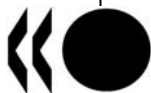


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FINANCING ECEC SERVICES IN OECD COUNTRIES

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INTRODUCTION:

THE OECD THEMATIC REVIEW OF ECEC POLICY

The first OECD Thematic Review of Early Childhood Education and Care (ECEC) Policy was launched under the auspices of the Education Committee, early in 1998. Twelve countries participated in the review: Australia, Belgium (Flemish and French communities), the Czech Republic, Denmark, Finland, Italy, the Netherlands, Norway, Portugal, Sweden, the UK and the USA. After the completion of the country reviews, a comparative and analytic report from the review series was disseminated at the Stockholm Conference in June 2001, and published by the OECD under the title: *Starting Strong*.

Delegates to the Stockholm Conference were unanimous in their recognition of the improved knowledge base in comparative ECEC policy, developed by OECD countries during the first phase of the review. So as to maintain and further develop this knowledge base, a proposal was made to the OECD Education Committee in November 2001 to hold regular bi-annual workshops, through which country data and policy developments (what works) could be updated, and major issues of interest explored. Countries would be free to propose themes for discussion and analysis, and provided that a majority of national delegates agreed with their proposal, a theme could be adopted. Among the most common themes proposed for discussion were:

1. Expanding access for young children from low-income and immigrant families, and improving co-ordination with family and social inclusion policies;
2. Improving policy co-ordination and integrated delivery of ECEC services: bringing together the diverse approaches of responsible ministries, the new needs of our societies, and the specific strengths of daycare, kindergarten and the early primary school;
3. Balancing life-work responsibilities in the service of equal opportunities and the best interests of young children; an analysis of the contribution of early childhood services, parental leave policies and workplace arrangements;
4. Pedagogy and pedagogical frameworks in the early years;
5. An examination of staff recruitment, training and working conditions across the ECEC sector, taking into account the growing educational and social responsibilities of the profession;
6. Funding and financing mechanisms: an analysis of different funding mechanisms used by governments, with the recognition of the need for substantial government investment to support equitable access and levels of quality for all children;
7. Monitoring ECEC settings and assessing child outcomes, in the context of demand for better accountability and more participatory evaluation;
8. Early childhood indicator and data development.

Following the approval of the OECD Education Committee, workshops for national delegates were organised in 2002 to discuss and deepen understanding of ECEC policy issues. Two themes have so far been explored: the first *ECEC for low-income and minority children* at a workshop in Oslo, hosted by the Norwegian Ministry of Children and Family Affairs from 6-7 June, 2002; the second on *Comparative indicator and data development* at a meeting at OECD headquarters in Paris, on 14-15 October 2002. Reports of these meetings can be found on the OECD web site: <http://www.oecd.org/edu/earlychildhood> as well as the expert paper provided by Dr. Paul Leseman for the Oslo meeting.

The present paper on *Financing ECEC Services in OECD Countries* was commissioned by the OECD in preparation for our third workshop in Rotterdam, 22-24th January 2003, hosted by the Netherlands Ministry of Education, Culture and Science and the Netherlands Ministry of Health, Welfare and Sports. Following the workshop discussions and the comments received from the national delegates, the authors - Professors Gordon Cleveland and Michael Krashinsky, Economics Department, Division of Management, University of Toronto at Scarborough - present here a revised paper for publication in the OECD series of Occasional Papers, and for eventual consultation on the OECD web site. The paper will also be submitted to the OECD Education Committee for information and approval.

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CHAPTER 1:

BENEFITS AND COSTS OF EARLY CHILDHOOD EDUCATION AND CARE

1.1. Introduction

1. This report concerns financing issues in relation to Early Childhood Education and Care (ECEC). It will review, in some detail and in summary, the state of knowledge and research on the following topics:

- The case for public investment in ECEC – in other words, the benefits and costs of public investment in early childhood services. The intent here is to provide a succinct guide to key research on this important issue;
- An analytical classification of the main funding mechanisms used in different OECD countries for funding ECEC services for children of different ages (0-3, 3-6), together with a tabulation of information available on these funding mechanisms. This chapter will also discuss collection of data on funding of ECEC in OECD countries and review alternative ways of collecting and presenting these data;
- A review of research findings about the advantages and disadvantages of different funding mechanisms and methods of providing ECEC services. This will include both demand-side and supply-side types of funding, different ECEC service types (such as parental leave/benefits, centre-based childcare, family day care, public early education services, etc.), non-profit vs. commercial forms of provision, and public provision vs. the subsidisation and encouragement of a private market for ECEC services;
- A review of some evidence about the comparative costs of different types (and quality levels) of services in OECD countries.

2. Our understanding of ECEC is broad, in line with the definition provided in *Starting Strong*, the summary report from the OECD Thematic Review of Early Childhood Education and Care:

“The term *early childhood education and care* (ECEC) includes all arrangements providing care and education of children under compulsory school age, regardless of setting, funding, opening hours, or programme content. ...it was deemed important to include policies – including parental leave arrangements – and provision concerning children under age 3, a group often neglected in discussions in the educational sphere.” (OECD, 2001a, p. 14)

In parallel, Kamerman’s (2000a) outline of the scope of ECEC policy provides a listing of the key financial instruments with which this document is concerned. Apart from the establishment and enforcement of regulations, her listing provides the subject matter for the report.

“ECEC policy includes the whole range of government activities designed to influence the supply of and/or demand for ECEC and the quality of services provided. These government activities include direct delivery of ECEC services, direct and indirect financial subsidies to private providers (such as grants, contracts and tax incentives), financial subsidies to parents both direct and indirect (such as cash benefits and allowances to pay for the services, tax benefits to offset the costs, or cash benefits that permit parents to stop working and remain at home without loss of income) and the establishment and enforcement of regulations.” (Kamerman, 2000a, p. 8)

3. What are the general objectives of ECEC policy? Parents have children by choice and seek to raise them in the best ways they can. The overwhelming majority of parents care deeply for their children and allocate substantial amounts of family time and resources to caring for their physical, social, emotional and psychological needs and to stimulating their development to be rounded human beings. Why then do governments need to be involved at all in financing ECEC services and various supports to families? There are two broad sets of reasons. The first is to transfer resources to families with young children. Raising children is expensive and families with young children are typically themselves young; the incomes and assets of these families are low relative to what they may be later in life, and relative to the high cost of raising young children. The second is to protect and promote the public interest in the raising of children and the functioning of families. Although most families are dedicated to raising their children, they will not always make decisions which are ideal from the social point of view, whether these are decisions about the care for their children or the employment of family members. While governments seek to preserve a wide scope of freedom for parents to decide what is in the best interests of children and family members, ECEC policies must provide incentives and financial support for them to make decisions which are most positive for the long-run interests of children, families and society. This may involve the provision of accessible, good quality ECEC services with or without parent fees.

4. Countries differ in the objectives they define for ECEC policy. The economic rationale for ECEC policy is based on an analysis of the benefits to children, families and to society as a whole from different possible policies in comparison with the costs. Well-designed ECEC policies will increase net benefits in the context of a market economy. In a market economy, some goods and services can be bought and sold in competitive markets and, without substantial government involvement, buyers and sellers interact in ways that produce desirable results. In effect, buyers of these commodities weigh up the benefits and compare them to the costs when they make a decision to purchase. The sellers behave in ways that ensure that the prices buyers face reflect the true cost to society of producing this good or service. The private competitive market, without government action, allocates an appropriate amount of society’s economic resources to the production of these goods. In these cases, competition keeps prices low and encourages producers to invest in new technologies and to seek new ways of satisfying customer demands. Furthermore, the multiplicity of potential sellers gives consumers maximum freedom of choice to find the combination of characteristics which suits them best.

5. However, certain goods or services do not have some or all of the economic characteristics required for competitive markets to deliver desirable results. For instance, a good or service may generate substantial “positive external benefits” which are not taken into account in private market transactions. Or a good or service may have characteristics which are difficult for potential consumers to judge accurately and purchasing mistakes may be made with negative consequences. In these and similar cases, there is

“market failure”, and these market failures can be corrected by government action. Government action will be appropriate if the benefits gained by government policy are greater than its costs. Education, for example, is a service which, because of its characteristics, is typically provided through the public sector because private markets fail to deliver the appropriate amount of it to those who need it most; the benefits of publicly-provided education are judged to exceed its costs.

6. The arguments for public financing of some or all ECEC services are similar to these arguments for public education. Donald Verry (1992) has provided a general outline of these arguments. Table 1 below is adapted from his original version.

Table 1: POTENTIAL BENEFITS AND COSTS OF PUBLICLY FINANCED ECEC

Type of Effect	Potential Benefits	Potential Costs
Effects on Children		
Stimulates the development of children in the important early years	Improved brain and social development of children in early years can improve school-readiness and have long term payoffs in abilities, income, productivity and economic growth, reduced delinquency and criminal activity, improved health, higher tax revenues and better citizenship.	The cost of resources necessary to provide good quality early childhood education. Also, the excess burden costs of higher taxation.
Ensures high-quality non-parental childcare for children	Good quality licensed childcare provided by trained and dedicated childcare professionals is better for children than many current informal arrangements. There is evidence that, either because of inadequate incomes or inability to judge accurately the quality of childcare, too many parents choose inadequate care.	The extra resources needed to provide higher quality childcare.
Provides a more equal start in life for children.	Promotes equality of opportunity, a fundamental value in most advanced societies. All children can benefit from some amount of early childhood education. Children from low-income families incur especially large benefits.	
Effects on Mothers and Families		
End tax discrimination against employed mothers	Failure to permit deductibility of childcare costs from taxable income creates tax inequality which reduces mothers' employment. Increased public funding will reduce this effect. Society shares in improved productivity through higher government tax revenue from those newly employed.	Deductibility will reduce tax revenue from currently employed mothers. Employed mothers will reduce household production.

Providing assistance to young families when expenditures are high and incomes are low.	Government funding of ECEC when parents are young and higher taxation when older acts like a long-term loan programme to allow parents to make better lifetime decisions about work and children.	Assistance to young families, and more family-friendly leave and benefit policies at work, may encourage higher fertility, raising public costs.
Encourage mothers to maintain labour force attachment, continuity of job experience, take job promotions, work full-time rather than part-time.	Mothers are encouraged to make work decisions in long horizon framework to permit reasonable financial independence, avoid poverty if divorced, in old age, etc.	Mothers may suffer tension from “super-mom” work and family activities unless gender roles continue to change and family policies are supportive.
Change young women's assumptions about future job paths and prospects. Promote gender equity throughout society.	Young women make education and other human capital decisions based on opportunities available to their mothers. Public financing of early childcare expands mothers' opportunities, allowing their daughters to make long-lasting early human capital investments based on ability rather than gender.	Have to work on changing young men's assumptions about gender roles too.
Reduce the job disincentive effects of social assistance and childcare costs	Reduced immediate and longer term social assistance costs, effective reduction of child poverty, end of poverty cycle. Increased future education, productivity, self-esteem of children and tax revenue for governments.	Costs of good quality ECEC, perhaps home-visit programmes, training programmes, changes in social assistance policy.
Effects on Society		
Common social and educational experiences when children are young	Encourages social cohesion, good citizenship, the integration of immigrant families, early screening of children with behavioural, social or cognitive difficulties. Provides early foundation for integration of children with disabilities.	Increased taxes. Possible sense of decreased parental choice.

Source: Adapted and amended from Verry (1992).

7. Two broad areas of potential market failure exist in relation to early childhood education and care (ECEC): market failure in relation to the care and education of young children, and market failure in relation to the employment of parents (especially mothers) when children are young.

8. There is a public interest in children and in the care and education they receive when they are young. There would be no market failure related to children if this public interest completely mirrored the interest of parents and their ability to purchase good quality ECEC services. However, an educated workforce is essential both for economic growth and for the maintenance of a healthy democracy, and these benefits “spill over” beyond the individual family to society as a whole. Further, society has an interest in assuring

that children get an equal start in life; if ECEC decisions are financed entirely by the stretched incomes of young parents, this equal start is imperilled.

9. There is equally a public interest in the employment attachment of young parents. Since mothers are likely to be primary caregivers for their young children, they are likely to have their employment relationships interrupted in children's early years. Mothers' employment, earnings and related childcare decisions may be distorted by various forms of market failure. One distortion is the absence of perfect capital markets; in theory, since purchasing good quality ECEC services for children should mean that those children prosper in the future, and because continued labour force attachment for mothers should mean increased prosperity for these parents in the future, it should be possible to borrow the cost of ECEC services from a bank today, using the future prosperity as security for the loan. Of course this is not possible. Public provision of ECEC services today, financed by future taxation on more prosperous parents and children, is an alternative, given the absence of perfect capital markets to bridge between the present and the future.

10. Another important distortion in countries in which ECEC is sold on the private market is the taxation of earnings which are used to purchase ECEC services; since the costs of ECEC are necessary costs of employment (rather than an expenditure of discretionary income) failure to make these expenditures fully deductible produces an economically inefficient barrier to mothers' employment. Another distortion, particularly important for lone parent families, is provided by the tax-back rate, or benefit-reduction rate associated with social assistance (or welfare) payments. These punitive benefit-reduction rates make employment unattractive for the majority of families on social assistance, leading to increased dependence over time. If, in addition to this, ECEC services are costly, this inefficient barrier to employment is yet higher.

11. Many ECEC policies are directed towards reducing or eliminating one or another of these sources of market failure in relation to children and families. In general, ECEC policies which are directed towards providing developmental/educational benefits for children, as well as reducing employment barriers for parents will have a greater ratio of benefits to costs¹. The material below reviews some recent research evidence about the benefits to children and to families of ECEC policies.

1.2. The Research on Benefits to Children

12. The best evidence that is available strongly suggests that good childcare is beneficial for children's development, both for the cognitive/language/academic skills of children and for the social behaviour of children in the family and in the classroom. This should hardly be a surprise. It is widely accepted that, once children reach five or six years of age, group education provided by highly trained teachers with significant learning resources at hand will have strong positive impacts on young children – impacts large and positive enough to be worth the expenditure of billions of dollars of public money. Furthermore, much

¹ A recent evaluation of the benefits and costs of public provision of ECEC services in Canada found that expected benefits exceeded costs by 2 to 1. The benefits to children from using good quality ECEC services and the benefits to mothers and families from continued employment attachment were each equal to about half the benefits (Cleveland and Krashinsky, 1998).

evidence suggests that the first years of a child's life have more educational and behavioural impact than later years (McCain and Mustard, 1999). It is logical to conclude that good quality early childhood education and care, provided to children when they are younger than compulsory school entry should have positive effects as well.

13. However, it is not easy to prove beyond the shadow of a doubt that this hunch about early childhood development and care is correct. There are a very large number of factors that can affect a child's development and behaviour. Isolating the separate effect of good quality childcare on children while holding all the rest of these factors constant is a difficult research task; many of the disagreements in this research area are methodological. The key research problem is that ECEC services are not normally randomly assigned to children. Most data comes to researchers from a situation in which individual parents have chosen the type and quality level of ECEC that their child will use. As a result, it is difficult to separate the effects of "family" from the effects of "ECEC". The research that is most trustworthy in evaluating the effects of ECEC on children is research that deals well with this issue.

1.3. Well-known Research on the Benefits to Children²

14. There have been several "waves" of research about the effects of childcare on children. Many of the early studies were random assignment studies of children from lower income families to good quality childcare centres. Overwhelmingly, these studies found that good childcare can have very positive effects on children and that these advantages can be long-lasting. In particular, good childcare can compensate, at least partially, for a disadvantaged home life.

15. A later wave of research (still continuing) has focussed on the impact of variations in the quality of childcare. This research has concentrated on survey data, rather than random assignment techniques, therefore studying childcare use in its natural setting. Most of this research has been centred in North America where the range of quality variation in ECEC is large. Because the type, amount and quality of childcare is chosen by families (rather than being randomly assigned), the statistical techniques appropriate in this later wave of research are more complex.

16. Evidence from research on less-advantaged children shows that early childhood education and care, particularly when it is of good quality, has strongly positive effects. The paragraphs below give a thumbnail sketch of some of these results:

17. *The Child-Parent Centre Programme* based in Chicago began in 1967 to provide educational and family support services to children from 3-4 years of age through early elementary school. Two groups of children were studied – nearly 1000 who had experience in one of twenty child-parent centres which promoted reading and language skills as well as providing some health and social services and encouraging parent involvement, and another 550 who did not have this early childhood education background. Reynolds (1999) reports that the child-parent programme appears to enhance children's early cognitive and language development. As a result, they enter school ready to learn and this readiness provides advantages in adjusting to school. The children in this study were all economically disadvantaged. Reynolds

² See also OECD, *Education Policy Analysis*, 1999 for a detailed summary of this research.

investigated the causes of the programmes impacts on school readiness and found several pathways of influence. The study concluded that the long-term positive effects of the programme were primarily due to early cognitive and language development, culminating in better social competence in adolescence. However positive effects on parenting abilities were also important.

18. *The Carolina Abecedarian Project* provided full-day childcare five days a week for children starting when these children were three months old. This experiment studied four groups of randomly assigned children. The first group – the control group – received only family support services, paediatric care and child nutritional supplements. The first “treatment” group received high-quality centre-based childcare services for the first five years of the child’s life and additional educational support services from kindergarten to Grade Two. The second “treatment” group received only the five years of early intervention childcare. The third “treatment” group received only the kindergarten through Grade Two educational support services. Early intervention childcare services had positive effects on IQ scores, academic achievement and on the likelihood that a child would not be held back from passing a grade. The comparison group of similar children who only received early education support after reaching school age did not have the same positive effects. The study found that for these children, most of whom were from disadvantaged families (high-risk), the effects were larger the earlier that participation in early childhood services began (Ramey and Campbell, 1987; 1991). Children who had participated in the pre-school programme had higher scores on tests of reading and mathematics achievement at 8 and 12 years. They were less likely to be held back from promotion to the next grade at ages 8, 12 and 15, and were less likely to be placed in special education. The latest follow-up out to 21 years of age shows children who attended the pre-school programme were more likely to attend a four-year college.

19. The National Institute for Early Education Research has recently published (Masse and Barnett, 2003) a benefit-cost analysis of the Abecedarian Early Childhood Intervention, that reveals how broad and long-lasting the effects of this five-year program have been. The experiment involved 112 children, mostly African-American, whose family situations were believed to put them at risk of slowed development. On average, maternal education in experimental families was 10 years, maternal IQ was 85 and 55% of households were collecting social assistance. Masse and Barnett report a range of measures that deliver important benefits to participants and the community:

- Improved measures of intelligence and achievement over the long term, leading to higher earnings and fringe benefits now and in the future
- Lower levels of grade retention and placement in special education classes, leading to cost savings in elementary and secondary education
- Improved employment and earnings of mothers of the children receiving early childhood education services
- Reduced probability of smoking and improved health
- Reduced use of social assistance

The costs of providing intensive high-quality child care in the Abecedarian program were high. For infants, there was one staff member to every three children; for two and three year olds, there were two staff members for every seven children; for four and five year olds, the ratio was one to six. All staff were paid competitive public school salaries. As a result, in 2002 dollars, the annual cost of care per child was

nearly \$14,000 (U.S.). Nevertheless, the value of the benefits, discounted back to the present, was found to be considerably higher than the costs. At a discount rate of 3%, the project provided a 4 to 1 return on the investment of public resources targeted at a disadvantaged group (Masse and Barnett, 2003).

20. *Head Start programmes* have also been the subject of many studies. Head Start in the United States has provided half-day programmes for low-income children (at 3-4 years of age) since the 1960's. These programmes now provide early childhood services, including parent support and health monitoring to over 800,000 children per year. Studies of Head Start programmes have been particularly interesting because Head Start is a nation-wide initiative with quality variation across programmes. Most other studies of childcare use by low-income and disadvantaged children involve small samples of children and specially-designed high-quality childcare intervention programmes.

21. Currie and Thomas (1995), did an innovative study of Head Start's impact using data on siblings, one of whom had participated in Head Start and the other of whom had not. By comparing siblings at age 10, Currie and Thomas were able to measure the later effects of ECEC, holding constant many family-type factors which could otherwise be mixed-up with the effects of the Head Start programme. The study found a statistically significant 6-percentage point increase in the Picture Peabody Vocabulary Test score for Head Start children relative to children with no pre-school. Further, children who attended Head Start were 47 percent less likely to repeat a grade relative to their siblings who did not attend pre-school. Both white and African-American children had statistically significant early effects of Head Start, but the vocabulary and school effects were only significant at age 10 for white children. By age 10, African-American children have lost any benefits they gained, apparently due to the poor quality of later schooling, while ten-year-old white children retain a substantial benefit.

22. Currie and Thomas calculate that the increase in test scores due to Head Start might result on average in an increase in expected future wages by 4 percent. The reduced probability of repeating a grade due to Head Start would likely lead to a 5 percentage point decline in the probability of dropping out of high school amongst white children. Overall, using these back-of-the-envelope calculations, Currie and Thomas conclude that potential gains from Head Start are "much larger than the costs". "If the factors preventing African-American children from maintaining the gains they achieve in Head Start could be removed, the programme could probably be judged an incontrovertible success." (Currie and Thomas, 1995, p. 361; see also Currie and Thomas, 2000).

23. *The literature on how childcare affects the social and cognitive development of disadvantaged children* has been carefully reviewed by several authors (Karoly et al., 1998; Love, Schochet, and Meckstroth, 1996; Lamb, 1998; Currie, 2000; Barnett, 1998). In the review prepared for the Rockefeller Foundation, Love and his colleagues wrote that "the preponderance of evidence supports the conclusion of a substantial positive relationship between childcare quality and child well-being. Evidence for this relationship encompasses multiple dimensions of quality and diverse indicators of children's well-being" (p. 3). Lamb's review concluded that: "Quality day care from infancy clearly has positive effects on children's intellectual, verbal and cognitive development, especially when children would otherwise experience impoverished and relatively unstimulating home environments." (p. 104). The conclusion from this literature would appear to be that for children from disadvantaged families exclusively parental care is

often insufficient for children's developmental needs, and that children can be made better off by involvement in well-designed supplementary childcare programmes, and that these effects are long-lasting.

1.4. Current Research on Benefits to Children

24. Because of the interests of researchers and the availability of funding, most of the earlier studies, and especially the ones with funding to follow children for many years, concentrated on children from low income backgrounds and on specially-designed early childhood programmes. However, more recent studies on groups of children from a mix of different backgrounds appear to have found similar results, especially if studies are able to identify better-quality programmes. There are a number of ways of identifying better-quality programmes, and different studies use different methods. Developmental psychologists and childcare researchers agree that measures of process quality, which assess the quality of the childcare environment in which children play and learn as well as judging the quality of the teacher-child interactions, are the best way of measuring the features of a childcare service that will promote child development.

25. Process quality is measured by trained observers, following carefully developed guidelines, in on-site observations of childcare activities. Two well-known process quality measures are ECERS (Early Childhood Environments Rating Scale) and ITERS (Infant-Toddler Environments Rating Scale), although there are a number of other alternatives, or supplementary measures. A specially designed quality measure which allows for quality comparisons across different types of care, including informal and regulated care, is known as the ORCE (Observational Record of the Caregiving Environment).

26. The data collected in an ongoing study by the National Institute for Child Health and Human Development (NICHD) is uniquely well suited to assessing the effects of ECEC quality on children over time. Mothers in ten different centres around the United States were approached in hospitals where they were giving birth and asked to participate in this study. The final sample of about 1300 children and families has provided an enormous amount of data from the very beginning of their child's lives and the data collection is still continuing. The study is unique in a number of ways. It has regularly collected (at 6 months, 15 months, 24 months and 36 months) good measures of the quality of non-parental childcare the child received, no matter what the type or location of this care. Phone interviews were collected every 3 months to track hours and types of childcare. The NICHD study also collected detailed information about the quality of care provided by mothers to their own children (using the HOME scale as well as an assessment of mother's sensitivity based on videotaped observations of mother-child interaction). The mental development of children was assessed at 15 months and 24 months using the Bayley scale, which is the most widely used measure of cognitive developmental status for children in their first two years of life. At 36 months of age, school readiness of children was measured using the Bracken School Readiness Scale, a scale that assesses knowledge of colour, letter identification, numbers and counting, shape recognition and ability to make comparisons. Further, expressive language skills and receptive language skills were measured at 15 and 24 months using age-appropriate versions of the MacArthur Communicative Development Inventory (CDI) and at 36 months using the Reynell Developmental Language Scales. On top of that, detailed information about family characteristics and about changes in family characteristics over time, have been collected.

27. When children were 36 months of age, the researchers in the NICHD Early Childhood Research Network analyzed the effects of childcare on children to that date. The analyses (NICHD, 2000) controlled for two different measures of the quality of maternal care provided at home, for the child's gender, for the mother's vocabulary level, for family income, and for type, amount and quality of childcare used since birth. Holding this wide range of factors constant, this study found that the quality of non-parental childcare mattered to virtually all measured child outcomes at 15, 24 and 36 months. In general, the higher the quality of care received, the better that children did on measures of cognitive functioning and language development. In particular, it was the language stimulation by caregivers that had significant positive effects on cognitive and language outcomes of children.

28. Further, in analyses which controlled for maternal vocabulary, family income, measures of the quality of care at home and child's gender, the effects of childcare quality were compared to the effects of care provided exclusively by mother at home (defined as receiving less than 10 hours per week of non-maternal care). In language skills assessed at 24 months and in school readiness assessed at 36 months, the children who had received high quality childcare scored significantly better than children from exclusive maternal care. On virtually all measures, children in high quality care scored better than those from exclusively maternal care and those in low quality childcare scored worse, although these differences were not always statistically significant (NICHD, 2000).

29. However, taking all children with childcare experience together and comparing them to all children in exclusively maternal care, this research suggests that "children in exclusive maternal care did not consistently differ from children in non-maternal care." (p. 976, NICHD, 2000). This conclusion is important; it suggests that research looking only at the effects of "childcare" on children (without any measures of the quality of care) are highly likely to find no effects; this type of research therefore bypasses the most important child development issues associated with parental and non-parental care.

30. Another noteworthy result of the path-breaking NICHD study is that children from low-income or disadvantaged families were not found to have larger effects from the use of different quality levels of childcare than non-disadvantaged children. Once the quality of home care is controlled, children from all backgrounds benefit similarly from good quality early childcare.

31. *The Cost, Quality and Child Outcomes Study* (Helburn, 1995) studied childcare in the classrooms of about 400 childcare centres in four states – California, Colorado, Connecticut and North Carolina. The original study provided information about the immediate effects of childcare on children. A sub-sample of these same children were followed through 2 years of childcare, through kindergarten and to the end of second grade at school (Peisner-Fineberg et al., 2000). Children were assessed for receptive language skills, reading ability and math skills, cognitive skills, sociability, and problem behaviours. Controlling statistically for maternal education, child's gender, ethnicity and the quality of teaching at the elementary level, researchers assessed the relationships between childcare quality at age 4 and children's developmental outcomes after Grade 2. Children who were enrolled in higher quality childcare classrooms were found to have better receptive language skills in pre-school and in kindergarten, although these results were no longer statistically significant in Grade 2. Higher quality childcare was associated with better math skills before school entry and right up through second grade.

32. Andersson's study of Swedish children in 1992 provides information about the long-term cognitive and social effects of a uniformly high quality early childhood education and care system on children. The original study, when children were aged 8, was based on a sample of 128 families drawn from low and middle-resource areas of Sweden's two largest cities. This follow-up study when the children were aged 13 controls statistically for family background, gender of the child, child's native intelligence, and child's achievement at aged eight. With these factors controlled, the earlier a child entered centre or family day care, the stronger the positive effect on academic achievement at age 13. For children entering childcare in their second year of life or earlier, the academic benefit was found to be an improvement of between 10% - 20% in academic performance at age 13, compared to children cared for exclusively at home. Andersson's conclusion was that "early entrance into day care tends to predict a creative, socially confident, popular, open and independent adolescent." (pp. 32-3).

33. The following summary from *Neurons to Neighbourhoods: The Science of Early Childhood Development* by the National Research Council and Institute of Medicine (Shonkoff and Phillips, 2000) presents an assessment of the effects of child care quality, and indicates some of its key features. The assessment is based on critical review of a wide range of recent studies:

"In sum, the positive relation between child care quality and virtually every facet of children's development that has been studied is one of the most consistent findings in developmental science. While child care of poor quality is associated with poorer developmental outcomes, high-quality care is associated with outcomes that all parents want to see in their children, ranging from co-operation with adults to the ability to initiate and sustain positive exchanges with peers, to early competence in math and reading.... The stability of child care providers appears to be particularly important for young children's social development, an association that is attributable to the attachments that are established between young children and more stable providers. For cognitive and language outcomes, the verbal environment that child care providers create appears to be a very important feature of care." (pp. 313-4)

1.5. Effects of ECEC on Parents' Employment Situation

34. It is a biological fact that men cannot have babies. Nor can they suckle their young. Beyond these limitations, it is not obvious that men could not, given sufficient encouragement and early training, share equally in the burdens and joys of child rearing. However, the way our society has evolved, in virtually all OECD countries, it is generally the mother's role to take the primary responsibility for both the provision of care to young children and the making of day-to-day decisions about their lives. Accordingly, it is nearly always the mother's career that is foregone; if someone stays home with the children; it is the mother who works part-time when children are young, who declines opportunities for advancement, who neglects the acquisition of skills which might permit moving to a higher income. Of course, young children make life forever different for fathers as well; often they may work harder or longer hours, and there is a considerable amount of off-shifting, where fathers and mothers adjust work schedules to avoid having to hire paid caregivers while both work. The evidence, however, seems overwhelming that changes in ECEC policy will have more dramatic direct effects on the daily lives of mothers, and on fathers more indirectly.

35. Gunderson (1986) has identified six dimensions of female labour market behaviour which are potentially affected by changes in early childhood education and care policies "(1) labour force

participation, (2) hours of work, (3) acquisition of general labour force experience and company specific seniority, (4) human capital acquisition, (5) earnings and (6) occupational status.” (p. 2). There is a considerable research literature on the effects of childcare costs on mothers’ labour force participation, much less on hours of work, and very little on other dimensions of labour market experience. There is only sparse evidence on the effects of the convenience and quality of childcare on any aspect of mothers’ labour market decision-making.

36. There has been a sea-change in the labour force participation of women since the Second World War. In most OECD countries, the female participation rate (the percent of all women of labour force age who are currently either employed or unemployed and seeking work) has doubled or tripled since the 1940’s. The growth in participation rates has been particularly strong amongst married women with children, including those with pre-school children.

37. While labour force participation rates have increased rapidly, nearly all studies of the employment decision of mothers have found that the cost of early childhood education and care is one key element of that decision. Cleveland, Gunderson and Hyatt (1996) and Powell (1997) provide summaries of this literature, as well as reporting the results of their own work. For instance: “The Canadian results confirm those found in most U.S. studies, indicating that childcare costs exert a significant negative effect on the labour supply of women with children and on their decision to purchase ECEC. Specifically, a 10% increase in the expected price of childcare is associated with a 3.9% reduction in the mother’s probability of engaging in paid employment, and an 11 percent reduction in the probability of purchasing market-based care.” (Cleveland, Gunderson and Hyatt, 1996, p. 147). Notice that a rise in the price of market-based or paid childcare affects different mothers differently; some who do not have good childcare alternatives will leave the labour force, others will abandon their current childcare arrangement but find an unpaid alternative which permits them to stay in the labour force.

38. The current cost of childcare for many families is quite considerable in countries without publicly-financed or publicly-provided ECEC services. Consider the case of Canada, as an example. Nearly half of families with pre-school children use non-market forms of childcare (off-shifting by the child’s father, care by other relative inside or outside the child’s home) to allow mothers to work. Although the monetary cost of these arrangements is generally zero, this is misleading. The use of non-market care is strongly and inversely associated with the mother’s income, suggesting both that women are more likely to take only a part-time job when using family care resources and that women with low earning capacity may be compelled to use unpaid care. Cleveland and Hyatt (1994) have calculated the annual monetary cost of childcare for those families using paid arrangements; even using the relatively low quality arrangements which predominate, childcare costs eat up 7.9% of gross family income on average. Since, the mother’s work decision frequently involves a comparison of her potential income to the expected cost of care, it may be more relevant to consider childcare costs as a fraction of the mother’s income alone; on average, childcare costs amount to 17.9% of the mother’s annual gross income in Canada.

39. Another source of information on childcare expenditures is Statistics Canada’s Family Expenditure Survey. Surveying major metropolitan areas in Canada in 1990, they found that there were about 500,000 families with substantial (over \$250.00) annual childcare expenses. On average, these families spent over \$2,700 annually on childcare. Increased expenditure was strongly and positively associated with the

number of pre-school children in the family, the mother's participation in full-time work and family income. There were over 200,000 families spending an after-tax average of nearly \$5,400 annually on paid care. Since the typical mother of young children might have an expected full-time full-year pretax income of \$25,000 or less, it seems obvious that the price of childcare is sufficient to affect both decisions about labour force participation and hours of work.

40. There is not much evidence about how ECEC costs, convenience and quality affect whether a mother works full-time versus part-time. Lisa Powell (1997) reports on Canadian evidence suggesting that full-time work is quite sensitive to childcare costs, while part-time work is less so: "Simulation results show that if all childcare costs were fully subsidised, the rate of full-time employment (as a percent of all mothers) would increase from 29% to 52%, suggesting that childcare subsidies will have a particularly strong positive effects on full-time work." (p. 12) As Powell notes, this finding is even more significant in a lifetime context, because substantial experience of part-time working has been shown to affect a mother's career path, leaving her with a permanently lower lifetime income stream. Heckman (1974), Averett, Peters and Waldman (1997), and Gustafsson and Stafford (1992) provide complementary evidence that childcare costs have a substantial negative effect on hours worked. Michalopoulos, Robins and Garfinkel (1992) find effects which are statistically significant, but small in magnitude.

41. Nearly all the statistical evidence cited above comes from cross-sectional studies (with data from a single point in time) in which the decisions of mothers facing different opportunities and having different characteristics are compared with one another. These studies do not, by their nature, consider the lifelong effects of changes in the anticipated cost, availability and quality of childcare. However, decisions about the acquisition of labour force skills through education and job training, about marriage and having children, about whether a mother will stay at home while children are young are long-term decisions which are, at least in part, made when mothers (and fathers) are still girls (and boys). Only a part of the effect of any permanent change in childcare policy is contemporaneous. Much of the effect of, for instance, the comprehensive family and childcare policies of France, or Sweden (and now Quebec) is on the lifelong plans which young people will make. These effects are very hard to capture and measure with any statistical precision, but we know they are there.

42. Indirect evidence about the importance of these type of effects is provided by Gunderson (1986, 1992; see also Waldfogel, 1997) when he decomposes statistically the male-female earnings gap. At the time of that research in Canada, women earned, on average and comparing annual full-time earnings, about 60-68% of what men did (depending upon the year of measurement). The earnings gap was thus somewhere between 32% and 40%. Only a relatively small proportion of this gap (about 5 percentage points) can be considered pure wage discrimination. The majority of the difference arises from the different labour market decisions women have made, nearly all of which are associated with their primary responsibility for the rearing of children. For instance, about 10-15 percentage points of the difference is due to occupational segregation. In other words, women are concentrated in sales, service and clerical female-dominated occupations. These jobs may be easier to enter and exit, may offer more part-time employment, may offer more flexibility in hours of work than other occupations but there is a considerable wage penalty suffered in both the short and long-term. About 5-10 percentage points of the average wage differential is statistically related to differences in unionisation and the accumulation of human capital (experience and education). Another 16 percentage points is due to differences in the number of hours

typically worked (even amongst “full-time” workers). As Gunderson (1986) notes “Differential child-raising responsibilities is a crucial determinant of each and every one of these components. In fact, it is difficult to think of any other factor that is so important in influencing the various components of the earnings gap.” (p. 2)

43. Most of the data cited above refers to married mothers only (including common-law) or is a combined result in which the effects on married mothers is numerically predominant. The labour force situation and the labour force decisions facing lone mothers (i.e., never-married, divorced, separated or widowed) are quite different from those of married mothers. There is a distinct economic literature on the effects of childcare on lone mothers (e.g., Connelly, 1990; Berger and Black, 1992; Dilnot and Duncan, 1992; Ermisch, 1991; Jenkins, 1992; Kimmel, 1994 and 1995; Robins, 1988; Cleveland and Hyatt, 1996a, 1996b). It is virtually a consensus in this literature that the effects of childcare costs (and availability) are strong; the decisions of lone mothers are likely to be more sensitive to changes in childcare policy than are the decisions of married mothers. So, for instance, Cleveland and Hyatt using data from the Canadian National Childcare Survey find that a 10% rise in childcare costs would lower the employment rate of lone mothers by about 6% (about 2 percentage points). Connelly finds that use of social assistance would fall from 20% to about 11% if childcare costs were fully subsidised in the U.S. for unmarried mothers. In self-reported evidence, lone mothers in the Canadian National Childcare Survey who are currently working and paying for childcare were asked whether they would change childcare arrangements or leave their employment situation if the price of childcare were to rise by 25% or more. Nearly 70% of single mothers reported they would change childcare arrangements under these circumstances, while nearly 40% reported that they would quit their jobs. On both counts, lone mothers were found to be considerably more sensitive than married mothers. Similarly, on both counts, never-married mothers were found to be more sensitive than divorced, separated or widowed mothers.

44. The effects of childcare costs and availability on lone mothers may be strong but so, too, are numerous other factors. Many lone mothers with young children are potentially eligible for social assistance and other benefits. Many lone mothers do not have extensive job experience or education and many have spent time out of the labour force with young children. Their anticipated employment earnings may supplement these social assistance and other payments, but given the almost punitive rates at which employment income is “taxed-back” from welfare recipients, the returns to employment will be meagre unless hourly wages are quite high. Childcare costs may well be the straw that breaks the lone mother’s back; unless childcare expenses are fully subsidised, there will be little incentive to employment for most lone mothers.

1.6. Concluding Observations

45. The evidence on the benefits and costs of early childhood education and care does not suggest that all and any expenditure of public money on ECEC will generate benefits greater than costs. The precise design of ECEC financing programs matters. In particular, the ratio of benefits to costs is clearly affected by the quality of ECEC services available; benefits to children rise with quality level, not just up to some point, but apparently without obvious limit (Lamb, 1998). However, costs also rise, in general, as the quality level of ECEC services rises. Programs should be designed to maximize the excess of benefits over costs for any child, and should include all children and families for whom benefits exceed costs.

46. There have been only a few complete benefit-cost studies of ECEC services. In a Canadian context, in which there is currently only one year of preschool education part-day and part-year available to most children before compulsory schooling at age six, Cleveland and Krashinsky (1998) find that good quality ECEC services full-day and full-year for most children from ages 2 – 6 would generate benefits twice as high as the additional public costs. Most European countries have already concluded that publicly-financed preschool ECEC services in approximately this age range are beneficial, and worth the cost. Cleveland and Krashinsky find that close to half the public benefits of the proposed ECEC services in Canada derive from employment support provided to parents (particularly mothers) of young children. By implication, some countries currently providing preschool ECEC services might be able to increase the ratio of benefits to costs by redesigning ECEC services to make them more supportive of parental work schedules and needs.

47. Other benefit-cost studies have focussed on early intervention programs such as the Perry Preschool Experiment, Head Start, and the Abecedarian Experiment. In general, these targeted programs have been enriched in resources relative to child care available on the private market in the United States, and have included services such as parental education, parental involvement, health and development checks and counselling etc. in addition to part or full day ECEC services. Although these experiments have typically been very successful in delivering benefits up to seven times higher than costs, it is not clear how to transport the lessons of these interventions to other contexts and other countries. An important component of the long-run benefits from the Perry Preschool intervention, for example, came from a reduction in involvement in crime. Though important, this would not apply equally to all possible targeted populations. Further, the recent results from the NICHD studies suggests that the typical criteria for targeting such programs may be suspect. After controlling for the quality and sensitivity of care received at home, the NICHD (2000) did not find that children from low-income families were likely to benefit more than children from middle or higher-income families. In other words, potential benefits from good quality ECEC services seem to be widespread rather than targeted to restricted groups of children. This is consistent with other evidence which suggests that the majority of “vulnerable children” (those experiencing poor cognitive or behavioural outcomes) do not come from low-income neighbourhoods. In fact, in a major Canadian study (Willms, 2002) approximately 30% of children in neighbourhoods at all socio-economic levels but the very highest were found to be “vulnerable”.

48. There have been no benefit-cost studies for ECEC services provided to very young children (0-2 or 0-3 years). Anderson (1990) and NICHD (2000), amongst others, suggest that are substantive benefits to children from high quality early care. However, there are similar benefits to children from sensitive and effective parental care. Further, the cost of providing high quality non-parental care to infants is very high (recommended staff-child ratios are typically about three times as high as for preschool children). Alternatively, the cost of paying parents to stay at home for several years while their children are young may be much higher again (see the discussion in Chapter Three). Many countries (see tables at end) provide reasonably generous financial assistance and job protection for between a few months and a year to mothers (and a small but increasing number of fathers) who will care for and nurture their infant children at home full-time. Beyond that, in the name of supporting freedom of parental choice, most countries provide minimal financial assistance or services to families with children until those children reach age 3, 4 or 5. Many of these families use arrangements which probably provide, at best, only modest developmental

support to their young children while the majority of parents are employed. It is unlikely that either children, families or the public are obtaining the maximum potential benefits in this period of children's lives.

CHAPTER 2:

FINANCING ECEC: A REVIEW OF DATA AND DATA REQUIREMENTS

49. The determination of what data about the financing of ECEC is needed starts from the definitions of *ECEC* and *ECEC policy* provided in Chapter 1 above:

“The term *early childhood education and care* (ECEC) includes all arrangements providing care and education of children under compulsory school age, regardless of setting, funding, opening hours, or programme content. ...including parental leave arrangements – and provision concerning children under age 3....” (OECD, 2001, p. 14);

“ECEC policy includes the whole range of government activities designed to influence the supply of and/or demand for ECEC and the quality of services provided. These government activities include direct delivery of ECEC services, direct and indirect financial subsidies to private providers (such as grants, contracts and tax incentives), financial subsidies to parents both direct and indirect (such as cash benefits and allowances to pay for the services, tax benefits to offset the costs, or cash benefits that permit parents to stop working and remain at home without loss of income)....” (Kamerman, 2000a, p. 8)

2.1. Types of Financial Instruments

50. Where governmental and other financing is concerned, there is a wide variety of possible funding mechanisms used to encourage and provide ECEC services. A partial list would include:

- Maternity leave, parental leave, paternity leave, child-rearing leave, family leave, all with or without paid wage replacement benefits
- Public provision of universal services, or services with restricted clientele (Head Start, kindergarten)
- Childcare expense deduction or tax credit based on childcare expenses
- Voucher conditional on purchase of childcare of certain types (for instance, conditional on non-profit provision, accreditation, or some indicators of quality)
- Income-conditioned childcare subsidies to low-income families, conditional on employment and use of certain types of childcare
- Wage grants, operating grants, maintenance grants to child care facilities with or without conditions about the use of the grants
- Childcare allowance as part of social assistance, with requirements for job training or employment
- Tax benefits or cash grants to subsidise stay-at-home care

- Capital grants to ECEC facilities
- Tax treatment of fringe benefits, employer provision of services, employer capital investment in services
- Reduced taxation of net income of childcare centres, reduced sales taxes charged to childcare operators, reduced sales taxes charged to parents purchasing childcare

51. These types of financing programmes can be usefully divided into a number of relatively distinct and comprehensible types:

- Child-related leaves and associated benefits – including maternity, parental, paternity and child-rearing leaves, with or without paid benefits, with or without full job protection;
- Publicly-provided ECEC services – including pre-primary education and ECEC services provided by public sector bodies or non-profit agencies (even with user fees so long as these fees are small for all users);
- Supply subsidies to ECEC services – operating grants, quality-enhancement grants, wage-enhancement grants, capital equipment grants, tax benefits and tax reductions given to ECEC services otherwise normally subject to taxation;
- Demand-side subsidies for the use of ECEC – subsidies to low-income families for the use of ECEC services, tax deductions of ECEC expenses or tax credits based on ECEC expenditure, vouchers for the purchase of ECEC services
- Other financing programmes

Naturally, there will be some difficult cases of classification and fuller definitions will be necessary to resolve controversies.

2.2. What Data is Needed?

52. To compare ECEC policies and systems of financing across countries, a number of kinds of detailed information are needed. In particular:

- The name and type of assistance provided by each programme or policy;
- The width and depth of each programme – the width is the range of families eligible for the programme (and the conditions of eligibility) and the take-up rate (number or per cent taking up the benefits or services offered by the programme). The depth is the amount of assistance provided to the average family (or facility, or child) or the range of levels of assistance provided to different types of families, all expressed in units of a comparable currency;
- The total amount of public spending on each programme expressed in comparable currency units.

53. Since ECEC financing programmes are themselves complex, and systems of ECEC financing are complex, a tree-structure of tables is appropriate. Three levels are recommended. First, an initial summary table covering the set or system of programmes and services provided in each country. This table would provide the five-way breakdown described above: child-related leaves and associated benefits, publicly-funded ECEC services, supply subsidies, demand subsidies, other financing programmes. Second, a set of follow-on tables, one for each of the five financing programme types, would provide details of each

programme or service. Third, a short written discussion of each programme (similar to that in Appendix 1 of *Starting Strong*) would provide additional details about eligibility, conditions, coverage and exceptions that could not reasonably be included in tabular descriptions.

54. A brief description of the structure of these tables is provided below:

Table 2 – The Overview: very brief descriptions of ECEC programs and partially or wholly publicly funded ECEC services by country, categorized into child-related leaves (and associated benefits), publicly-funded ECEC services, supply subsidies, demand subsidies, or other financial assistance and the total annual public cost of these programmes as a per cent of GDP.

Table 3 – Child-related leave (and associated benefit) programmes in each country by name of programme, eligibility, duration of leave, per cent of wage replaced, take-up rate, degree of job protection, and annual cost

Table 4 – Publicly-provided ECEC services in each country for 0-3 and 3-6 year olds by name of service, eligibility, administrative auspices, locus of care, coverage/ access/ spaces, duration of service, parental share of costs, indicators of quality, annual cost, age of compulsory schooling

Table 5 – Supply subsidies to privately provided ECEC by name of financing programme, type of facility, purpose of subsidy, eligibility/conditions, average annual assistance per facility or per child-hour served, annual cost

Table 6 – Demand subsidies for the use of private and publicly-funded ECEC services by name of programme, types of care covered, eligibility, average annual assistance per child subsidised, take-up rate, annual cost, whether subsidy relieves taxes otherwise owing

Table 7 – Other – name of programme, eligibility, conditions of use, average annual assistance per child-hour, annual cost.

2.3. How Programmes Affect Typical Families

55. Another type of table is also desirable. In many cases, ECEC policies have differential impacts on different families. There is, therefore, no single typical family and information about the average amount of financial assistance per family or per child is only somewhat informative. Further, there may be interactions between the tax system of a country and the eligibility criteria for ECEC benefits which is difficult to assess. For these types of ECEC policies, it would be useful to assess the impact of policies on six different representative family types: a two parent family at the median pre-tax family income, at the twenty-fifth percentile of family income and at the seventy-fifth percentile of family income, a lone parent family at the median lone parent pre-tax income, at the twenty-fifth percentile and at the seventy-fifth percentile. Tables would show the amount of after-tax, after-benefit situation of each of these family types as it is affected by a particular ECEC policy or benefit. This data would give a clearer picture of variations in the “depth” of ECEC policies as applied to different family types, and allow for clearer understanding of variations in policy design across countries.

2.4. Data Collection Issues and Problems

56. There are a series of other data issues on which it is useful to briefly comment.

57. The definition of Early Childhood Education and Care services provided above is distinct from and much broader than the definition used in the collection of education statistics by OECD (ISCED Level 0). The ISCED definition restricts data collection to educationally-oriented ECEC programmes taught by teachers with education-type credentials, and does not consider parent leaves and associated benefits. The recommended tables would collect information on financing of ECEC services and child-related leaves and benefits independent of the quality or educational orientation of the services. Quality is an issue of very significant concern but should not be the defining characteristic for the universe on which data will be collected.

58. The tables recommended above would not provide information on the total number of regulated or licensed ECEC spaces available in a country, unless those spaces were substantially publicly-funded. Although regulated and licensed ECEC spaces are not necessarily publicly provided nor largely publicly funded, regulation and/or licensing is an attempt to represent the public interest in improving quality of services. It might be valuable to add a tabulation of the number of licensed and regulated spaces to the table on “supply subsidies”.

59. There are serious problems in collecting or presenting ECEC data in the tables described above for any country in which key programmes vary across provinces, states, municipalities or similar jurisdictions. There is no ideal solution; data tables would have to show either the average value or the range of values across different jurisdictions within a country or both. For such countries, the written descriptions of ECEC financing arrangements (level 3 described above) would provide more detail on financing schemes for sub-national jurisdictions.

60. It is only possible to tabulate major ECEC financing programmes. Each country has a wide variety of special allowances and programmes affecting a small number of children or families that it is not feasible to include in the tables described. For instance, the following types of assistance or services are unlikely to be itemised in the recommended tables:

- childcare allowances (or disregards) as part of social assistance, with requirements for job training or employment
- capital grants
- tax treatment of fringe benefits, employer provision of services, employer capital investment in services
- taxation of net income of childcare centres, sales taxes charged to childcare operators, sales taxes charged to parents purchasing childcare
- childcare expense allowances related to unemployment insurance

The recommended tables on ECEC financing should, therefore, be labelled as showing the “major” ECEC financing programmes. An explicit definition of “major” is needed.

61. The tables recommended above do not necessarily include special ECEC programmes directed towards children or families with special ECEC needs, such as children with disabilities, children-at-risk, or children from low-income families. It may be desirable to provide an additional table detailing the programmes of financial assistance and ECEC services available to these families and children in different countries.

62. Most countries provide some kind of general financial assistance to families with children. The recommended tables do not include general financial assistance to families, whether this assistance is universal or scaled to income and whether provided through a demogrant or as a tax deduction or credit. Obviously, this financial assistance is important to families, and might or might not be used to pay for ECEC services. An international comparison of family policies across countries would include this general assistance, but an international comparison of ECEC policies across countries should not.

63. There are a wide variety of different objectives towards which ECEC policy is directed in different countries. This report has not addressed the issue of collecting data on the outcomes towards which ECEC financing is directed, although that would be a logical complement to this report's recommendations. The set of possible objectives on which data or proxy measures could be collected would include:

- Children's health
- Mother's health
- Parent-child relationships
- More gender-equal parental roles
- Mothers' labour force participation
- Mothers' hours of work
- Employment of lone parent mothers otherwise on social assistance
- Intellectual/ social development of children-at-risk
- Intellectual/ social development or school-readiness of all children
- Encouraging or guaranteeing quality in ECEC services
- Increasing the supply of licensed or regulated ECEC services available to parents
- Raising wages/salaries of childcare workers
- Lowering the price of childcare to parents or the price of certain types of childcare or the per cent of ECEC costs borne by parents
- Encouraging fertility
- Work-family balance
- Integrating immigrant children and families
- Changing the human capital investment decisions of girls and young women
- Permitting free parental choice amongst different employment and care options
- Equality of women's position in the labour market

64. Note that in calculating the parents' share of the costs of ECEC services (e.g., in Table 4 below), it is inappropriate to count tax credits or tax deductions as a contribution by governments to paying part of the

full cost of ECEC services and therefore as a reduction of the parents' share. (Consider this question: if the market price of a childcare space is \$8,000, and childcare expenses are fully deductible from income taxes, how much will the family have to pay for this childcare space? Answer: \$8,000). Tax deductibility reduces taxes otherwise payable; it does not reduce the market price of ECEC payable by the family. Tax measures related to parental expenditures on ECEC are likely to have important effects on mothers' employment and therefore on the use of ECEC. However, they are appropriately viewed as a means to reduce inappropriate tax burdens on employed mothers (horizontal tax equity) related to their use of ECEC services, rather than as a method of paying for ECEC services.

2.5. What Data Exists?

65. *Starting Strong* provides the best comparative data on ECEC financing currently available. It is not entirely clear why this kind of data on financial aspects of ECEC programs has not been available in the past. Early Childhood Education and Care appears to have been, in the past, a relatively low priority of many governments, and producing nationally and internationally comparative data has seemed to be of little positive value, and potentially embarrassing to some jurisdictions. There are jurisdictional problems as well. In Canada, for example, responsibility for ECEC is in provincial/territorial jurisdiction, so the act of collecting data across 13 jurisdictions and federally would require effort and resources, and the establishment of common definitions and data collection practices. Up to this point, it is through the efforts of a non-governmental organization – the Childcare Resource and Research Unit (CRRU) at the University of Toronto – that cross-provincial and territorial information on ECEC financing programs is now collected, and even then, only every several years. Information is provided to the CRRU by provincial-territorial and federal officials. Much of the data is estimated by knowledgeable officials rather than being known from original sources (see also Cleveland, Friendly and Lero, 2001 for details on what data is collected at federal, provincial and territorial levels in Canada, and recommendations for change).

66. Stoney and Greenberg provide some insight into data collection difficulties in the U.S. (1996):

- The United States does not have a single coordinated child care system. Instead, child care and early education involve a complex mix of private and public funding for an array of formal and informal, regulated and unregulated, primarily educational and primarily custodial care arrangements....
- Estimating the amount of money spent on child care and early education can be difficult because it requires both a careful definition of which services and activities are subsumed in the discussion and the availability of good data
- Even with a clear definition, however, the availability and quality of the data concerning expenditures for these services are very uneven. The public and private entities involved in financing early childhood programs often operate in isolation from one another, view early childhood services in very different ways, and report data differently. Some do not collect data at all or group expenditures only into broad categories. Data are sometimes reported for the calendar year, federal fiscal year, or state fiscal year. ... Despite these challenges, by making some generalizations in language and approach, it is possible to paint a broad picture of how child care and early education services are financed in the United States. (pp. 83-5)

67. As a demonstration and using the tabular framework recommended earlier in this chapter, much of the ECEC financial and programme data from *Starting Strong* is collected in the set of tables below. Additional data from a number of other sources has been included where available. Since the data comes from different sources and has not been verified for completeness or accuracy, these tables should be viewed as indicative only.

CHAPTER 3:

CURRENT RESEARCH ON DIFFERENT FUNDING MECHANISMS

3.1. Introduction

68. Arguments presented in Chapter 1 suggest that OECD countries need to be concerned about early childhood education and care (ECEC). Even so, the issue of how best to fund those services remains unresolved; funding arrangements across the OECD vary considerably. Some countries leave funding largely in the hands of parents, intervening only in extreme cases (in various ways for children in families with very low incomes or at risk), while other countries provide considerably more public funding and services. But even among countries that invest significant amounts of public money, the structure of that funding can differ significantly.

69. One issue is whether public intervention will occur on the demand side or on the supply side. Some countries direct funding through families, allowing parents to make decisions on what kinds of ECEC are best suited to their children. These demand side subsidies can flow through the tax system as credits or deductions. Alternatively, they can be provided directly through vouchers, or they can be provided by allowing parents to choose types of care and then designing funding mechanisms in which the funds follow the children.

70. Other countries subsidise certain types of ECEC directly and arrange for those services to be provided to parents and children. These supply side subsidies are usually limited to specific types of care, so that parents who choose other types of ECEC may receive no subsidisation. Approved types of care will thus be provided to parents at below-market prices (and, in some cases, for free). Supply-side subsidies can also be provided in a variety of ways. ECEC services can be provided directly through the public sector by various levels of government, or ECEC services can be provided by subsidising private sector producers who meet certain standards. When the government chooses the latter option - that is, when it chooses to, in effect, contract out production to the private sector - there still remains the question of whether for-profit firms will be considered eligible for subsidy, or whether subsidies will be limited to non-profit organisations. Even in the latter case, there remains open the issue of the extent to which those organisations will be governed by parent boards or to what extent boards of directors will be independent of direct parental control.

71. Another issue of concern when using supply-side subsidies is the degree and nature of centralised control over what happens within the organisation providing ECEC. One alternative is to organise ECEC as an add-on to the existing public education system. Alternatively, a separate stand-alone public or private ECEC system can be set up.

72. Finally, it is important to keep in mind that the most important component of the early care of the young child will occur within the child's home and will be provided by the child's parents. Even the most extensive ECEC programmes currently in operation in OECD countries generally provide no more than 40 to 50 hours a week of ECEC to children, implying that the rest of the day and nighttime hours (120 or more) are provided by parents. Most studies of child outcomes identify parents as the most important factor in determining how children turn out. A central concern for ECEC policy will be to determine the appropriate boundary between parental care and ECEC services outside the family. In particular, a decision needs to be made on what age is most appropriate to begin ECEC services, and what supports are necessary to families prior to that age to allow them to provide family care. OECD countries vary widely in the nature of the parental and child-rearing leave programmes they provide, and in the extent to which those programmes encourage mothers or fathers to remain in the home to care for their children.

73. This chapter will look at these different funding mechanisms and provide an overview on what economic research has to offer in designing ECEC funding. The major contribution of economics is to clarify the basis on which policy makers might choose one policy arrangement rather than another. There is no one best funding mechanism for all circumstances. However, it is often the case that disagreements on funding that appear to be only technical also reflect differences in philosophy. For example, individuals (and governments) may differ on the appropriate role of the state in setting standards for the care of children, and on the appropriate roles for men and women within and outside the family. Different funding mechanisms will be consistent with a larger role for the market or for the state in ECEC and these different approaches may be more or less consistent with practices and beliefs of the party in power in different countries.

3.2. What is the optimal level of spending on ECEC?

74. This fundamental question must be, of course, the starting point for any debate about public spending on ECEC. Although economists tend to use terms in discussing this issue that are unfamiliar to those outside the profession, it turns out that they often see the issue in ways that are not that different than those used by non-economists. For economists, if ECEC were a private good provided by competitive firms under conditions of perfect information, there would be no justification for any public spending. Public spending on ECEC is then justified by arguing that there is some kind of "market failure" that interferes with the functioning of the private economy.

75. It is worth reviewing briefly how economists construct these theoretical arguments for public financing of ECEC, based on the market failure/externalities approach: Imagine for a moment that the decision to purchase ECEC is made privately by parents. Parents would make such a purchase because of the benefits that would flow to the family. These benefits would include the direct benefits to the parents, arising because ECEC frees up time that the parents can then use in other ways, most generally by participating more fully in the labour market. The benefits would also include benefits to the children, which parents value. These benefits include but are not limited to higher wages by these children in the future because of increased readiness for school. Because parents value what happens to their children, they would take both types of benefits into account when making the decision about whether to purchase

ECEC and how much of it to buy. To argue for public funding for ECEC, economists argue that some kind of market failure arises in the ways in which parents assess these two types of benefits.³

76. In general, we might consider a fourfold classification of why private markets might fail to provide the optimal amount of ECEC from the point of view of society. There are market failures involved in both the benefits flowing to the parents and the benefits flowing to the children. In each of those cases, there are external benefits that flow to society that are not fully taken into account in private decisions. And, in each of these cases, there are informational problems that interfere with parents making adequate decisions when they purchase ECEC.

77. Consider first the benefits flowing to children. Good childcare prepares children for later life. Children who are well-cared for early in life grow up to have more success in school and ultimately to be more productive in the labour market. There are also positive links between better education and better health, and one could also argue that better educated children also grow up with a better appreciation of the arts and other amenities that make for a good life. If these benefits accrued only to the children themselves, through higher wages and better health and more meaningful lives, then we might imagine that conscientious parents would take them into account when they decided on how much to spend on their children. But in a very real sense, all of these gains linked to early education also “spillover”⁴ to the rest of society.

78. Higher productivity spills over to the rest of society for two reasons, both well accepted by economists: high-skilled workers make those around them more productive, because they invent new products and start new businesses; and high-skilled workers pay higher taxes which support the economic and social infrastructure that drives our economic engine. If ECEC “levels the playing field” by providing more equal opportunities to all children, then this is another public benefit that spills over to society. Better health is also an externality because many of the costs of poor health are borne publicly. Better educated children also grow up to be better citizens and voters, again benefiting the rest of society. Better educated and more equal societies have lower crime rates, again a social benefit. For societies with large numbers of immigrants, ECEC can help integrate children more rapidly into society (and, through those children, can even help integrate parents), and although this benefits children directly, it also flows to everyone else in the country.

³ It is a fundamental theorem in microeconomics that when markets work well, the outcome that they generate will be efficient. Interference with markets under these circumstances will inevitably result in economic losses. Thus, economists can justify government intervention in the free functioning of markets only when it can be shown that there is some particular way in which markets do not “work well.” This notion is called “market failure.” In the case of children, the microeconomics approach would argue that when parents are the only ones deriving benefit from their children, and when all markets are working well, these parents will make economically correct decisions about all the key variables that affect their children, including the decisions on whether and when mothers (or fathers) return to work, the care arrangements that are made when they do, and the appropriate expenditures on education at various stages of the children’s lives. To justify government involvement in these decisions, we will have to explain how markets fail to function well.

⁴ Economists use the term “spillovers” in much the same way as they use the term “externalities.” In each case, they are referring to benefits or costs that accrue to someone other than the individual consumer or producer making the fundamental economic decision.

79. Because parents do not take these externalities into account, economic theory tells us that most parents will not spend enough on ECEC. It is of course true that some parents place unusually high value on their children and thus may in fact spend so much on ECEC even without subsidies that additional spending might not be necessary. It is also true that, at the other end of the spectrum, some parents place relatively little weight on the welfare of their children, so that the additional spending called forth by public programs might be particularly productive.

80. Furthermore, even if we ignore all of these externalities, parents may not purchase high enough quality childcare for two reasons: first, if they do not have enough money to do so (they cannot easily borrow against children's future wages to finance such investment) or second, if they cannot easily measure the quality of the childcare they are in fact purchasing. For these reasons, we believe that many parents do not take adequate account of the benefits of purchasing high quality ECEC, and this is a further compelling argument for subsidies to ECEC.

81. Now consider the benefits flowing directly to parents. The major benefit of ECEC is the fact that it frees up parents' time to participate in the labour force. Of course, parents earn wages when they do so, so many of the benefits are in fact private. But high rates of taxation on mothers' earnings provide significant benefits to other taxpayers (an externality widely considered in the literature). Furthermore, evidence suggests that when mothers leave the labour force to care for young children, they forego productivity and wage increases, and suffer depreciation of their skills. This reduces their wages in the future, further reducing the tax revenues and harming other taxpayers.

82. Again, even if we ignore these externalities, it can be argued that many parents are not fully aware of these costs, and in any case they cannot easily borrow against future earnings to finance childcare in the present. In addition, higher wages for mothers in the future protect mothers and their children from some of the financial implications of family breakup, a consideration that seldom enters into the employment calculations of young parents. For all these reasons, we believe that parents do not take adequate account of the short and long term private and social losses involved when they stay out of employment for long periods of time when children are young, and this is a compelling argument for subsidies to ECEC.

83. A recent calculation of the benefits and costs of good quality ECEC services in Canada, performed by the authors, found that even under very conservative assumptions about the magnitude of these externalities, the benefits were significant and turned out to be essential in arguing that public childcare expenditures would generate net benefits to society (Cleveland and Krashinsky, 1998). We looked at both the benefits to children and to their parents in funding ECEC for children ages 2 to 5 years at relatively high levels (we assumed expenditures of about \$8500 in 1998 for full-day ECEC, which is more than was spent on most children in that year in Canada). Children with working parents would receive high quality child care while their parents worked. Children with a parent at home full time would receive enriched early childhood educational experiences. We considered only the economic benefits that would be generated: for children, we considered the economic gains in terms of higher future wages; for parents, we considered only the increases in earnings and the higher taxes those earnings would generate (the increases in earnings occurred both because parents worked more hours in the paid labour force, and because parents took shorter breaks from paid employment, increasing earning power in the future). We concluded that such a program would cost about \$5.3 billion dollars in new public spending in 1998, about one-half of one

percent of Canada's GDP. The benefits of such a program would be approximately double the increment in expenditures.

84. Some of the literature on ECEC has focused on only the economic returns from increasing labour force participation by parents. The tax rate on earnings discourages labour force participation, and because the elasticities⁵ are large for women with children, there exist significant efficiency losses for this group. Childcare subsidies would tend to induce labour force participation for these mothers, and thus might actually increase efficiency. But when the benefits are limited in this way, it can be shown that the maximum efficient subsidy to childcare cannot exceed the marginal tax rate (see Krashinsky, 1981). However, the optimal subsidy is positive in such a model, and one can even imagine circumstances in which the additional labour supply called forth by a childcare subsidy would generate enough tax revenue to more than compensate for the cost of the subsidy (Bergstrom and Blomquist, 1996, suggest such a possibility). Lundholm and Ohlsson (1998) discuss this issue in the course of analyzing the political determination of optimal childcare subsidies. Graafland (2000) simulates childcare subsidies in a general equilibrium model and finds what we would expect: childcare subsidies increase labour supply by mothers and generate higher tax revenues as well as lower transfer payments to families (because family income is now higher). Duncan and Giles (1996) suggest that childcare subsidies will generally not pay for themselves, in part because they often go to children whose mothers are not employed, or alternatively to those who were already employed at the time of the subsidy.

85. The extreme case in which public financing of subsidies to ECEC ends up saving the government money is unlikely unless tax rates are especially high. This situation generally applies only in some welfare (i.e., social assistance) systems, because the implicit tax back (benefit-reduction)⁶ rates on the earnings of single mothers on welfare can be close to 100%. Using a non-linear budget constraint to model U.S. childcare subsidies, Averett, Peters and Waldman (1997) find that labour supply elasticities can be relatively high for mothers, so that childcare subsidies can elicit significant increases in labour supply. Meyers, Han, Waldfogel and Garfinkel (2001) suggest that childcare subsidies can be used to cancel out the income losses due to the 1996 U.S. welfare reforms, so that governments may save money without driving poor mothers deeper into poverty if they introduce childcare subsidies at the same time as they reduce welfare benefits.

⁵ Economists use the concept of "elasticity" to measure the rate at which one variable changes when another one is raised. For example, in this case, the elasticity refers to the rate at which women's participation rate in the labour force rises when after-tax wages rise (technically, the elasticity in question is defined as the percentage increase in labour force participation given a one percent rise in the after-tax wage rate). A "large" elasticity suggests that women with children respond forcefully to a change in wages, so that when tax rates rise and effectively lower the after-tax earnings of these women, they react by significantly reducing their participation in the labour force.

⁶ The term "tax-back rate" or "benefit-reduction rate" refers to the rate at which welfare recipients lose their benefits when their earnings increase. For example, if a recipient sees her benefits drop by \$80 when she earns \$100 by working, this amounts to a benefit-reduction rate of 80%. In effect, the welfare system is placing a very high rate of implicit taxation on the earnings of those on welfare. Because welfare regulations often take effect in non-linear ways, the system will often change the benefits in irregular ways as recipients cross various thresholds. For this reason, economic models must use "non-linear budget constraints," which is the way economists refer to these irregular benefit reduction rules.

86. Despite all our arguments suggesting that ECEC subsidies are efficient, there remains considerable recent debate on this very point. Sherwin Rosen (1996) has argued that Swedish expenditures on childcare are too high. He suggests that although Sweden is a wealthy country, this wealth predates the expansion of the welfare state. He argues that the efficiency losses⁷ from expenditure on childcare programs may be substantial, perhaps as large as half of the direct expenditures on these programmes. Whatever those may be, there is evidence, suggests Rosen, that childcare subsidies are too large and that a reduction accompanied by a budget balancing reduction in marginal income taxes would increase efficiency. (Rosen, 1996, p. 732)

87. Rosen also argues that although the Swedish workforce has expanded by the entry of women into the labour force, most of this expansion has been in the public sector, where these women produce services that had formerly been produced in the family. In effect, Sweden has monetised the household sector, so that a large fraction of women take care of the children of women who work in the public sector to care for the parents of the women who are looking after their children. The significant taxes needed to finance all this 'cross-hauling' distort economic activity in the Swedish economy and lead to inefficiency⁸.

88. This argument is obviously highly provocative, and can be reacted to on a number of different levels. If one accepts Rosen's reasoning, then the dead-weight losses in different countries can be compared. For example, Dobbelsteen, Gustafsson, and Wetzels (2000) argue that the Netherlands have a smaller efficiency loss than Sweden, a result that naturally flows from the lower subsidy rates for childcare in the Netherlands. Rosen's result occurs in large part, however, because ECEC services in his model are essentially a private good. As we explained earlier, once one makes this assumption, standard economic theory states that government intervention is inefficient, and all Rosen has done is to attach estimates of the losses that arise. These losses disappear once one introduces the types of market failure we discussed earlier. In the case of ECEC, the arguments can become quite theoretical, hinging on assumptions about information and insurance markets (see, for example, Blomquist and Christiansen, 1999, and Aiyagari, Greenwood, and Seshadri, 2002).

89. The only source of market failure contained within the Rosen model is the existing tax rate on earnings. If we accept Rosen's assumptions, the only possible justification for childcare subsidies are high values for the elasticity of labour supply. However, we reject the argument that there are no externalities in ECEC. As was argued in Chapter 1, children are not a private commodity, valuable only to the extent that they appear in parents' utility functions⁹. Children have value to the community, and the beneficial effects

⁷ The term "efficiency losses" is used by economists to refer to deadweight losses in productivity that occur because households or firms alter their behaviour in inefficient ways in response to government policies. For example, taxes on earned income may induce households to reduce their participation in the labour market in order to avoid paying taxes. The term "marginal income taxes" refers to the rate of taxation on additional dollars of income earned by the household.

⁸ Rosen uses the term "cross-hauling" to refer to the apparent absurdity of having people do each other's work, and having the public sector pay for all of this activity. Our view is that much of modern economic life consists of people carrying out vital functions for each other, so that there is nothing particularly odd in this practice.

⁹ Economists have traditionally used the notion of a "utility function" to capture the ways in which goods and services make consumers better off. More recently, economists have used this approach to model less traditional activities. In this case, some economists assume that children generate a flow of benefits that make their parents better off, and that

of ECEC on children therefore accrue not only to parents but also to all other people in the country. This social interest generates an externality that can also provide an important justification for ECEC subsidies (yet this externality is not part of Rosen's calculation).

90. Other authors also make reference to these kinds of externalities. For example, Aslaksen, Koren, and Stokstad (2000) use externalities in their explicit critique of Rosen. Duncan and Giles (1996) refer to externalities both in early education for children and in encouraging mothers to return to the workforce. Blau, who emphasises the trade-offs implicit in most subsidy programmes, makes reference to distributional benefits to children as part of the justifications usually offered for subsidies (Blau, 2000a).

91. It is of course important to understand that mothers are productive both when they work for pay in the labour market and when they care for children inside the home. Rosen chooses to emphasize this point when he refers to the monetization of the household sector in Sweden as "cross-hauling." When mothers go out to work for pay and in turn society pays for ECEC to care for the children of those mothers, not all of the additional GDP production is "new." However, what has motivated women to enter the labour force in ever greater numbers, even in countries like Canada and the United States where child care is not heavily subsidized, is the fact that these women feel that they are more productive when they do so. In that sense, child care is a cost of enabling women to participate fully in the economy, and this cost is significantly less than the output produced by those women, contrary to what Rosen suggests. Our cost benefit study in Canada suggested that the payoffs arising from spending money on ECEC would be considerably more than the cost. The cost of ECEC is, in part, the cost of replacing the care formerly provided by mothers in their own homes; the benefits of ECEC are, in part, the productivity of those mothers when they are in the labour force.

92. In the end, the issues can be viewed in a somewhat simple manner. In countries where there is relatively little government spending on ECEC (the U.S. and Canada are examples), mothers are working in ever growing numbers. Because the vast majority of mothers with young children are in the labour force, some kind of extra-family childcare is usually required. Most ECEC experts argue persuasively that the quality of care being purchased in free markets is generally inadequate, and in many cases dangerous to children's development and future productivity. Because society cares about what happens to children, some significant public financing of higher quality ECEC is desirable.

93. Having accepted this argument, there would still remain the determination of the optimal level of public spending on ECEC. The answer is not trivial because the measurement of the externalities we have discussed requires detailed estimates of things that will occur in the future (the future productivity, inventiveness, and creativity of children who are better educated; the improvements of the health of those children; the benefits of better citizenship; and so on). Even those who believe strongly in the

parents can increase this flow of benefits by increasing the time they spend raising children and by purchasing more goods and services which improve the quality of their children. Economists use the notion of "externalities" to express the fact that not all the benefits of a good or service flow to the individual consumer who makes the decision on how much of the good or service to purchase. Thus the argument is made that children generate an externality because they bring benefits to not just their parents, but to others in society. This peculiar way of expressing the general public interest in the next generation represents the way economists discuss this phenomenon.

effectiveness of ECEC have difficulty assigning firm dollar values to all these benefits, especially since determining the optimal spending on ECEC requires us to derive clear estimates of the additional benefits associated with each additional increment in proposed spending. We can argue then that there ought to be considerable public spending on ECEC, but determining whether that spending should account for 1 or 2 or 4 or 6 percent of GDP is beyond us at this point. What we argued in Canada was that we should be spending considerably more than we are spending at present, and that the optimal level can be arrived at over time, as the impact of real and ongoing programs is assessed.

94. Beyond our arguments as economists lie the more political views of ECEC spending. In general the discipline of economics takes as a starting point the unfettered marketplace and then explains government intervention in terms of market failure. When examining ECEC, this approach may seem somewhat strange, since most of the care of children continues to take place within families, which are distinctly non-market institutions. The reason for this approach is that the thinking of most economists is embedded firmly in what Esping-Andersen (cited in Gustafsson and Stafford, 1998) term the liberal view of state intervention.

95. The liberal view of state intervention sees the state as the residual provider of services, intervening only when markets fail. Liberals would apply this logic to social services, suggesting that only “market failure” arguments can justify state provision of social services like education, medical care, old age pensions, and of course childcare. The United States would be viewed as a prime example of a state in which this view dominates, although Canada and Australia are also offered as examples. The corporatist view would instead start by looking at the ways in which these services have been provided in the past by alternative corporate entities, often to members of those entities. There is a strong church influence, and welfare services are often provided through occupations. Examples include Germany, Austria, and France, and Gustafsson and Stafford include the Netherlands in this group. Finally, the social democratic view would start by looking at ways in which these services might be provided universally to all citizens, tied to the individual’s attachment to the labour force. The typical example here would be Sweden, but the other Nordic states are usually also included (see Gustafsson and Stafford, 1998, 224-5).

3.3. Should subsidies for ECEC be on the demand side or the supply side?

96. Once a country determines the level of public financial support to ECEC that it desires, the next question is to determine whether to provide that support directly to families and allow them to choose the types of ECEC they will purchase, or to provide subsidies to various approved producers of ECEC and therefore to constrain families in the kind of care they may choose if they wish to receive financial support. An example of demand-side subsidies would be tax credits or vouchers, which provide subsidies directly to parents with little requirement other than that they purchase some kind of ECEC. An example of supply-side subsidies would be subsidies provided to private producers who meet certain specific requirements which might include various aspects of quality (staff-child ratio, educational attainment of staff), of parental involvement, and in some cases of mode of provision (public or non-profit).

97. Despite the fact that different countries have chosen very different models of provision, there has been relatively little written that can provide definitive answers as to how to best provide ECEC. An important experiment is currently being developed in the Netherlands, which has committed itself (as this

paper is being written in early 2003) to shifting towards demand-side subsidies. Prior to the shift, the system in Holland was mixed. The government provided subsidies to ECEC institutions on the supply side, while many employers provided subsidies to their workers (about 65 percent of existing labour contracts provided child care subsidies to workers). The new system imagines that employers will continue to fund about one-third of the cost of the system, while the government will provide income-tested subsidies directly to parents through the tax system (with higher subsidies to those with low incomes, and provisions for the subsidy to fall as income rises). The details of the system were being worked out as this paper went to press.

98. Looking at the general issue of supply-side vs. demand-side subsidies, we believe that the debate is largely an ideological one. Those who believe in markets - and they are not limited to those on the political right (although in fairness, the sentiment is most often held in that milieu) believe that parental choice will maximise the effective use of scarce public funds. Demand-side subsidies place funds in the hands of parents who can spend them on forms of ECEC that provide the most attractive types of care. Those who are suspicious of markets - and they are not limited to those on the political left (again, however, the left originate many of these arguments) - are concerned that private organisations may waste public funds, diverting them to uses that were not those originally intended. Further, parents may not be able to accurately measure quality, or may have goals that differ from those that motivated the subsidy programmes in the first place.

99. Of course, in many countries, the provision of ECEC is largely determined by historical patterns of organising social goods. Gustafsson and Stafford (1998) emphasise the different philosophies that have motivated organisation: liberal states (the United States, Canada, Australia) have market orientations, with state intervention occurring only when the market is shown to have failed; corporatist or conservative states (Austria, France, Germany and Italy) reflect the historical influence of church organizations, with welfare goods being provided by religiously based institutions; social democratic or institutional states (Sweden, Norway) have a tradition of public provision, with an emphasis on programmes that are institutional and universal. The authors place the Netherlands in the corporatist tradition, in that the existence of two major religious traditions (Catholic and Calvinist) led to a 'pillarisation' of society, with welfare services organised within each pillar.

100. The debate over supply-side and demand-side subsidies has to some extent mirrored the voucher debate in education. The analogies are not precise, since in the educational voucher debate, the supply-side subsidies being discussed are usually limited to those provided only to public providers. We will take up the issue of public vs. private provision in another subsection below. However, a significant part of the voucher debate has indeed focused on the efficacy of parental choice, and that is the key feature in the supply-side-demand-side discussion (for a more detailed discussion of these issues, see Krashinsky, 1986).

101. Those who believe in educational vouchers emphasise the effectiveness of parental choice. Parents can choose the types of educational institutions that best serve their children, and can use market forces to discipline unresponsive public educational bureaucracies. Voucher advocates quote figures showing that private educational institutions provide better education at lower cost, and suggest that even the poor would benefit by the ability to use vouchers to escape ghettoisation in inner city schools. Vouchers would lead to educational innovation and provide incentives to competing schools to reward effective teachers

and get rid of ineffective ones. The argument, stripped of its rhetoric, amounts to the case for the superiority of markets over other institutions. Markets allow consumers to purchase what they want, and to punish institutions that fail to deliver. The prototypical argument for vouchers was expressed by Milton Friedman almost half a century ago in his book *Capitalism and Freedom*, where he argued that private schools provided better education with a third less resources, and suggested that an expansion of this approach would save considerable money and provide vastly better results.

102. Those who oppose vouchers argue that parents have difficulty in measuring quality in education, and that private schools are not really more effective than public schools. Interestingly, in Canada, measurements of quality in child care centres have found that public centres are superior to private centres (see Krashinsky, 1999). The evidence offered to the contrary by voucher advocates (that is, the evidence that private schools are cheaper but better than public schools) could be countered by arguing that private schools can choose their students, and can avoid students who are disruptive or hard to educate. The public school must take anyone who shows up, and has difficulty getting rid of “problem” students. Voucher systems would have to be designed to force voucher schools to take anyone who wished to attend, and would have to have central agencies which could monitor voucher schools to ensure that they complied with requirements and delivered what state regulations dictated.

103. The issue is clearly a complex one. In opting for demand-side subsidies for ECEC, the state is ceding authority to parents, allowing them to use the subsidies to choose what they believe is best for their children. Parents can shop around, and economic theories of markets tell us that suppliers will respond effectively to the demands of parents. Parents will get exactly the type of quality that they most value, and this should ensure that the most effective ECEC is obtained for the least number of dollars. If parents want highly structured early-education programs, that is what they will get. In contrast, if parents want unstructured play-groups, then that is what they will get. The market, in theory at least, delivers the most “bang for the buck” (or for the Euro).

104. There are however two potential problems with this approach. The first is the issue of whether or not parents can effectively judge the quality of ECEC services available in the private market. The second is that parents' goals are not always consistent with what the state desires when it offers ECEC subsidies. Consider the first issue. Markets only work well if purchasers can effectively monitor the output they are purchasing, and reward firms that produce the highest quality for the lowest price. But the market for childcare is decentralised and somewhat chaotic. Many parents have never purchased childcare before, and by the time they learn what they need to know, their children are old enough so that the parents may never purchase childcare again. Working parents have little time to seek out and evaluate childcare, even if they knew entirely what they were looking for. Furthermore, the direct consumer of the care - the child him or herself - cannot easily communicate with the parent about what kind of care is being delivered. And the effect of good or bad childcare is seldom immediately apparent. For these reasons, studies have found that parents often over-estimate the quality of the care that they purchase relative to the assessments of objective measures of quality (Helburn, 1995; Mocan, 2001; Walker, 1991).

105. If this problem is significant, then the presumed advantages of the marketplace disappear. For-profit firms will have an incentive to provide childcare that seems of high quality but is not. Because parents can be fooled into buying low quality care, low-quality providers will be able to underprice higher-quality

producers and drive them out of business. For example, suppose that a high-quality producer sells ECEC for 12,000 Euros. If a low-quality deceptive producer can produce ECEC for 8,000 Euros, but can dress that care up in a way that makes it seem of equal quality as the higher cost care, then the low-quality producer could sell the care for 10,000 Euros and make a profit while simultaneously winning over all the customers of the higher-quality producer. As a result, the market will fail, and the higher-quality producer will be driven out of business even though the public might prefer that kind of care if they had full information about it.

106. Governments will be encouraged by public advocates to engage in significant regulation to deal with this problem. But although most ECEC experts can differentiate high quality care from low quality care, writing detailed enforceable regulations to achieve the same differentiation may be more difficult. And enforcing those regulations will be costly, eating up resources that could be used more directly to deliver high quality ECEC to children.

107. Turning to the second issue, let us assume that parents can perfectly monitor quality. The assumption implicit in demand-side subsidies is that the parent will be an effective agent for the state. Thus the decision by the parent to purchase ECEC will not only obtain the most quality for the lowest dollar from the perspective of the parent, it will also obtain the most public benefits at the lowest price.

108. Parents, however, are interested predominantly in the private benefits of ECEC. Only if there is no possibility of substituting private benefits for public benefits will the private decision maximise what the state is subsidising. For example, parents want the best possible education for their children, and that means getting their own children into schools with good teachers and few other children who are disruptive or hard-to-educate. Parents may also want forms of education that run counter to public policy. For example, some parents may not want their children exposed to teaching of evolutionary theory, or to alternative religious beliefs, although both are important in a scientific and pluralistic society. Thus vouchers can lead to segregated forms of education, and to limits on the ECEC choices of children perceived to have “problems”. To ensure that this does not happen, the public authority must set up elaborate regulations and enforcement mechanisms. (It is interesting to note that in many jurisdictions that have adopted voucher systems as supplements to the public schools system, the major private schools which have sprung up have been religiously based. This is one reason that vouchers have not been widely introduced in the United States, because of the constitutional restrictions of extending funding of any kind to religious institutions.) Again, these mechanisms are themselves expensive to administer, and these monitoring costs might consume any efficiency gains implicit in consumer choice.

109. The general issue of special-needs children is a little discussed, but potentially important, problem in relation to demand-side subsidies. If subsidies to all children are the same, profit-oriented ECEC centres will not seek to serve these children, since they consume resources that might otherwise go to the entrepreneurs running the centres. But even nonprofit ECEC providers with the best motives may find it difficult to accommodate these children. The reason is that providing ECEC for special-needs children is resource-intensive and may therefore divert resources away from other children. Parents, concerned generally with the welfare of their own children, will tend to avoid centres that divert resources in this way. As parents self-select into centres without special-needs children, centres with them will be driven out of business.

110. One way to deal with this problem in a demand-side subsidy system is to provide higher subsidies to special-needs children. But such a policy requires detailed knowledge of the exact nature of each child's needs. Absent such fine tuning, ECEC centres will have a natural incentive for "creaming". That is, centres will have an incentive to take on children with higher subsidies only if their needs have been over-estimated by the system, and to reject other special-needs children. The costs of administering such a system to avoid creaming can be considerable.

111. Finally, any demand-side system will face considerable administration costs in processing and monitoring the flows of funds from governments to centres. The government will have to ensure that centres claiming reimbursement have indeed registered and cared for the children for whom funds are being paid. Ensuring that public monies are properly spent is itself a costly activity.

112. For all of these reasons, demand-side subsidies may not deliver exactly what the public authority intends. In that case, it will be necessary to weigh off two competing effects. Demand-side subsidies provide all the benefits of competitive markets. Against these benefits must be stacked the costs of monitoring private decisions to ensure that public funds end up providing the benefits for which they were allocated. There is no easy way to determine whether the costs of monitoring are less than or greater than the gains from competition. For that reason, different countries choose different mechanisms for subsidising ECEC.

113. An example from Canada may make this debate somewhat clearer. Canada provides relatively generous tax deductions for expenditures on childcare. The purpose of the regulations is to take into account the cost of care in defining taxable income for the lower income spouse: because childcare is a necessary cost of working, and because the cost is significant, horizontal tax equity¹⁰ between workers with young children and those without young children requires deductibility. As the regulations are written, however, summer camp expenditures are counted as childcare for the purposes of the deduction. Thus, public school teachers who are not working during the summer (but who are generally paid on a 12-month basis) can deduct much of the cost of summer camp for their older children. We suspect that this was not the intent of the framers of the childcare expense deduction. But these kinds of diversions of funding are inevitable when demand-side subsidies are constructed.

114. It should also be emphasised that the debate over demand-side and supply-side subsidies is often a proxy for a quite different debate over standards and quality. In systems with little public money, parents often rely on informal childcare when they work. This care has minimal educational and developmental components, and is usually of quite low quality. Demand-side subsidies usually cost less, because they subsidise these kinds of low-cost childcare. And because those subsidy rates are often set at low levels, most parents cannot afford the high-cost high-quality ECEC that most childcare professionals favour.

¹⁰ Economists use the term "horizontal equity" to refer to the principle that taxpayers in equivalent situations should pay equal amounts of tax. If child care is a necessary cost of working, then a mother with young children who earns \$16 an hour for working but must pay \$3 an hour for child care is in the same position as a woman without young children who earns \$13 an hour and has no child care expenses. Deductibility of child care expenses treats both these women the same way in assessing taxes.

115. In contrast, supply-side subsidies are usually limited to care that meets or exceeds some minimum educational and developmental standards. These subsidies usually cost significantly more per child. Thus the debate over demand-side and supply-side is often really a debate over what kind of quality will be provided and what kind of standards will be set. As noted in Chapter 1, most of the benefits to children from ECEC depend on the quality of care and education they receive.

116. Finally, it should be noted that the issue of parental choice is probably exaggerated within the demand-side supply-side debate. Many supply-side systems allow parents considerable choice of the kind of centre to which to send their children. For example, in Canada, many public school systems allow parents to choose schools which emphasize language-immersion programs, or performing-arts programs. Some high schools designate themselves as “academies” and require students to wear uniforms; others designate themselves as “alternative schools” and provide less structured programs. Since funds flow with enrolment, these supply-side systems acquire some of the aspects of demand-side subsidies, so that the clear-cut distinctions between supply-side and demand-side models of funding can be somewhat blurred by practice.

3.4. Should governments provide ECEC services through the public sector?

117. The issue of public provision is also a complicated one that has been resolved in different ways in different OECD countries. Some countries direct subsidies to approved private childcare centres. Other countries prefer to produce ECEC through the public sector. Even in the latter case, production may be devolved by central authorities onto local governments, or may be produced directly through central agencies.

118. In economic terms, the decision is similar to that of a firm deciding whether to produce a needed input itself or to contract for that input with an external supplier. More simply put, this is 'make it or buy it' decision, and there is a long and well-established literature in economics on it. The key issue is one of transaction costs¹¹. Each mode of production involves different costs to ensure that the right product is delivered at the lowest possible price. If the firm decides to 'make it', it is opting for internal production. Because of the open nature of employment relationships, monitoring quality within the firm has some advantages. But the monopoly position of internal suppliers can make for command and control problems. When costs rise or quality falls, correcting the problem requires complex interactions within the corporate bureaucracy, and this can be expensive. In contrast, when the firm decides to 'buy it', it is opting for contractual arrangements with external producers. While this allows the firm to shop around for the best price and the highest quality, monitoring quality is also a costly process. Uncertainty may lead to expensive contracting, and to the possibility of opportunistic behaviour by one side or the other. Dealing with this problem can also be expensive.

¹¹ The concept of transaction costs is used by economists to capture the cost of making a deal between seller and buyer. These costs can include the costs of searching for the best price and bargaining, the costs of devising and enforcing a contract, the costs of communicating about quality and design, and so on. Uncertainty refers to the firm's lack of knowledge of exactly what products it will require in the future. As circumstances change, the firm will want to vary what it buys, but signed contracts may not allow this flexibility. Uncertainty may also refer to the firm's lack of knowledge about the quality provided by the supplier.

119. The decision by the firm is thus an ambiguous one. Where there is little uncertainty and it is easy to specify the nature of the input being purchased, this argues for buying the input outside the firm. Where there is lots of uncertainty, and where contracting and monitoring are expensive, internal production of the input will be preferable. Firms in the real world generally engage in both types of production, suggesting that the debate is always an open one.

120. In the case of ECEC, the issues can be looked at in the same way. The state has to regulate private producers who receive subsidies in order to ensure that public funds are effectively used, and that the right kinds of ECEC are being delivered. But public bureaucracies can themselves involve rent-seeking¹², as has been well-documented in the public choice literature (some of the earliest discussion of this is in Niskanen, 1971). What this means is that public ECEC is likely to cost more than privately-provided ECEC, but that it will be unclear whether the additional cost in the public sector is buying more of what public authorities desire, or whether the higher costs simply represent a form of rent. In practical terms, much of the higher cost in public ECEC centres is caused by higher salaries. We know that higher salaries can attract better educated and more committed workers. We also know that higher salaries in the public sector can in some cases simply represent an exploitation by public-sector unions of their monopoly position. Economic theory provides no easy answers to which effect is greater. For example, Andersen and Andersen (2001) suggest that in Denmark public childcare centres are able to lobby more effectively for funds than are private producers, and thus are more successful in keeping staff-child ratios lower. But of course this leaves open the question of whether that is in fact the most effective way of increasing quality, or whether it is partially a way to reduce workloads. Childcare experts in Canada argue that increasing qualifications for childcare workers is generally a more effective use of funds than improving staff-child ratios (see Cleveland and Krashinsky, 2001, part 3).

121. An interesting discussion of changing modes of production in Sweden occurs in Gustafsson, Kjulín, and Schwarz (2002). They describe how relations between central and local governments evolved as childcare legislation changed. The move towards block grants to local governments providing childcare led to reductions in costs as staff-child ratios were raised, and a move away from family home care towards day care centres.

3.5. If the government subsidises private ECEC, should it allow for-profit facilities?

122. There has been considerable debate in some countries over whether to permit public subsidies to flow to for-profit care providers. Not surprisingly, this debate is most active in countries with established for-profit facilities. When the government expands ECEC funding, these for-profit organisations naturally want to be part of the system. They argue that they can produce high quality care at low price, and that

¹² Economists use the term “rent” to refer to profits earned because of some kind of scarcity. That scarcity can be artificially produced by monopolists who restrict output. In the context of public bureaucracies, the concept is used to suggest that the public agency supplying some public service is essentially a monopolist. Because of this position, the agency can increase the price of its services and earn “rents” (the people in the bureaucracy who do this are said to be “rent-seeking”). These rents may take the form of higher salaries, better perquisites (better offices and furniture, conferences in interesting places), or lighter workloads.

their entrepreneurial spirit allows them to innovate in ways not contemplated by non-profit or public institutions. In the U.S., there are cases of municipalities contracting out part of their public education system to for-profit firms that guarantee to deliver higher quality output at a lower cost than is current in the public system.

123. Relatively little of the childcare literature addresses this issue. An early contribution is Nelson and Krashinsky (1974), which explored some of the advantages of different modes of production. There has however been a recent and extensive literature discussing the relative advantages and disadvantages of for-profit and non-profit forms of organisation (for a recent discussion of this literature, see Krashinsky, 1997). In general, the literature adopts a 'contract failure' approach. For-profit firms offer all the advantages contained in market capitalism: competitive firms strive to meet consumer demand and to keep costs down, because firms that fail to do so are driven out of business by competition. Non-profit institutions lack this emphasis on profits and thus may divert resources to other goals. However, contracts between buyers and sellers will fail when buyers cannot monitor performance, or when there are public goods. In those cases, non-profit institutions may offer significant advantages simply because they lack the same incentive to engage in opportunistic behaviour.

124. It is important to separate rhetoric from reality on these issues. Childcare advocates sometimes argue that the profit motive should play no role in social services, because profits will inevitably divert resources away from the service and will reduce quality. If markets work well, this argument makes little sense. Economic theory tells us that competition will erode profits, and competitive firms will earn just enough profits to guarantee a fair return on invested capital. Since non-profit firms will have to borrow to buy capital, and will have to pay interest on those loans, the notion of diverting revenues towards profit seems questionable. Yet there is some truth in that argument. If buyers cannot judge quality and cannot monitor what they are purchasing, then for-profit firms will have an incentive to degrade quality in order to raise profits, and the normal market mechanisms to prevent this will not function effectively. The non-profit literature suggests that under these circumstances, non-profit firms may be more trustworthy and may produce higher quality for a given level of expenditure, despite any inefficiency that results because of the absence of the profit motive. A recent contribution by Doherty, Friendly and Forer (2002) finds that greater clarity in defining staff responsibilities, lower rates of staff turnover, and the hiring of staff with more ECEC education at higher wages are key to explaining observed quality advantages of non-profit child care centres in Canada over their for-profit counterparts.

125. Relying on non-profit organisations to eliminate opportunistic behaviour¹³ can however be problematic. Krashinsky (1999) suggests that non-profit day care centres in Canada do indeed provide higher quality care than do for-profit centres. But this occurred in an environment in which centres derived no particular advantage by calling themselves non-profits. He questions whether higher quality will continue if the government limits subsidies to non-profits, since the law governing non-profits contains relatively few provisions for enforcement. That is, if the government will only deal with non-profit

¹³ The term "opportunistic behaviour" refers to actions by one party to an agreement seeking to exploit some loophole in the agreement, or some lack of knowledge by the other party. The party engaging in opportunistic behaviour tries to make himself better off at the expense of the other party.

centres, then for-profit centres have a significant incentive to masquerade as non-profits by incorporating themselves under the non-profit statute. Day care centres are small institutions that can easily disperse profits under a variety of other names, e.g., management fees and rental payments to owners.

126. Many jurisdictions handle this problem by requiring non-profit ECEC organisations to be governed by boards of directors that are dominated by parents and/or public representatives. An alternative would be to allow non-profits to form in a variety of ways, but to subject them to the overview of larger established non-profit institutions (community organisations, quasi-public children's bodies, etc.). All of this suggests that it is the governance structure, more than the legal form that dictates the ways in which ECEC organisations operate.

127. Again, it is important to understand that the debate on this issue may also serve as a proxy for a quite different debate. Because non-profit childcare centres have traditionally emphasised quality more than for-profit centres, the political decision to extend subsidies to for-profit firms may in fact be a decision to spend less on quality. When advocates argue for non-profit ECEC, they are often in fact arguing for higher quality rather than about the institutional form per se.

3.6. What is the optimal division between parental leave and ECEC?

128. There is considerable variation among the OECD countries on the provision of parental and childcare leaves of absence. Some countries, like the United States, provide no paid parental leave and only partial guarantees that jobs will be held open for parents. Other countries (Sweden, for example) provide paid leave for much longer periods and with considerable flexibility of coverage.

129. There has been only modest discussion of the optimal division between the two types of programmes. There is relatively little evidence of educational or developmental advantages of ECEC over parental care for children under the age of 2. By itself, however, this statement provides little guidance for public policy. If parental leave provisions are inadequate, then we know that mothers who want to continue to work will be forced to re-enter the labour market when their children are very young. And we also know that low quality childcare when children are very young can do considerable harm. Because infant care is extraordinarily expensive, most working mothers who return to work when their children are infants will find it difficult to afford adequate care. Thus societies which wish to encourage mothers to maintain an attachment to the labour force will have to strike a balance between parental leave provisions and ECEC programmes.

130. As economists, our contribution to this debate can only be to suggest that the choices facing most western countries are relatively stark. Most economies have seen a rapid increase in labour force participation rates of women with young children. This has been true even in North American economies with relatively limited ECEC funding and relatively limited parental leave provisions. The following factors are relevant in determining the boundary between parental leave and ECEC:

- When women have a lifelong attachment to the labour force, they are unlikely to want to take significant breaks, because in most jobs, these breaks interfere with wage increases and advancement, and erode skill and other human capital. For this reason, most mothers will

tend to re-enter the labour force relatively quickly in the absence of guarantees that hold their jobs for them, and in the absence of wage replacement while they are caring for children;

- Wage replacement under parental leave is going to be very expensive, if it is to be high enough to allow women to remain at home. Firms are likely to be unwilling to absorb these costs, and laws requiring them to do so are likely to lower the wages paid to young women and encourage discrimination. Central funding of parental leave will avoid the downward pressure on wages and will encourage labour force participation, but it will involve significant public expenditure (see Ruhm, 1998, for a discussion of these issues).
- We observe a spike in re-entry into the labour force at the point where paid parental leave ends. At that point, children will require care, and infant care is extremely expensive, in large part because it is very labour intensive. For example, in Ontario where we live, regulatory standards require one adult for every 8 pre-schoolers (ages 30 months to 5 years) in day care, one adult for every 5 toddlers (ages 18 months to 30 months), and one adult for every 3.3 infants (under age 18 months). If parents are forced to pay for care, many of them will be forced to make substandard provisions for care. But public funding for infant care will by necessity be very expensive.

131. In the end, the problem is simply that caring for young children is very resource intensive, whether it takes place inside or outside the family. Inside the family, infant care requires the attention of an adult who cannot be otherwise employed. In modern industrial economies, wage rates are high, so that foregoing work makes this a very expensive proposition for the family. But outside the family, there are minimal possibilities for economies of scale, because good infant care requires very high staff-child ratios.

132. Faced with these realities, some governments have sought to return childcare to families by paying mothers with young children to stay at home with them. Often, but not always, these are designed as lengthy “child-rearing” leaves as an extension of normal parental leave, but with low flat-rate payments and minimal job protection. Because the wage replacement involved in these schemes is quite low, they typically appeal to lower-wage lower-skill mothers (see Morgan and Zippel, 2003, for a discussion of these issues: they cite Austria, Belgium, France, and Germany among the western European countries that provide relatively low levels of financial support for extended parental leaves; see also Moss and Deven, 1999). In part, this has been a response to high rates of unemployment and what we would regard as a false¹⁴ view that unemployment has been caused by growth in the labour force (and, conversely, that unemployment can be reduced by moving mothers out of the workforce). In the long run, we might suggest that encouraging low-wage mothers to stay out of the labour force is unwise. Participation in the labour force itself builds human capital in a number of ways. Workers acquire on-the-job training and experience that translates into higher future productivity and wages. The view that labour force participation is a lifelong activity encourages investment in the knowledge and skills of young women, both by the women themselves and by their parents. And low-wage mothers often have children who would benefit particularly from high-quality ECEC.

¹⁴ Evidence that this view is false lies in the experiences in North American economies, where rapid growth in labour force participation has not generated unemployment.

133. Kamerman (2000b) suggests that there are significant philosophical differences which lead to different choices about the design of parental leaves and benefits policy: “It has to do with the extent to which the policy is designed (1) to support family work and child rearing and to create an incentive for women to leave the labour force when children are very young; or (2) to facilitate women’s work outside the home and help reconcile work and family life, by protecting and promoting the well-being of children while their parent(s) are in the labour force ... A key issue is the duration of the leave and the level of the benefit.” (p. 13)

134. Some governments apparently believe that, since ECEC services are expensive for young children, it might be cheaper to pay women to stay at home to care for their own children. Some recent calculations in the Canadian context suggest this is very unlikely to be true, except for very modest programs that affect few families. Cleveland and Krashinsky (2003) have calculated that if a program were to be designed to encourage mothers to forego employment and stay home when children were below school age, it would be expensive. To reduce maternal employment rates by half of their current level (from about 65% to 32.5%) would require an annual grant to families of over \$15,000¹⁵. The annual cost of this program in Canada would be about 1.5% of GDP. This does not include the loss in tax revenues from the mothers no longer employed. Nor does it include the loss of economic productivity when mothers leave their current employments. Nor does it include long-term losses from the decline in job-skills of mothers who are absent from the labour force for a number of years. The true cost is several times the direct cost, or perhaps about 5% of GDP, much higher than the cost of public provision of ECEC services to those same families. This evidence seems to suggest that economies are stronger when they encourage mothers and fathers to maintain their attachments to employment, and formulate leave and ECEC policies with this in mind. While withdrawing mothers from employment may seem to make economic sense, especially when unemployment rates are high, this is likely to be an unproductive strategy in the long run.

3.7. Some Other Unrelated Issues

135. There are a number of other issues that do not easily fall into the categories that we have devised above. These issues were raised at the Rotterdam meetings and are dealt with in this section.

136. First, there is the issue of the appropriate role for employers in funding ECEC. In the Netherlands, child care funding has, particularly since the early 1990’s, been provided by employers as a negotiated benefit in industry-bargained employment contracts. This system of funding was stimulated by the desire to overcome labour shortages. In designing their new demand-side subsidy system, Holland appears to be counting on a continuation of this practice. However, we are not convinced that voluntary arrangements of this sort can be a reliable part of a centrally-funded system. If the government guarantees funding for lower-income parents, then the industries where these employees work will have less incentive to provide these benefits, and the working parents themselves may prefer to negotiate arrangements that eliminate employer-funded ECEC benefits in favour of other benefits. That being the case, some element of coercion may be needed to continue employer funding. It may be easier simply to place the burden on all

¹⁵ This calculation is an approximation which depends on a series of assumptions which are specified in Cleveland and Krashinsky (2003).

employers by funding ECEC in part through a payroll tax. However, since economic theory suggests that payroll taxes end up being borne by workers, it is not clear to us that such a mechanism has benefits beyond the obvious political ones.

137. Second, there is the issue of how to deal with segregation by either race or income within ECEC centres. Since most ECEC systems involve considerable elements of parental choice, and since parents with young children have shown a strong preference for ECEC that is relatively close to their own homes, centres will naturally reflect the ethnic and income mixes of their surrounding communities. Since the bussing of young children can be both expensive and controversial, it may be relatively difficult to alter these mixes. We feel that such problems – if they are viewed as such – can be addressed more productively through housing and incomes policies rather than through an ECEC system.

138. Third, there is the issue of the role of family home child care in a publicly-funded system. In private systems (such as exist in Canada and the United States, among others), many parents use care provided by private individuals, either in their own home or in the homes of the children. Parents choose these arrangements largely because they are cheaper than ECEC in regulated centres, and sometimes more convenient, as well. Family home child care is cheaper because it is often provided by poorly trained individuals with few alternative labour force opportunities. While publicly-funded programs can continue to use family-home providers, many rely primarily on centre- and school-based care because of the desire to increase quality. Those systems that do use family-home care often require levels of training and regulation that end up eliminating most of the cost advantages of family-home child care (although Denmark appears to be at least a partial exception). In Canada, for example, regulated and supervised family home care costs about the same amount as nonprofit centre-based care (although somewhat less than publicly provided child care).

139. Finally, there is the issue of targeting. Although ECEC benefits all children, much of the evidence suggests that the largest benefits flow to children from the most disadvantaged families. For example, evidence from the Perry Preschool Program suggested a payoff of as high as 7-to-1 for dollars spent on the most disadvantaged children. There is a natural temptation for governments with limited resources to focus those resources on recipients with the highest needs. However, we favour universal eligibility for ECEC programs, for the same reasons that public education services are universally provided: universal programs provide a natural integration of different types of children, a desirable social goal in its own right; because ECEC provides desirable benefits to all children, it is short-sighted to save money by providing it only to the most needy; universal programs garner broad public support, both from parents and from many others. Combined with universal access, some programs will offer enhanced programming to children with a wide range of special needs and abilities.

Conclusions

140. There is not a universally best design of early childhood education and care policy for all countries. Countries will differ in their social and economic objectives, their philosophical approaches to the role of the state in relation to families and children, and their evaluation of the costs and benefits of different ECEC policies. On the other hand, the design choices that countries make about ECEC financing

mechanisms matter. Different policies can have dramatically different effects on the quality and use of ECEC services and on family employment decisions.

141. There are a variety of design issues dealt with in this chapter. The initial one is to determine the optimal level of spending on ECEC. In any country, this stage of analysis and defining objectives is key. Even if there are no externalities associated with children and parental employment, there is a potential market failure associated with taxation of income used to pay for ECEC expenditures. However, it is widely accepted that there is a public interest in the care of children when they are young and in the associated employment decisions that parents make. The benefits and the costs of financing ECEC services will vary according to the child's age, the quality of care received, the needs of specific children, the employment situation of parents and the effects of decisions on the long-term employment attachment of parents. Governments will weigh up these varying costs and benefits in the context of prevailing views in that country about the appropriate roles of state and family in providing education, care and protection for children, and prevailing views about the appropriate roles of women and men in society and the family.

142. A central decision to be made about ECEC financing is whether assistance will be provided on the demand side (to parents) or on the supply side (through financial assistance to or direct provision of ECEC services). Financial assistance provided directly to parents presumes that parents will make the best ECEC decisions for their children and maximizes the role of consumer choice. Demand side funding generally presumes that parents can accurately judge ECEC quality and the educational needs of their children. Further, demand side funding presumes that private parental interests and public interests are similar. Funding provided to the supply side of the ECEC market reflects a view that a more restricted range of quality levels should be publicly encouraged. Many of the same issues arise here as with debates over the use of vouchers in education. Funding on the demand side implies associated costs of monitoring the results of parental choices.

143. If a decision is made to finance ECEC services through the supply side of the market, a second decision follows: should these services be directly provided through the public sector, or should they be purchased from private ECEC providers? This is similar to the make-it-or-buy-it decision faced by firms, and will be based on the amount of transaction costs. If it is believed that there is considerable uncertainty about the quality of services provided by private sector providers, and that it is difficult to monitor and control this quality, then publicly provided ECEC will make most sense. If it is straightforward to monitor and control quality amongst private producers of ECEC, purchasing services will be preferred on grounds of lower costs.

144. A further linked decision is whether supply-side financing should be directed exclusively to the non-profit sector or to both non-profit and for-profit providers of ECEC. The beneficial forces of competition are likely to have more effect on for-profit providers. However, for-profits are more likely to engage in opportunistic behaviour. To the extent that quality levels are difficult to monitor, non-profits may be considered more trustworthy. Even then, non-profit status may be a muddied signal of higher quality. Since for-profits may have incentives to masquerade as non-profits, it will be important to consider the governance structure of non-profits to ensure that they have increased incentives to reflect the public interest in enhanced quality of ECEC services.

145. Governments also need to consider the appropriate balance between providing financial support for parents to stay at home when children are very young and financial support for the use of ECEC services when children are somewhat older. Most countries provide substantial wage replacement and job protection for a period up to about a year after the birth or adoption of a child. Generally this time may be shared by parents. Some countries have adopted extended child-rearing leaves of several years in duration paid at much lower rates. Other countries provide substantial financial support for ECEC services for very young children.

146. The dividing line between parental leaves and ECEC services is a difficult one for each country to draw, and political opinions about these issues may be strong. The cost of ECEC services for young children is high because the ratio of staff to children must be high. There is more controversy in research about the effects of childcare on children the younger these children are. This has led some governments to believe that paying mothers to stay at home with young children may be economically feasible and socially desirable. It is clearly possible to encourage some mothers to stay at home, but this is predominantly a low-wage, low-skilled group. There is evidence that, as a more general strategy for the care of young children, paying mothers (or fathers) to stay at home would be extraordinarily expensive, both in the initial costs of the program and in the economic losses to tax revenues and economic productivity.

CHAPTER 4:

THE COSTS OF ECEC SERVICES IN OECD COUNTRIES

147. There have been a number of studies of the cost of producing ECEC services; virtually all of them done in the United States and therefore largely referring to services produced in an open market rather than to publicly-provided services. In any case, these studies do provide some useful insights, which may be more broadly applicable across countries.

148. Naturally, costs do not remain constant from one year to the next, and, because of differences in wage and other input costs, staff-child ratios and other factors, costs of producing ECEC services are not the same across different countries. Why then review studies on the costs of producing ECEC services? There are several good reasons. First among them is the attempt to identify the key factors that cause costs to vary (i.e., costs per child, or per child hour). Identifying the key factors that determine costs is policy-relevant in two ways: it may suggest intelligent ways in which costs can be reduced (keeping quality constant). And it may suggest an approximate algorithm for predicting costs of services that are being developed. A second good reason to study costs of ECEC derives from the suggestion that family childcare can produce equivalent child experiences for a lower cost than can centre care. A third reason to study costs is to identify inter-country variations in ways of producing ECEC services that may affect cost levels. Unfortunately, the available information does not permit us to make much progress in achieving these research objectives.

4.1. Definitions and Data Issues

149. So as to ensure some comparability, the following definitions and precautions would seem necessary:

- The relevant measure is cost per unit of output, so for ECEC services it would be cost of production per child or per child hour;
- Costs should not only include “expended costs” but also implicit costs. So, for instance, if a childcare centre receives free rent and building maintenance services and also has parent volunteers, all of these resources should be included in the cost calculation at the price for which they could have otherwise been purchased;
- One potential implicit cost that we do not include is foregone wages by ECEC staff. It has been argued that, in the United States and perhaps other countries, ECEC staff are paid less than the going rate for their labour services and that this amounts to a voluntary donation of labour time. This may be true, but unless we think this situation is likely to change soon, or

unless this situation varies across providers, it would be inappropriate to include this as an implicit cost;

- It is important to account for both age of child and quality of care in cost calculations. ECEC services for an infant are different from ECEC services for a pre-school child. Averaging costs across different age levels provides little useful information. Similarly, ECEC services at different levels of quality are different from each other. Naturally, higher quality will cost more and lower quality cost less to produce. An analysis of costs which does not standardise for quality will provide little useful information.
- It is, for obvious reasons, necessary to consider the cost of production of ECEC services in centres separately from the cost of production of family childcare

4.2. The Cost of ECEC in Centres

150. The most comprehensive and useful study of centre costs was produced by the General Accounting Office in the United States in 1999 (GAO, 1999). It analyses the costs of producing “high quality” childcare centres on Air Force bases and compares these to the cost of producing childcare in civilian centres. All Air Force centres have been accredited according to NAEYC (National Association for the Education of Young Children) guidelines and are therefore considered to be “high quality” (more precisely at a rating of 4.5 and above on a 7-point process quality evaluation scale, similar to the Early Childhood Environments Rating Scale – which could be interpreted as moderate to high quality).

151. Information in the study is provided in U.S. dollars per child hour, as of 1997. According to the study, the full cost of care comprises direct and indirect labour, staff education and training, food, supplies, equipment, utilities and the annual value of centre occupancy (imputed rent) plus the value of legal services and the value of donated services. Direct labour costs (wages and benefits of caregiving staff directly involved with the children) are slightly over half of all costs (52.4%), while indirect labour (including directors and administrators, curriculum development staff and cooks) forms nearly another quarter (23.05%). Occupancy costs (imputed rent based on \$5.93 per square foot annually) is another 10% and supplies (classroom and administrative materials) and food are another 12%.

152. The estimated cost per child hour was \$3.86 in 1997 or an annual cost per child of about \$8,028 (about 2080 hours for the average child). The costs vary dramatically by age of child being about \$5.40 per hour for infants (less than 12 months), \$4.72 for 12-24 months, \$3.96 for children 24-36 months of age and \$3.23 for pre-schoolers. Using 2080 hours as the standard, that gives annual costs of \$11,231.00 for infants (less than 12 months), \$9,817 for 12-24 months, \$8,236 for children 24-36 months of age and \$6,717 for pre-schoolers. Staff-child ratios used were based on actual attendance rather than NAEYC standards.

153. The overall cost in civilian centres of comparable quality was \$3.19, but when Air Force centre costs were adjusted for the same age distribution, these costs were \$3.42 per hour or only 7% higher than in comparable civilian centres.

4.3. Key Factors Affecting Centre Costs

154. *Age of child* - The large majority of the costs of providing ECEC in centres is composed of the costs of labour. As a result, any policy decisions affecting the number or skill level of workers required will necessarily have a significant impact on costs. In most countries, the ratio of staff to children for the care of infants is much higher (e.g., 1 to 4) than the ratio for pre-schoolers (e.g., 1 to 12). Assuming that staff at the same average skill levels are used amongst infants as amongst pre-schoolers, this implies that direct labour costs per child hour will be close to three times as high for infants as for pre-schoolers. Thus, in the 1999 GAO study, direct labour costs for infants were about \$3.75 per child hour and for 3-5 year-olds were about \$1.38 per child hour. Direct labour costs comprised nearly 70% of all costs for infants, compared to about 43% of all costs for pre-schoolers. Nearly all the rest of the centre costs (indirect labour, supplies, utilities, food, equipment, and the cost of space) do not vary by child's age and so are attributed equally to each child hour of service (adding about \$1.70 - \$1.85 to the hourly costs at each age level; [GAO, 1999, pp. 48-9]).

155. *Staff Qualifications* – Staff wage and benefit levels are, naturally enough, strongly affected by education level. The quality of care received by children is likewise strongly affected by education level of staff. For this reason, in many countries a large percentage of ECEC teachers/caregivers are required to have received specific post-secondary training in the education and development of young children.

156. *Quality level* – Normally increases in the quality of child care require increases in costly inputs. However, there is evidence that the quality level of ECEC can sometimes be increased without dramatic increases in cost. An econometric analysis of centre costs based on the Cost, Quality and Child Outcomes Study (Mocan, 1997) projected that a 25% increase in quality (as measured by process outcome measures such as Early Childhood Environments Rating Scale) could be achieved with only a 10% increase in costs. This suggests that there are a range of factors determining the quality of ECEC experiences provided to children in childcare centres and that, in some countries at least, there may be some scope to improve quality without improving staff-child ratios or hiring more qualified teachers. Helburn and Howes (1996) suggest that key factors which may influence quality with minor impact on cost include “a child care director's administrative experience and effectiveness...personality traits of staff, staff commitment to good quality, and effective teamwork...” (p. 79). There are several studies of the key components of quality in ECEC which support the contention that many factors affect quality, not only staff-child ratios and staff education levels (Blau, 1997, 2000; Cleveland and Hyatt, 2002).

157. *Size of facility* – There is some evidence for economies of scale in the production of ECEC services. Mocan (1997) found evidence that average costs would fall slightly as the size of a childcare centre rose beyond 67 full-time-equivalent children served. Other authors have found some similar evidence. Given fixed staff-child ratios by child's age, it is unlikely that these savings are in direct labour costs. It is likely, however, that the services of directors, administrators, accountants, cleaning and maintenance staff, cooks, and staff who specialise in staff training and curriculum development could be spread over a larger number of children more efficiently than over a small number of children. Looking at data from the Cost, Quality and Child Outcomes Study, Helburn and Howes (1996) have written that “labour cost, total cost and total revenue per child were significantly higher in centres serving fewer than 40 children on a full-time basis than in centres serving more than 40.” (p. 75)

158. Services to different age groupings within the same centre – The term “economies of scope” refers to reductions in average cost of production that are enjoyed by a company offering a range of different services (or goods) rather than concentrating on a single service (or good). There is some evidence of economies of scope in the provision of childcare services. Mocan (1997) finds that serving infants-toddlers and preschool children in the same centre leads to some cost savings, as does serving preschool children and school-aged children together. However, there are no cost efficiencies to be gained by serving infants-toddlers and school-aged children jointly.

4.4. The Cost of ECEC in Family Childcare Homes

159. The cost of ECEC services in family childcare homes is of considerable interest. Some have suggested that the cost of ECEC provided in a family childcare home is typically less than the cost of the same quality of care provided in a centre. Others believe that family childcare is only cheaper if the caregiver is given low compensation for her services, or if monitoring and support services are lacking. As a result, so this argument goes, cheaper family home childcare implies lower and more variable quality, and less ability to monitor service quality than in centre care; if these failings are corrected, the cost of family home childcare will roughly equal the cost of centre care.

160. There is little published evidence to resolve this important issue. Kamerman has written that the cost of a centre space in 1991 in Denmark was about \$13,000 while the cost for family childcare was about \$7,100 (Kamerman, 2000a). However, she provides no details about the quality of care or compensation of caregivers.

161. Helburn and Howes (1996) have reported on cost data from an unpublished study on the Economics of Family Childcare in the U.S. (Modigliani et al., 1996). The sample of caregivers was taken from a larger study on the quality of care in family childcare homes which found only 9% of homes rated as good quality, while 56% provided adequate or custodial care, with 35% judged to be inadequate. Family childcare providers who had chosen childcare as a career tended to provide better quality care, but also cared for larger groups of children, than did those who viewed it as interim work while their own children were young or who felt obliged to provide care for a relative. The more professionally-oriented caregivers who provided care to larger numbers of children were able to earn a living wage while providing ECEC at rates comparable to centre costs. Family home caregivers caring for fewer children tended to do so for low compensation and with low quality care. Because family home childcare providers charge close to the same per hour fee for all ages of children, and typically refuse additional infants if they already have one, they are able to offer parents a considerably lower price per hour for infant care than is available from centres (U.S. \$341 per month vs. U.S. \$454 per month averaged across all quality levels [Helburn and Howes, p. 78]).

162. Even though there is virtually no published evidence on the relative costs of family child care vs. centre-based ECEC, some of the issues are obvious. Since labour is the major input to child care services of all kinds, the relative costs of centre-based ECEC and family home ECEC depends largely on:

- The number of children looked after by each caregiver/teacher in each type of care,
- The skill levels/education levels of caregivers in the two types of care,

- The wages and benefits paid to different skill levels/education levels of caregivers/teachers in each type of care

163. In most cases that we observe in different countries, family child care is currently cheaper than centre-based care. This occurs because the skill level/education level of family home caregivers is typically lower and the wages/benefits (or equivalent compensation) for any given skill level is lower for family home caregivers. This is partially offset by the child - staff ratios, which are typically higher in centre care than in family care (except, perhaps, for infants). There is very little evidence about how the different conditions of family child care vs. centre care affect the quality of ECEC provided in the two settings. If family child care is cheaper, but provides lower quality care, it may not be a bargain from the point of view of public interests. Further, if family child care becomes institutionalized as part of a public ECEC system, one would expect qualification levels and compensation levels to be more or less equalized across different types of care.

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TABLES

TABLE 2

MAJOR ECEC FINANCING PROGRAMS BY COUNTRY AND TYPE

COUNTRY	LEAVES AND BENEFITS	PUBLICLY-FUNDED SERVICES	ECEC	SUPPLY SUBSIDIES	DEMAND SUBSIDIES	OTHER	PUBLIC FUNDING AS % GDP
AUSTRALIA	-Maternity leave and benefits by private agreement only (not statutory) -Maternity allowances -Parental leave (unpaid)	Preschools and Kindergartens for 4 and 5 year-olds		Operating subsidies to all child care services Private Provider Incentive	Child Care Benefit for use of approved services (means tested – sliding scale) -Tax relief -In subsidized care sector, sliding scale of fees	Quality Improvement and Accreditation System (QIAS)	0.1% for ISCED Level 0 institutions; 0.3% on all childcare (not education); 2.63% including cash benefits
BELGIUM FLEMISH COMMUNITY	-Maternity leave and benefits -Parental leave and benefits -child-rearing leave and benefits	Pre-primary school from 2.5 – 5 years	2.5 – 5	Supplementary investments to kinderschools serving low income/ethnic families	-Tax relief -In subsidized care sector, sliding scale of fees		
BELGIUM FRENCH COMMUNITY	-Maternity leave and benefits -Parental leave and benefits -child-rearing leave and benefits	Pre-primary school from 2.5 – 5 years Day care centres from 0-3	2.5 – 5	Supplementary investments to schools serving disadvantaged families	-Tax relief -In subsidized care sector, sliding scale of fees		0.5% for ISCED Level 0 (all Belgium)
CANADA	- Maternity leave and benefit - Parental leave and benefit	-Kindergarten (5 year olds) -Junior Kindergarten in some provinces (4 year olds) - centre and family child care in Quebec (0-4 years old)		Operating grants for licensed/regulated ECEC in some provinces	- tax deductions for child care expenses - subsidies for the use of licensed child care for low-income families		
CZECH REPUBLIC	Maternity leave and benefit Parental leave and benefit	Kindergarten					1.16% (0.5% for ISCED Level 0)
DENMARK	Maternity leave and benefit Parental leave and benefit Paternity leave and benefit Child-rearing leave and benefit New child-rearing leave and benefit	Day Care facilities: Centre care – creche, kindergarten, age-integrated facilities, after-school centres Municipal childminding Private facilities based on public grants Pre-school class School-based leisure-time facilities			Free-choice schemes		2.37% (1.1% for ISCED Level 0) US\$4,082 per child 0-6 annual spending on ECEC services

COUNTRY	LEAVES AND BENEFITS	PUBLICLY-FUNDED SERVICES	ECEC	SUPPLY SUBSIDIES	DEMAND SUBSIDIES	OTHER	PUBLIC FUNDING AS % GDP
FINLAND	-Maternity leave and benefit, -Parental leave and benefit, -Paternity leave, -Child care leave and home care allowance	-Municipal day care centres from 0-6 years -Family day care homes from 0-6 -Pre-school groups for 6 year-olds - Open ECEC services			Private Care Allowance. Money paid directly to service provider.		0.91% GDP for children 0-6 in day care (not including leaves or benefits, private allowance, or care pre-school).
FRANCE	Maternity leave and benefit Parental leave and benefit Paternity leave	Creche Ecole maternelle			For family day care For in-home care providers Tax relief	Employer contributions to CAF	US\$2,951 per child 0-6 annual spending on ECEC services (not including tax relief)
GERMANY	Maternity leave and benefit Child-rearing benefit	Kindergarten Pre-school class			Some subsidized care for low-income Tax relief		
ITALY	Maternity leave and benefit Parental leave and benefit	Asili nidi for infants and toddlers Scuola materna (nursery school) for 3-6 year-olds Integrated municipal services					0.4% for ISCED Level 0
LUXEMBOURG	Maternity leave and benefit	Creches Jardins d'enfants Centre d'enfants Enseignement prescolaire			Tax deduction		
NETHERLANDS	Maternity leave and benefit Parental leave (unpaid) Career Interruption Benefit	Family day care 0-4 Out-of-school care 4-12 Playgroups 2-4 Primary education 4-12		Centre care 0-4 (in transition to demand-driven system)	Tax deduction	Encouragement to employers to sponsor centres (in some sectors, by collective labour agreement there are special child care funds)	0.4% for ISCED Level 0; US\$1,372 per child 0-6 annual spending on ECEC services
NEW ZEALAND	Maternity leave Parental leave Paternity leave	Kindergartens Centre care Family day care		Direct Grant funding for chartered ECEC services Funding for license-exempt	Targeted fee subsidies for low-income parents of special needs		

COUNTRY	LEAVES AND BENEFITS	PUBLICLY-FUNDED SERVICES	ECEC	SUPPLY SUBSIDIES	DEMAND SUBSIDIES	OTHER	PUBLIC FUNDING AS % GDP
NORWAY		Te Kohanga Reo (Maori community based ECEC) Pacific Islands ECEC		services			
	Maternity leave and benefit Paternity leave and benefit Parental leave and benefit Time account	Kindergartens Family day care Drop-in centres		(Public financing of ECEC occurs through operating subsidies to all approved bamehager, private and public)	Tax deductions for ECEC expenses	Cash benefit for at-home or unsubsidized care	0.6% for ISCED Level 0. Also 0.6% for parental benefit
PORTUGAL	Maternity leave Parental leave Paternity leave	Creche (0-3) Amas (0-3) Creche familiar (0-3) Jardim d' infancia (pre-school – 3-6)		3-6: free, except for private profit centres > free milk (public centres) > lunch and after-hours activities are partially financed by the State for public and non profit centres	> breast-feeding subsidies > RMG (minimum income pay) > tax deduction > Family subsidies for children and young people > Subsidies for children that attend special needs centres		
	Maternity leave Parental leave and benefit Paternity leave and benefit Pregnancy leave and benefit	Preschool Family day care Preschool class					SEK 34,500 m for ECEC services 0-6 (2001). SEK 15,000 m for leaves/benefits (2002)
UNITED KINGDOM	Maternity leave and maternity pay Paternity leave and paternity pay Parental leave Time off for dependents Adoption leave and adoption pay Duty to consider requests for flexible working	Sure Start Local Programmes and Children's Centres All 4 year olds entitled to 3 terms of free, part-time nursery education. This entitlement will be extended to all 3 year olds from April 2004. Currently around 70% of 3 year olds benefit.		> Free early education places for 3 and 4 year olds, funded through LA/EYDCP > Early Years and Childcare Grant (including Neighbourhood Nurseries Initiative in England only) and the Standard Spending Assessment.	Childcare Tax Credit		0.4% for ISCED Level 0; US\$627 per child 0-6 annual spending on ECEC services
	Maternity leave	-Head Start and Early Head Start -kindergarten -some prekindergarten		Food subsidy program	> tax credit for child care expenses > subsidies to child care for families below 85% of state median income		0.4% for ISCED Level 0; US\$600 per child 0-6 annual spending on ECEC services

TABLE 3
CHILD-RELATED LEAVES AND BENEFITS

COUNTRY	NAME/ TYPE OF PROGRAM	ELIGIBILITY	LENGTH OF LEAVE/ BENEFITS	% WAGE REPLACED	TAKE-UP RATE	JOB PROTECTION	ANNUAL COST
AUSTRALIA	Maternity	Estimated 17% - 38% of mothers eligible for some sort of paid maternity leave (depends on workplace agreement)	6-12 weeks	varies		By individual or collective agreement	
	Maternity Allowance	Paid to all families at childbirth who receive Family Tax Benefit A	Lump-sum payment per child	Aus\$780 (2001)			
	Maternity Immunization Allowance	At 18 months paid if children immunized to families receiving FTB(A)	Lump-sum payment per child	Aus\$208 (2001)			
	Parental	<i>Workplace Relations Act 1996</i> provides entitlement to unpaid parental leave of 12 months for permanent employees with same employer for 12 months continuously	52 weeks	unpaid		yes	
	Maternity		15 weeks	82% first month, 75% thereafter		Yes	
BELGIUM	Parental		3 months full-time for each parent or 6 months part-time (before 4 years)	Low flat rate - 20,400 FBE; approx E505/mth; 37% of average wage (1999)		Yes	
	Paternity		2 weeks	100%		Yes	
	Child-rearing		indeterminate	12,308FBE/mth (4,450FBE supplement in Flemish community)		No	
	Employment Insurance (Maternity Benefit)	Birth mother or adoptive parent having worked 600 hours in last 12 months; does not include self-employed or students	15 weeks benefit after two-week waiting period. Job-protected leave varies by province	55% up to a ceiling; up to 65% for low-income; benefits are taxable. Income earned reduces benefit dollar for dollar		Yes	Cdn \$848 million in 2001-2
CANADA	Employment Insurance (Parental Benefit)	Either parent	35 weeks benefit; no additional waiting period; job-protected leave varies by province	55% up to a ceiling; up to 65% for low-income; benefits are taxable above some level		Yes	Cdn \$1.311 Billion in 2001-2

COUNTRY	NAME/ TYPE OF PROGRAM	ELIGIBILITY	LENGTH OF BENEFITS	% WAGE REPLACED	TAKE-UP RATE	JOB PROTECTION	ANNUAL COST
	Maternity and Parental Leave	Varies by province/territory	Varies by province/territory	No provincial/territorial benefit; only job-protected leave		Yes	
CZECH REPUBLIC	Maternity		28 weeks	69%		Yes	
	Parental		Until age 4	Flat rate	Almost entirely mothers	Yes	
DENMARK	Maternity	120 hours employment during preceding 13 weeks; includes self-employed	18 weeks (of which 14 after birth)	100% for most mothers (or unemployment benefit)		Yes	
	Parental	120 hours employment during preceding 13 weeks; includes self-employed	32 weeks for family	100% of earnings or unemployment benefit; benefits are taxable		Yes	
	Paternity	Public sector and many private sector	2 weeks (use it or lose it)	100%; benefits are taxable		Yes	
	Child-rearing	For parents with custody of child 0-8. If child is 0-2 child must be outside childcare institution. Only for parents with children born prior to January 2002.	13 consecutive weeks for each parent. Extended to 26 weeks each if child is 0-1 or adopted. With employer's permission extended to 52 weeks.	60% of unemployment benefit			
	Subsidy caring for own children	Parents of children from 24 weeks until they begin in a pre-school class	Duration minimum 8 weeks, maximum 1 year. Maximum 3 subsidies per family.	The local authority determines the size of grants, which must be the same for all children within the same age group. The maximum grant from the local authority is equivalent to 85% of the net cost of the cheapest place in a day care facility for the relevant age group in the municipality.	0-2 years: 490 3-6 years: 140 (2003)		24m Danish Krona
FINLAND	Maternity	Resident of Finland for 6 months prior	18 weeks (of which 6 weeks before birth)	66% ; benefits are taxable		Yes	Together 500.1 million Euros
	Parental	Resident of Finland for 6 months	26 weeks	66%		Yes	
	Paternity		18 days (3 weeks)			Yes	

COUNTRY	NAME/ TYPE OF PROGRAM	ELIGIBILITY	LENGTH OF BENEFITS	% WAGE REPLACED	TAKE-UP RATE	JOB PROTECTION	ANNUAL COST
	Home Care Allowance		Until age 3 or partial leave to age 6 - the family is entitled to the allowance only if they have at least one child under 3 cared for at home. If they also have older children less than school age, they are entitled to additional benefit for those children	For the first child under 3, 252.28 Euros per month and depending on family income up to 168.19 Euros additional per month (with possible municipal supplements as well). For every other child less than 3, 84.09 Euros per month. For every child under school age, but over 3, 50.46 Euros per month.			305.1 million Euros. Additional municipal benefits 37.9 million Euros
FRANCE	Maternity	Insured 10 months before leave; minimum work hours (1200 hours) or insurance contributions	16 weeks (compulsory 6 weeks prior to birth) – longer for third and multiple births	84% of wage to max U.S.\$1742/mth (1991). Monthly stipend of U.S.\$192 for those without current job if employed at pregnancy; benefits not taxable		Yes	Total parental leave costs \$1.43B (\$U.S.) in 1991
	Parental Allocation Parentale d'Education	If 2 or more children. Parent staying home must have worked at least 2 years in 5 years preceding birth	Until age 3	Flat rate, income-tested; E485/mth; 39% of average wage (1999)		Yes	
	Paternity		3 days			Yes	
GERMANY	Maternity	Insured for 12 months, between 10 th and 14 th month before confinement	14 weeks (of which 6 weeks before birth)	100%; taxable in principle but rarely in practice		Yes	
	Parental/child-rearing	Can be alternated between mother and father up to 3 times. Claiming parents can work up to 19 hours/week.	3 years (6 months limited to fathers)	Flat rate E307 (24% of average wage) for first 6 month, income tested for next 1 1/2 years, 3 rd year unpaid		Yes	
ITALY	Maternity	Employed and insured at start of pregnancy	21 weeks (5 months)	80% (paid by employer)		Yes	
	Parental	Any time until child reaches 8 th birthday	10 months (extended to 11 months if father takes 3 months)	30% (paid by employer)		Yes	
LUXEMBOURG	Maternity		16 weeks	100%		Yes	
NETHERLANDS	Maternity	Employees working full-time or part-time; not self-employed or housewives	16 weeks (4-6 weeks before birth)	100% to a ceiling (unemployed mothers at lower rate); benefits are taxable		Yes	
	Parental	Parents must work at least 20 hours per week	6 months (partial leave) for each parent	Unpaid		Yes	
	Child-rearing benefit (Career Interruption)	Employees and civil servants, only with employer agreement	2-18 months	430 Euros/month		No protection. Employer agreement necessary.	

COUNTRY	NAME/ TYPE OF PROGRAM	ELIGIBILITY	LENGTH OF BENEFITS	LEAVE/	% WAGE REPLACED	TAKE-UP RATE	JOB PROTECTION	ANNUAL COST
NEW ZEALAND	Maternity		14 weeks		Unpaid (but income-tested benefit for low-income single mothers)		Yes	
	Parental		38 weeks		Unpaid		Yes	
	Paternity		2 weeks		unpaid			
NORWAY	Maternity, paternity and parental	Employed and insured at least 6 of last 10 months	52 weeks of which 30 days for father (use it or lose it). 3 weeks before birth and 6 weeks after for mother.		80% to a ceiling (or 42 weeks at 100% to a ceiling)		Yes	
	Time account	Parents working at least half time and eligible for parental leave	From 12 weeks – 104 weeks. Parents may combine part-time work with paid part-time leave, stretching normal parental leave benefits over a longer time.		Parents can work 50/60/75 or 90% of full-time and receive benefits accordingly. Parents may combine leave simultaneously or consecutively.		Yes?	
PORTUGAL	Maternity	Employed with pay deductions for at least last 6 months	Up to 120 days		100%		Yes	
	Paternity	Employed with pay deductions for at least last 6 months	5 days simultaneous with mother or up to 120 days instead of mother		100%		Yes	
	Pregnancy	When the child or mother are at clinical risk	Indeterminate, depending on risk		100%		Yes	
	Parental	Until the child is 6 years old	Up to 3 months		100%		Yes	
	Grandparents	Birth of grandchildren when parent is less than 16 years old	30 days		100%		Yes	
	Assistance to the handicapped or chronically sick	Parents with children less than 12 years old	6 months to 4 years		65%		Yes	
SWEDEN	Maternity		7 weeks before and 7 weeks after birth				Yes	
	Pregnancy	Pre-birth if unable to continue working	50 days before birth		80% to a ceiling (289,500 SEK)		Yes	375 m SEK (2002)
	Parental		18 months, of which 480 days with cash benefit (but may be used until age 8); 6 additional months for multiple births (includes 30 days for father non-transferable)		80% to a ceiling for 13 months (minimum 60 days for each parent), minimum SEK 120/day, flat rate for next 3 months at SEK 60/day	95% of high-rate days	Yes	14,115 m SEK (2002)

COUNTRY	NAME/ TYPE OF PROGRAM	ELIGIBILITY	LENGTH OF BENEFITS	LEAVE/	% WAGE REPLACED	TAKE-UP RATE	JOB PROTECTION	ANNUAL COST
UNITED KINGDOM	Paternity		10 days at birth		80% to a ceiling	75%	Yes	518 million SEK (2002)
	Maternity Pay	Pregnant employed earners with minimum 26 weeks continuous employment by 15 th week before baby is due and earning at least lower earnings limit for National Insurance.	26 weeks		Either 6 weeks at 90% of average weekly earnings followed by 20 weeks at a standard rate of 100 pounds sterling (2003/4) or 26 weeks at 90% of average weekly earnings (if this is less than the standard rate)	350,000 mothers are currently estimated to claim maternity pay. 300,000 (85%) are estimated to take up the additional 6 weeks of paid leave from April 2003. 60,000 to 100,000 are expected to take 6 weeks of the available 26 weeks of unpaid maternity leave	Yes	Cost to employers of extensions to maternity leave entitlement from April 2003 = 51 million pounds sterling. Cost to taxpayers of additional maternity pay = 305 million. Cost to employers of additional maternity pay = 20 million.
	Maternity leave	Ordinary maternity leave: all pregnant employees Additional maternity leave: pregnant employees with at least 26 weeks continuous service by 15 th week before baby is due	26 weeks ordinary maternity leave, followed immediately by 26 weeks additional maternity leave for qualifying women		26 weeks statutory maternity pay (see above) or Maternity Allowance		Yes	
	Paternity pay	Employed earners with minimum 26 weeks continuous employment by 15 th week before baby is due and earning at least lower limit for National Insurance	1 or 2 weeks	100 pounds sterling per week or 90% of wage, whichever is lower, for one or two weeks.	Estimated that around 280,000 fathers will take up this benefit (60% - 80% of 400,000 eligible)	Yes	57 million pounds sterling to taxpayers; 30 to 52 million pounds sterling to business	
	Paternity leave	Employees with at least 26 weeks continuous employment by 15 th week before baby is due.	1 or 2 weeks	Statutory paternity pay			Yes	

COUNTRY	NAME/ TYPE OF PROGRAM	ELIGIBILITY	LENGTH OF BENEFITS	% WAGE REPLACED	TAKE-UP RATE	JOB PROTECTION	ANNUAL COST
	Parental leave	Applies to employees with one year's service with parental responsibility for children less than 5 years (or disabled children less than 18 years)	13 weeks (18 weeks for parents of child with disability)	unpaid	The RIA for the 1999 Employment Relations Bill estimated a take-up of 82,000. In the RIA following the extension of Parental leave, it was estimated that take-up would be 3%-12% of those eligible (2.8 m)	Yes	The RIA for the 1999 Employment Relations Bill estimated the cost of Parental Leave to be 29 million pounds sterling. The RIA following the extension of parental leave (using different assumptions) estimated additional cost to business of 6 – 39 million pounds sterling.
	Adoption pay	Employed eamers with minimum 26 weeks continuous employment by week in which they are notified about adoption and earning at least lower limit for National Insurance	26 weeks	100 pounds sterling per week or 90% of employee's average weekly earnings, whichever is lower	Estimated 100% take-up; 3,850	Yes	10 million pounds sterling to taxpayers; 1 to 1.5 million pounds sterling for business
	Adoption leave	Employed eamers with minimum 26 weeks continuous employment by week in which they are notified about adoption	26 weeks ordinary adoption leave followed immediately by 26 weeks additional adoption leave	26 weeks statutory adoption pay		Yes	
	Time off for dependents	Employees who require time off to deal with emergencies involving a dependent, including children	An amount of time considered reasonable	unpaid		Yes	
	Duty to consider requests for flexible working	Working parents with children under six			Estimated that 396,000 requests (82% of requests) for flexible working will be accepted	Yes	Estimated cost to business = 296 million pounds sterling
UNITED STATES	Maternity leave	In firms over 49 employees (estimated half of female workers are eligible)	12 weeks	Unpaid. Some states provide partial benefits through Temporary Disability Insurance or equivalent .		Yes	

TABLE 4
PUBLICLY-FUNDED ECEC SERVICES FOR 0-3 AND 3-6 YEAR OLDS

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE /ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
0 – 3 YEARS										
AUSTRALIA	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	6
BELGIUM FLEMISH COMMUNITY	Kinderdagverblijf – child care centres		Kind & Gezin, public agency of Ministry of Welfare, Health and Equal Opportunities	centre	(30% of children 0-3 served in publicly-financed care)	Full-day, all year				
	Kleuterschool (pre-primary school - from 2.5 years)	2.5 – 5 years	Dept of Education, Ministry of the Flemish Community	Pre-primary school	About 54% of 2 year olds (2000)	Daily from 8:30 – 15:30 (half day Wednesdays), after-school care available in many locations	No access fee for pre-primary school but schools can ask for money for after-school care			6
BELGIUM FRENCH COMMUNITY	Creche	0-3	Office de la Naissance et de l'Enfance	centre		Full-day, all year	Linked to income			6
	Ecole maternelle (from 2.5 years)	2.5 – 5 years	Ministry of Education	Pre-school/school	85% at 2.5 years	Half-days at 2.5 years	Free			6
CANADA	Centre family child care	0-4 in Quebec.	Ministere de la Famille et de l'Enfance, Government of Quebec	Centres and family child care	Approx. 40% of children 0-4 in Quebec in 2000-1	Full-day, all year	Cdn \$5 per day	Child:staff ratio 5:1 (0-18 months), 8:1 (18 months-3 years)	Cdn \$1.013 Billion in 2001-2 for children 0-4	6

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
DENMARK	Kommunal dagpleje (Municipal childminder)	0-2 years (90% of municipalities guarantee places for all children 1-5 according to rules and 5% have alternative form of guarantee)	Ministry of Social Affairs, municipalities	Family day care homes	Overall 0-2 years: 59% (2002) Kommunal dagpleje: 0-2 years: 35%, 3-6 years: 2%	Full-day, all year	Free for low incomes or special needs. Maximum 33% for 1 child in day care facilities. Maximum 16,5% for second child and successive children	Child-staff ratio 3:1		
	Vuggestuer (creche)	0-36 months of municipalities guarantee places for all children 1-5 according to rules and 5% have alternative form of guarantee)	Ministry of Social Affairs, municipalities		Vuggestuer: 0-2: 9%	Full-day, all year	Vuggestuer: average 21% of costs Free for low incomes or special needs. Maximum 33% for 1 child in day care facilities. Maximum 16,5% for second child and successive children	Child-staff ratio 3:1		7
	Aldersintegrerede institutioner (age-integrated facility)	(90% of municipalities guarantee places for all children 1-5 according to rules and 5% have alternative form of guarantee)	Ministry of Social Affairs, municipalities	centre	Aldersintegrerede inst. 0-2 years: 13%	full-day, all year	Aldersintegrerede inst. Average: 22% of costs. Free for low incomes or special needs. Maximum 33% for 1 child in day care facilities. Maximum 16,5% for second child and successive children	Child-staff ratio 6:1		7
FINLAND	Puivakoti (Day care centres), perhepaivahoitio (family day care), pihmaperhepaivahoitio (Group family day care)	Legal right for every child 0-6	Ministry of Social Affairs and Health, municipalities	Centres and family homes	21,4% of children full day; 1,1% of children part-time (2001)	Full-day, all year (part-time services available)	Average 7,9 - 11% of costs, depending on family income, to max of 200 Euros per month (first child), 180 Euros per month (successive children)	Child-staff ratio 4:1 under 3 years	248 million Euros in 2001 (approximate on based on data for 0-6)	7

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
	Avoin varhaiskasvatukset (open ECEC services)						Part-time all year			
FRANCE	Creche	0-36 months	National Ministry for Social Affairs, and municipal social services		(25% of children served in publicly-financed care)	Full-day, all year	Charge fees to graduated income. Average daily fee about U.S.\$10., max about \$22 (1991)	Director is puericultrice with specialized training and 5 years experience	U.S.\$1.11B in 1991.	6
GERMANY	Krippe	0-36 months	Local authorities		(2% of children served in publicly-financed care)	7:00 – 16:30, closed short period in summer				6
ITALY	Asilo Nido	3-36 months	Regions and Municipalities	centre	6% of 0-3	8-12 hours daily, for 11 months	Varies; average 36% of costs or 12% of disposable income	Child-staff ratio 7:1		6
LUXEMBOURG	Foyer de jour	Includes creche (0-36 months), jardin d'enfants (2-3 years) and centre d'enfants (4-12 years)	National Ministry for Family and Solidarity and local authorities		(3% of 0-3 served in publicly-financed care)	Full-day, all year				6
NETHERLANDS	Kinderdagverblijf (ChildcareCentres)	0-4 (but waiting lists due to shortages)	Ministry of Labour and Social Affairs	Centre	8% of 0-3 served in publicly-financed care	Kinderdagverblijf open full-day all year for children 2 months- 3 years	Varies by income; average 44% of costs (6-21% of net family income)	Child-staff ratio 4:1 to 6:1		5
	Gastouderopvang (family child care)	0-4/0-12	Ministry of Labour and Social Affairs	Family home						
	Peuterspeelzamen (preschool playgroups)	No legal right to services for children 0-3	Ministry of Health, Welfare and Sports, and local authorities	Centre	Over 50% of 2-4 year olds in playgroups					

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
NEW ZEALAND					In 1997, 12.6% of < 1 yr, 31.4% of 1-2, 50.1% of 2-3 were in some form of ECEC					6
	Barnehage (kindergarten)	0-6	National Ministry of Children and Family Affairs; Regions and municipalities	Centres	48% of 1-4 year-olds (47% public; 53% private)	Usually open at least 41 hours per week	28%-45% depending on municipality, income and type of care	Only 1/3 have 2-3 years tertiary; 7-9 children per trained preschool teacher		6
NORWAY	Familiebarnhager (family day care)	0-6	National Ministry of Children and Family Affairs; Regions and municipalities	Family day care homes						6
	Apne barnhager (drop-in centres)	0-6	National Ministry of Children and Family Affairs; Regions and municipalities	centres						6
	Creche	0-3	Ministry of Social Security and Work	Centres		4-11 hours daily	According to parents income			6
PORTUGAL	Creche familiar	0-3	Holy House of Mercy	Home-based		4-11 hours daily				6
	Amas	0-3	Municipal	Home-based	n.a.	According to parent needs				6

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
SWEDEN	Preschool (Forskola)	Children at 1 year old have right to ECEC if both parents work or study. If parent is unemployed or on child-related leave, children have right to 15 hours/week	Municipal	Centres	64% of 1 and 2 year olds	Full-day, full year	To be eligible for special government grant, the maximum fee is 3% of household's income (before tax) for the first child, 2% for second and 1% for third child. Fees may not exceed SEK 1140 for first child, SEK 760 for second, SEK 380 for third.	Child-staff ratio 5.4: 1 for 1-5 years	SEK 27,345 million for 1-5 years	7
	Family day care (familjedaghem)	Children at 1 year old have right to ECEC if both parents work or study. If parent is unemployed or on child-related leave, children have right to 15 hours/week	municipal	Family day care	8% of 1 and 2 year olds	Full-day, full year	To be eligible for special government grant, the maximum fee is 3% of household's income (before tax) for the first child, 2% for second and 1% for third child. Fees may not exceed SEK 1140 for first child, SEK 760 for second, SEK 380 for third.	Child-staff ratio 5.3:1 for 1-12 years	SEK 3,530 million for 1-12 years	7
UNITED KINGDOM	Sure Start Local Programmes	All families with children 0-3 in defined catchment area	Overseen by statutory and voluntary sector agencies and parents. Accountable body is Local Authority, PCT or Voluntary Organisation	Range of activities and services targeted at specific needs	522 communities based in 20% most deprived wards in England. Approx. 800 children 0-3 in each community			Nationally and locally set targets	499 million pounds sterling (2002-3)	5 in Great Britain and 4 in Northern Ireland
	Children's Centres	Families with children 0-5	Local Authority		Also in 20% most deprived wards					

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
UNITED STATES	Early Start Head Start	Low-income children 0-3		centres	(5% of 0-3 in publicly-financed care)	Part-day, part-year	Free	Child-staff ratio 4:1 for infants and toddlers	U.S.\$279 million (1998)	6 generally (varies from 5-7 by state)
3 – 6 YEARS										
AUSTRALIA	Preschool (Kindergarten)	Approx. 4 years	State or Territory Education Community Services authority	Some attached to schools; some separate	Approx. 84% of 4 year olds (Productivity Commission Report, 2000-1)	10-12 hours/wk during school term	Government-subsidized, parent expected to make some contribution, but can be exempted on financial grounds	Pre-school teachers require 3-4 year university degree, not necessarily with early childhood specialisation		6
	Kindergarten (preparatory)	Approx. 5 years	State or Territory Education authority	Primary schools	Almost 100%	6 hours daily, school term	Free, but varying levels of voluntary parent contributions	School teachers require a 3-4 year university degree, not necessarily with early childhood specialisation		6
BELGIUM FLEMISH COMMUNITY	Kleuterschool (pre-primary school - from 2.5 years)	2.5 – 5 years	Dept of Education, Ministry of the Flemish Community	Pre-primary school	Almost 100% at 3-4 year olds	Daily from 8:30 – 15:30 (half day Wednesdays), after-school care available in many locations	No access fee for pre-primary school but schools can ask for money for after-school care	Pre-primary teachers have three years in teacher training colleges. Well-developed in-service training. Child-staff ratio 18:1		6
BELGIUM FRENCH COMMUNITY	Ecole maternelle	2.5 – 5 years	Office de la Naissance et de l'Enfance, Ministry of Childhood	Preschool/school	Almost 100% at 3-4 years	Daily from 8:30 – 15:30 (half day Wednesdays), after-school care available	Free	Maximum child-staff ratio 19:1, often less Teachers get 3 years at higher education college; puericultrices have two years child nursing after 4 year special secondary		6

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AGENCIES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
CANADA	Kindergarten	Aged 4.75 at school start in Sept	Provincial Ministries of Education; Department of Indian Affairs and Northern Affairs Canada (for on-reserve aboriginal Canadians)	School	99%	2 ½-3 hours each day during school term; full school day in Quebec	Free	All teachers have five years post-secondary; 20 – 28 students per class		6, (5 in some provinces)
	Junior kindergarten	Aged 3.75 at school start in Sept	Provincial Ministries of Education; Department of Indian Affairs and Northern Affairs Canada (for on-reserve aboriginal Canadians)	School	40% (primarily in Ontario and Quebec)	2 ½-3 hours each day during school term	Free	Teachers have five years post-secondary; 17-20 students per class		6, (5 in some provinces)
	Centre family child care	0-4 in Quebec.	Ministere de la Famille et de l'Enfance, Government of Quebec	Centres and family child care		Full-day, all year	Cdn \$5 per day	Child:staff ratio 10:1 (4-5 year olds)	Cdn \$1.013 Billion in 2001-2 for children 0-4	6, (5 in some provinces)
	Aboriginal Head Start and First Nations Head Start	For off-reserve and on-reserve aboriginal Canadians	Health Canada	Centre	10,900 children in 2001-2	Typically half-day, 4 days per week, September to June	Free		Cdn \$47.5 million (2001-2)	6, (5 in some provinces)
CZECH REPUBLIC	Materska skola or kindergarten	3-6 years	Ministry of Education	School	66.5% at 3 years; 98% at 5-6 years; average 86% 3-6	8 or more hours per day	Capped at 30% of costs, reduced for families in need	More than 95% of teachers have 4 years of training; child:staff ratios 12:1.		6

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
DENMARK	Bornehaver	3-6 years (90% of municipalities guarantee places for all children 1-5 according to rules and 5% have alternative form of guarantee)	Ministry of Social Affairs, Municipalities	Centre	Across all services: 3-6 years – 92% Bornehaver: 0-2: 1% 3-6: 46%	Full-day, all year	Average: 21% of costs. Free for low incomes or special needs. Maximum 33% for 1 child in day care facilities. Maximum 16.5% for second child and successive children			7
	Aldersintegrerede institutioner (age-integrated facilities)	0-6 years (90% of municipalities guarantee places for all children 1-5 according to rules and 5% have alternative form of guarantee)	Ministry of Social Affairs, municipalities	Centre	Alderintegrerede inst. 3-6: 30%	full-day, all year	Average: 22% of costs. Free for low incomes or special needs. Maximum 33% for 1 child in day care facilities. Maximum 16.5% for second child and successive children	Staff-child ratio 6:1		7
	Fritidshjem (after-school centers)	About 5 to 9 years	Ministry of Social Affairs, municipalities	centres	3-6 years: 2%	Full day all year	Average: 18% of costs. Free for low incomes or special needs. Maximum 33% for 1 child in day care facilities. Maximum 16.5% for second child and successive children	Child-staff ratio 9:1		7
	Bornehaveklasser (pre-school class)	nearly all 6 year-olds and a few 5 year-olds (legal right to place in out-of-school provision)	Ministry of Education, municipalities	School	Approx 98% of 6 year olds	During school term, 3-4 hours/day (out-of-school provision for other half day)	Free (out-of-school is fee-paying)	Staff-child ratio 6 or 7 to 1. Class led by pedagogues 3.5 years training at tertiary level		7
	Skolefritidsordning – SFO (school-based leisure-time facilities)		Ministry of Education, municipalities	School-centres	3-6 years: 11%		Average: 25% of costs			

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
FINLAND	Paivakoti (Day care centres), perhepaivahoitto (family day care), pöyhänpöthepai vahoitto (Group family day care)	Legal right for every child 0-6	Ministry of Social Affairs and Health, municipalities	Centres and family homes	55.9% of children 3-5 (2001). For children 6 years not participating in preschool education, 5.5% in full day care, 1.7% in part-time (2001)	Full-day, full year	7.9 – 11% of costs, depending on family income, to max of 200 Euros per month for first child, 180 Euros per month for successive children	Child-staff ratio 7:1 for full-days 3-6	992 million Euros in 2001 (approximate on based on data for 0-6)	7
	Avoin varhaiskasvatusto (open ECEC services)				55.1% of 6 year olds part-time day care (of those who attend preschool)	Part-time, all year				
FRANCE	Estopetus (Preschool)	6		Centres or schools	93% of age 6 (2001)	18-20 hours per week (700 hours/year – school year)	Free	Child-staff ratio 13:1 for part-day	Annual cost per child 3300 Euros (total 191.64 million Euros in 2001)	7
	Ecole maternelle	2-5 years	National Ministry of Education	Preschool/school	99% of 3-6 served in publicly-financed services	8:30 – 16:30 in term time, but usually closed Wednesdays	free		U.S.\$ 5.77B in 1991. Per-child annual cost estimated at U/S/\$2,396 (1991)	6

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
GERMANY	Kindergarten	3-5 years	Länder Ministries of Social Affairs		(85% of children 3-6 served in publicly-financed services)	5-7 hours/day not including lunch time, mainly during term time				6
	Vorklassen	5 years	Länder Ministries of Education							6
ITALY	Scuola Materna	Legal right to place in school-based ECEC 3-6 years	National Ministry of Education and local authorities	school	70%-90% from age 3; 96% at age 5-6	8:30-4:30; Sept-June plus municipal summer programs	Free, except meals for public (71%); varying fees for private (29%)	Staff-child ratio of 20-28 children per teacher		6
	Foyer de jour	Includes jardin d'enfants (2-3 years) and centre d'enfants (4-12 years)	National Ministry for Family and Solidarity and local authorities		(67% of 3-6 in publicly-financed services)	Full-day, all year				6
LUXEMBOURG	Enseignement prescolaire	Compulsory preprimary for school children aged 4 and 5	National Ministry of Education and communes	School	compulsory	8:00 – 16:00 but closed for 2 hour lunch and Tuesday and Thursday afternoons	free			6
	Child care centres - Kinderdagverblijf	0-4 years	Ministry of Social Affairs and Labour	centre	About 20% of children (71% of 3-6 in publicly-financed services)	On average centre is open 10 hours a day, 51 weeks a year	Varies according to income; overall parents pay 44% of costs (6-21% of net family income)	Staff-child ratios: 1:4 (age 0-1) 1:5 (age 1-2) 1:6 (age 2-3) 1:8 (age 3-4) local by-law on quality is required and sector has to monitor and improve quality relative to ISO standards	About 11,000 Euros per full-time place	5
NETHERLANDS										

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
	Out-of-school care	4-12 years	Ministry of Social Affairs and Labour	centre	5.3% of children	Average 3.6 hours on full schooldays, 10 hours per day during holidays	Varies according to income; overall parents pay 44% of costs (6-21% of net family income)	1:10 (age 4-12)	On average 4000 Euros per year per place	5
	Playgroups	2-4 years	Ministry of Health, Welfare and Sports	centre	About 50% of children of 2-4 year olds	Twice a week 2-3 hours per visit	Varies according to income; overall parents pay 44% of costs (6-21% of net family income)	No central regulations; most local authorities set standards	Varies widely; less costly than childcare	5
	Primary school (Bassisschool)	4-12 years (Legal right to place in primary school from 4 years)	Ministry of Education, Culture and Science	school		School day; 5 hours per day, 40 weeks per year	Free	National standards (but freedom of pedagogy) and national inspection	3400 Euros per child (excluding special education)	5
NEW ZEALAND	Kindergarten	3-5 years	National Department of Education; Regional and national kindergarten associations		In 1997, 85.9% of children 3-4 years and 96% 4-5 years used some form of ECEC. Vast majority of 5 year olds are in school, but school is compulsory only at age 6.	Half-days, 3 for younger; 5 days/wk for older		Teachers in kindergarten must hold Diploma of Teaching and be registered teachers		6
	Te Kohanga Reo	Maori language ability	National Department of Education; Te Kohanga Reo National Trust		Most popular ECEC for Maori families					6
	Pacific Islands ECEC centres	Range from bilingual full-immersion	National Department of Education							6
NORWAY	Barnehager (kindergartens)	0-6	Children and Family Affairs; Regions and municipalities	Centres	80% of 4-6 year-olds (47% of barnehager are municipal; rest are private)	Full-day	28%-45% depending on municipality, income and type of care	Only 1/3 have 2-3 years tertiary; 7-9 children per trained preschool teacher		6

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
PORTUGAL	Jardim de infancia (preschool)	3-6 years	Ministry of Education, parent associations, municipalities	Centres, integrated school	47% in public centres; 73% total coverage	5 hours, 5 days/wk (education time); up to 5 hours daily of lunch and after-hours activities	Free for education time; other time paid according to parents taxable income	Ratio 25/1 educator plus educational auxiliary staff; four year superior educator for curriculum guidelines		6
	Preschool (forskola)	Children at 1 year old have right to ECEC if both parents work or study. If parent is unemployed or on child-related leave, children have right to 15 hours/week	municipal	Centres	77% of 3-5; 93% of 6 year olds attend preschool classes in schools)	Full-day, full year	Free preschool class from 5 years	Child-staff ratio is 5.6 to 1 in preschool centres, and 13-1 in preschool classes.	SEK 27,345 million for 1-5 years	7
SWEDEN	Family day care (familjedaghem)	Children at 1 year old have right to ECEC if both parents work or study. If parent is unemployed or on child-related leave, children have right to 15 hours/week	municipal	Family day care	9% of 3-5	Full-day, full year			SEK 3,530 million for 1-12 years	7
	Preschool class (Forskoleklass)	Age 6	Municipal	School	93%; Voluntary, not compulsory	At least 525 hours/yr; leisure time center rest of the day	Free; fee in leisure time center	Child-staff ratio 12:1	SEK 3,833 million (approx SEK 2,200 m for leisure time centers)	7

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
UNITED KINGDOM	Nursery education	All 4 year olds entitled to 3 terms of free, part-time nursery education. This entitlement will be extended to all 3 year olds from April 2004. Currently includes about 70% of 3 year olds.	Local education authority/ Early Years Development and Childcare Partnerships	Variety of providers including maintained nursery schools and classes, independent schools, private day nurseries, playgroups and childminder networks	See elsewhere	Minimum of 2.5 hours per day, 5 days a week for 33 weeks a year	Free nursery education for all 4 year-olds and, by April 2004, all year-olds	Child-staff ratio 8:1 (playgroup) 13:1 (nursery class) 30:1 reception class	275 million pounds sterling for free nursery places for 3 year olds in 2002-3, and 1.61 billion pounds sterling for 4 year olds.	5 in Great Britain, 4 in Northern Ireland
	Early Years and Childcare Grant (including Neighbourhood Nurseries Initiative - England only)		Local education authority/ Early Years Development and Childcare Partnerships	Variety of providers including maintained nursery schools and classes, independent schools, private day nurseries, playgroups and childminder networks						
UNITED STATES	Reception classes for 4 year-olds		Local education authority	Schools		6.5 hours daily (9:00 - 3:30) during school term	free			5 in Great Britain, 4 in Northern Ireland
	Head Start	Children from families below federal poverty line; 826,000 per year (1999); mostly 4 years old	National Department of Health and Human Services; Head Start is separate federal bureau	Centres, some in homes; include health and development screenings and parent participation	36% of eligible children are served	Part-day		Child-staff ratio 8:1 at 3 years, 10:1 at 4 or 5 years 90% of teachers have either CDA, teachers' certificate or bachelor's degree	U.S.\$5.27Billion (2000)	6 generally. Varies from 5-7 by state

COUNTRY	NAME OF SERVICE	ELIGIBILITY	ADMINISTRATIVE AUSPICES	LOCUS OF CARE	COVERAGE / ACCESS	DURATION OF SERVICE	PARENTS' SHARE	QUALITY INDICATORS	ANNUAL COST	AGE OF COMPULSORY SCHOOLING
	Kindergarten and prekindergarten		State government	Schools, some private kindergartens	About 90% of 5 year olds in kindergartens (54% of 3-6 in publicly-financed services)	About 2.5 hours per day during school term	Kindergarten free for 5 year-olds in most states, prekindergarten free for 4 year-olds in some states		\$1.7 Billion (U.S.) 1998-99 for prekindergarten	6 generally. Varies from 5-7 by state

TABLE 5
SUPPLY SUBSIDIES TO PRIVATELY PROVIDED ECEC

COUNTRY	NAME OF PROGRAM	TYPE OF FACILITY	PURPOSE OF SUBSIDY	ELIGIBILITY/CONDITIONS	AVERAGE ASSISTANCE	ANNUAL COST
AUSTRALIA	Private incentive provider		To encourage private providers to open child care centres in areas of identified need			\$7.5 m (Aus.) over 4 years from July 2001.
	Operational subsidies to providers	Family Day Care, in-home care and some occasional care service providers	Operating subsidy for approved services			\$87.2m (Aus.) in 2001-2
CANADA	Varies by province; operating grants in some provinces	Typically in licensed or regulated facilities, sometimes only non-profit	Varies; to enhance wages and provide stable operating funding	Varies by province		
NEW ZEALAND		Licensed and chartered ECEC services	Universal funding; quality enhancement	Licensed or chartered. Max funding for six hours/childspace/day to max 30/wk; must provide annual audited statements; includes commercial and non-profit	Formula varies according to type of service, quality standard met, and ages of children enrolled. 1997 NZ\$4.84/hr for <2, NZ\$2.43/hr >1, 11% supplement for higher quality; \$3.24/hr/childspace for kindergartens	
PORTUGAL	Co-operation protocols between state and non-profit centres	Licensed and regulated non-profit centres (3-6)	Allow free and equal access; to promote educational quality	all	Annually revised by Ministry of Education	
	Development contracts between state and profit centres	Licensed and regulated profit centres (3-6)	Allow equal access	Low-income families	Annually revised by Ministry of Education	
UNITED KINGDOM	Free early education places for 3 and 4 year olds funded through the L.A./EYDCP	Variety of providers including maintained nursery schools and classes, independent schools, private day nurseries, playgroups and childminder networks	To enable providers to make free places available to eligible children	Paid through Local Education Authority to providers of free places. To be able to provide free places, providers must satisfy certain conditions (e.g., offer Foundation Stage Curriculum)	Local Authority will set rate at which they fund providers - approx 416 pounds sterling per place	

COUNTRY	NAME OF PROGRAM	TYPE OF FACILITY	PURPOSE OF SUBSIDY	ELIGIBILITY/CONDITIONS	AVERAGE ASSISTANCE	ANNUAL COST
	<p>Early Years and Childcare Grant (including NNI – England only) and the Standard Spending Assessment. The New Opportunities Fund also provides pump-priming funding for out of school places, including holiday schemes, before/after school clubs and education projects, focused on deprived areas.</p>	<p>Variety of providers including maintained nursery schools and classes, independent schools, private day nurseries, playgroups and childminder networks</p>	<p>To enable providers to make free available places to eligible children. The Early Years and Childcare Grant can be used to sustain existing good quality provision in danger of closure. The NNI element can be used to support new Neighbourhood Nurseries. The Standard Spending Assessment proved for early years education for four year olds.</p>		<p>Each Local Authority allocated grant annually</p>	<p>Total Early Years and Childcare Grant available for 2001-4 is 561 million pounds sterling.</p>
<p>UNITED STATES</p>	<p>Child and Adult Food program</p>	<p>Licensed child care centres, schools and family child care homes</p>	<p>Subsidizes meals</p>	<p>Must be serving low income children under 13</p>		<p>\$1.1 Billion (1999)</p>

TABLE 6
DEMAND SUBSIDIES FOR THE USE OF PRIVATE OR PUBLIC ECEC SERVICES

COUNTRY	NAME OF PROGRAM	TYPES OF CARE	ELIGIBILITY	TAKE-UP RATE	AVERAGE ASSISTANCE	ANNUAL COST	TAX RELIEF
AUSTRALIA	Child Care Benefit (Commonwealth Government)	Formal services; lower payments for registered informal services	Higher for low-income families, nearly all users of formal or registered services receive CCB (486,000 families in 2001-2)	Fee support is available to over 98% of those using formal, approved and informal/registered services	Max rate CCB for families at < \$30,806 (Aus) or on income support. Max assistance for 50 hrs/wk = \$133/\$278/\$434 per week for 1/2/3 children. (2002-3) 37% of claimants on max rate (187,106 customers). Average CCB/child is \$45.12/wk. Average cost to parents is 9% of disposable income	\$1,315B (Aus) in 2001-2	no
BELGIUM	Tax deduction				Reduce taxable income by 80% of actual costs to maximum of BF345 per day (US\$9) if employed; by up to BF11,000 (US\$299) per year if nonemployed		
DENMARK	Fritvalgordninger (free-choice schemes)	Private childcare instead of public day care	Parents are offered grants for private care of children from the age of 24 weeks until they begin a pre-school class. The child must have used or must have been given a place in a day care facility.	0-2 years: 2,790 = 1% 3-6 years: 650 = 0.2%	The local authority determines the size of grants, which must be the same for all children within the same age group. Grants may not exceed 70% of parents' documented expenses for private arrangement to max of 85% of the net cost of the cheapest place in a day care facility for this age group in this municipality.		No
CANADA	Subsidies directed at lower income families. Various names in different provinces	Licensed centre care, licensed or regulated family child care	Criteria vary. Low-income families with parents employed or in training, or child at developmental risk. Full subsidy ends at \$10,000-\$20,000 (Cdn) for one parent family (1998)	About 36% of children in regulated childcare are subsidized (2001) - excludes Quebec and all kindergartens			No

COUNTRY	NAME OF PROGRAM	TYPES OF CARE	ELIGIBILITY	TAKE-UP RATE	AVERAGE ASSISTANCE	ANNUAL COST	TAX RELIEF
	Child Expense Deduction	All types except care by family member < 21 years	Claimable by lowest earning spouse	90% -100%	Maximum claim (Cdn) \$7000 per child < 7 years, or actual expenditure; actual benefit depends on marginal tax rate, varies between approximately \$1400 and \$3500 per child; not refundable	Cdn \$401 million (2001-2)	Yes, tax relief from federal and provincial income taxes
FINLAND	Private Care Allowance	For purchase of private day care	Parents must apply. Allowance is paid directly to service provider.	Received by estimated 2% of children 0-6	Basic allowance is 117.73 Euros per child per month. Additional allowance up to 134.55 Euros per month per family according to family income.		
FRANCE	Aide a la famille pour l'emploi d'une assistante maternelle agreee	For use of registered family day care providers			Up to FF800 (US\$134) per month for a child < 3, up to FF400 (US\$67) for a child 3 - 6	U.S. \$ 83 mil in 1991	
	Allocation de garde d'enfant a domicile	For use of in-home provider			Payment of social security contribution (employee and employers' share) up to ff4,297 (\$655) annually	U.S. \$ 43 mil in 1991	
		Employed parents			Tax reduction of up to 25% of child care costs to limit of FF3,750 (US\$626) per child annually; up to 50% of costs to limit of FF45,000 (US\$7,514) annually for in-home care	U.S. \$ 155 mil in 1991	Yes
GERMANY		Private family day care services or centre services approved by local authorities	Limited number of subsidies for low-income parents				
	Tax deduction		Working lone parents; married couples only if one parent is sick or disabled				
LUXEMBOURG	Tax deduction	Costs of public or private services for children under 14			Reduce taxable income by amount of documented costs (or by undocumented costs to maximum of LF24,000 (US\$616) per child annually)		
NETHERLANDS	Tax deduction	Expenditures on licensed childcare centres above normal parental contribution	Normal parental contribution established by government, varies with income and number of parents		Deduction of a portion of the actual amount to maximum of NFL20,000 (US\$9,847) annually		
NORWAY	Tax deduction	Kindergarten and other paid care	Documented child care expenses for children < 10		Maximum deduction (for 2 or more children) E2817		Tax deduction for expenses

COUNTRY	NAME OF PROGRAM	TYPES OF CARE	ELIGIBILITY	TAKE-UP RATE	AVERAGE ASSISTANCE	ANNUAL COST	TAX RELIEF
UNITED KINGDOM	Working Families Credit and Disabled Persons Tax Credit	Registered or approved childcare (includes childminders and nurses)	years may be deducted from income of lowest earning spouse Low and middle income families	WFTC take-up rate by caseload estimated at 62-65% in 2000-1; no official estimates for childcare tax credit element	(US\$3541) annually (for 2 earner family 25000 NOK, for 1 earner 50000 NOK) Worth up to maximum of 70% of the cost of childcare up to 135 pounds sterling for one child and 200 pounds sterling for two or more children in registered or approved childcare. The rate will stay the same under the new tax credits being introduced in April 2003. The childcare element will be linked to the Working Families Tax Credit	Estimated at 300 million pounds sterling in 2001-2	WFTC and DPTC are credits against taxes otherwise payable
			Targeted subsidies through national Department of Health and local authorities' social services				
UNITED STATES	Dependent Care Tax Credit	All paid care	Working parents		Can claim expenses of \$2400 per child to max \$4800; max credit of \$720 per child (parents generally are calculated to pay 60% of child care costs)	\$1.6 Billion (U.S.) 1999	Credit against taxes otherwise payable
	Targeted subsidies through state welfare systems with federal financing through Child Care and Development Fund	Approved types of care	Families with working parents earning less than 85% of state median income		Sliding scale of fees	\$3.2 Billion (U.S.) 1999	

TABLE 7

OTHER ECEC FINANCING PROGRAMS

COUNTRY	NAME OF PROGRAM	ELIGIBILITY	CONDITIONS OF USE	AVERAGE ASSISTANCE	ANNUAL COST
AUSTRALIA	Quality Improvement and Accreditation System	Centres are required to take part in QIAS for parents to be eligible for Child Care Benefit (about 98% do)	Self-study based on NAEYC and ECERS-type quality criteria. Then evaluation by outside peer reviewer.		National Accreditation Council received \$3.4 m in 2001-2; will receive \$5.7 m in 2002-3
BELGIUM	Employers provide 0.05% of wage bill for development of services for children 0-3				
FRANCE	Employers contribute to cost of service through compulsory contributions to the Family Allowance Funds (CAF)			Employer contributions cover an estimated 25 % of cost of services in social welfare system	
ITALY	Employers contribute 0.1% of wages for social services; this may be spent on nurseries for children < 3				
NETHERLANDS	Stimulative Measure on Child Care to encourage employers to sponsor centres for younger children	Depends upon sector and employer. Estimated 65% of industrial agreements include childcare provisions.	Often paid to childcare foundation established by employers and unions to purchase childcare places from private providers.	Estimate employers now subsidize 25% of costs; employers can deduct cost of employer-provided care from taxable earnings	Typical employer contribution is 0.1% - 0.5% of payroll.
NORWAY	Cash Benefit	If caring for 1 yr old or 2 yr old child at home or purchasing care for these ages which receives no government grants		About U.S. \$400 per month (approx. equal to kindergarten subsidy per child) – about 3000 NOK/mth	
PORTUGAL	Financial support to municipalities and profit institutions for construction, renewal and material of ECEC centres	Licensed and regulated centres	Must be in an area with low ECEC provision Priority to areas at risk of social and educational exclusion, with high rates of school failure and high population density		

Notes to all tables:

>The information in these tables is the best available to the authors at the time of publication. Some of the data has been checked by government officials (Australia, Belgium, Canada, Denmark, Finland, Netherlands, Portugal, Sweden, United Kingdom). Some of the data comes from recent studies of ECEC prepared for the OECD (Czech Republic, Italy, Norway, United States). The rest comes from other sources, generally less up to date and less reliable. Even where data has been checked by government officials, fragmented responsibilities for ECEC mean that not all data has necessarily been checked. The data should therefore be regarded as giving a good general picture of the structure of ECEC policy and programs in different countries, but should not be regarded as completely accurate. In particular, information comes from different recent years for different countries, and even for different years within one country.

>Most countries also have financial benefits for families with children, delivered either as universal demogrants or as income-tested benefits, either through the tax system or otherwise. Although these benefits may assist parents who wish to stay home with their children after birth, these benefits are only included in the tables if their receipt is conditional upon taking child-rearing leave.

>ISCED Level 0 data is supplied to the OECD by Ministries of Education. ISCED Level 0 data includes only "centre or school-based programmes that are designed to meet the educational and developmental needs of children at least 3 years of age, and that have staff that are adequately trained (i.e., qualified) to provide an educational programme for the children." (OECD, 2001, p. 147)

Sources: OECD (2001a, 2002), Kamerman (2000a; 2000b), Ruhm (1998), Meyers and Gornick (2000), Ministry of Education (1998), Bergmann (1996), Friendly et al., (2002); Rostgaard and Fridberg (1998), government officials in various countries.