larger than the gain to taxpayers from lower expenditure in the case of public ownership. In practice however this interest of taxpayers may only be weakly represented through political and administrative systems. Moreover, the literature on privatisation of public enterprises stresses the role of several other sources of incentives for management to pursue efficiency stemming from the *transferability* of ownership: The price formed on shares as they are traded in the stock market carry information on management effort that can be used directly in incentive schemes such as share option to management and employees. Also, the threat of take-overs and replacement of the incumbent management creates incentives to improve performance. See Vickers and Yarrow (1991) for a discussion. In non-profit organisations these mechanisms are of course absent, although creditors may contribute to the ongoing scrutiny of the organisation wanting to be sure that loans can be paid back.

  As argued by Hart, Shleifer and Vishny (1997) service delivery by a government agency and by a private contractor differ decisively with regards to who has the residual control over the assets involved in situations that are not foreseeable when making the contract. This implies that private firms have a stronger incentive to invest in innovations and ways of improving the quality of the publicly funded service since their control over this intangible asset enables them to appropriate much of the returns of such improvements – more than public employees who are not having residual rights over such assets and who may be removed in the future.

- **E:** ... *by revealing best practices so slack cannot be hidden.* Private for-profit firms are more likely than public agencies and private non-profit institutions to want aggressive expansion of their activities. This promotes the process of revealing best practice making it hard to hide and sustain funding in excess of true minimum costs.

- **F:** ... *by making budget constraints harder.* Changing ownership changes the way extra payments to cover cost overruns are thought of. And knowing that they should not expect to be bailed out in the case of deficits, privately owned suppliers of publicly funded service will have to solve problems of excessive costs at an early stage. For non-profit organisations this difference will be less pronounced.

86. And the negative effects or "cons" being ...

- **G:** ... *by creating higher tangible transaction costs than in relations among different parts of government.* Because of the stronger incentives of for-profit suppliers to reduce costs, introducing private ownership calls for more thorough specifications of the service to be delivered and rigid structures to support the transaction than when introducing competition among public or non-profit suppliers. For-profit suppliers may be in a stronger position to exploit the situation opportunistically if a need for adjustment arises unexpectedly. Procedures for quality control may have to be more thorough. And ultimately, settlement of disputes may develop into comprehensive legal trials. All of this adds to the tangible transaction costs.

- **H:** ... *by diverting activity as incentives may bee too high-powered.* All taken into account, private firms may have too strong incentives to reduce costs in ways that deter service quality, stemming from their ability to take out cost reductions as profits.

87. Compared to the positive and negative effects from introducing competition, those from altering the ownership of service suppliers are more complex and difficult to assess, as the way they appear and their relative weight is likely to vary dramatically across different services ranging from kinder gardens to support services like cleaning.

88. In publicly funded services where soft incentives may often be preferred, non-profit organisations may be a better choice than for-profit firms. Indeed Glaeser and Shleifer (2001) show that independent entrepreneurs may prefer to organise as non-profit institutions -- even from a self-interested perspective. This is so, because this institutional choice commits them to applying soft incentives and consequently give an advantage in attracting employees, volunteers and donor funds.

89. Having just a few private firms or non-profit organisations may matter considerably -- disproportionately to their share of service delivery, as their revelation of cost information may have broader consequences for the ability of government to avoid slack in the public sector. Likewise, approaching the activity differently such alternative suppliers may contribute with innovations that can be copied more broadly.

Internal contracting and benchmarking

90. As noted earlier, stipulating the goals to be achieved by public agencies in internal contracts and benchmarking performance across agencies may to some extent mimic the effects of competition and non-government ownership. In Table A1 these partial effects are marked as (√).

Table A1. **Pros and cons of introducing competition and involving non-government owned suppliers**

These effects (pros and cons) …	**… arising from …**			**… can be realised through …**		**… and mimicked by …**	
	… introduction of competition and …	… involvement of non-government owned suppliers, being …		… competitive tendering and contracting or …	… user choice among suppliers (vouchers) …	… internal contracting with government agencies and …	… benchmarking.
		… non-profit organisations or …	… private firms …				
Pros							
A/B: Reallocating activity to more efficient units; and facilitating economies of scale and innovation through re-organisation of production processes and organisational structure …	… as suppliers can be replaced.	… as different activities can be combined more flexibly.	… as realising economies of scale may require firm reorganisations such as mergers.	√	√	(√)	
C: Focusing activity on core objectives and user needs …	… as contracts must specify services and objectives, and in an attempt by suppliers to attract users who have a choice.	… as non-profits can be more specialised and involved with particular user groups.		√	√	(√)	
D: Clearer incentive to operate efficiently within current field of activity …	… as activity could be shifted to other suppliers in case of poor performance.		… as efficiency gains can be taken out as profits and management risk replacement or take-overs.	√	√	(√)	(√)
E: Revealing best practice so excessive funding cannot be sustained …	… as other suppliers will try to enter …		… notably when suppliers have a clear motive to enter and expanding their activities in new market segments.	(√)	(√)		(√)
F: Making budget constraints harder …	… as cost overruns could trigger replacement of supplier.		… as cost overruns are a problem for the owners, and firm exit is more acceptable than closing public agencies.	√	√		
Cons							
G: Tangible transaction costs if public services are hard to describe, measure and evaluate …	… as writing and enforcement of contracts can be complicated and costly …		… notably if the supplier has strong incentives to cut down costs.	√	√	(√)	(√)
H: Diverting activity if public services are hard to describe and evaluate …	… as suppliers might sub-optimise on measurables or spend excessively on marketing to attract users …		… notably if the supplier has strong incentives to cut down cost and expand revenues.	√	√	(√)	(√)

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