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Financing Early Childhood Care and Education: An International Review

Abstract

This paper provides an international review of financing systems for Early Childhood Care and Education (ECCE) across different countries. Drawing on published academic and policy literature, the review sets out a typology of financing systems for ECCE with regard to: funding sources (who provides the money for ECCE); financing mechanisms (how money for ECCE is allocated); amounts of funding (how much money is available for each child). We apply this typology to describe ECCE provision internationally. Most countries organize some public funding for early childhood education, but the amounts vary both absolutely and relative to what parents pay, as do the financing mechanisms.

Keywords

early childhood

Disciplines

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**Financing Early Childhood Care and Education:
An International Review**

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1. Introduction

This Chapter provides an international review of financing systems for Early Childhood Care and Education (ECCE) across different countries. Drawing on published academic and policy literature, the review sets out a typology of financing systems for ECCE. In reviewing education financing systems it is necessary to describe:

1. Funding sources – who provides the money for ECCE?
2. Financing mechanisms – how is money for ECCE allocated?
3. Amounts of funding – how much money is available for each child?

Below, we present the range of funding sources, financing mechanisms, and amounts of funding that are possible and feasible. Sources and mechanisms are listed in Schema 1. We then describe these for a set of countries based on geographical representation and diversity of financing systems. Most countries organize some public funding for early childhood education, but the amounts vary (both absolutely and relative to what parents pay), as do the financing mechanisms. Country-specific information is drawn from national government data, international surveys and catalogues, and data clearinghouses. This information is summarized in Table 1 (see Table Notes for sources).

Based on a comprehensive review of financing systems, it is possible to make qualitative judgements about educational equity in ECCE. Each domain is relevant for a full consideration of the equity of ECCE systems. For example, a public system may fund ECCE for at-risk children but with only very low amounts of funding per child. Thus, a system may appear equitable in one respect but less so in another. This review examines equity in relation to gender, socio-economic status, demography, and ethnicity. It is not possible to give an exhaustive analysis of the equity of the various systems that are used across the world. Instead, general features are noted and policy inferences are drawn.

2. Financing systems

2.1 Funding sources

Essentially, there are two sources of funding for ECCE: public and private (Kamerman, 2000). See column 1 of Schema 1.

Public government funding can be a major source of funds for ECCE, particularly for low income families who cannot afford to make large private contributions. Within the public sector, funding may come from central/national or state/local government or both. At the national level funding may be come from Education, Health, and Social Services Departments, depending on the extent to which ECCE provision includes developmental as well as educational services.

National governments may have more political strength to collect revenues; regional governments may be relied on more to organize delivery of programs, accommodating local conditions.

Private funds for ECCE are expenditures by households directly on the education of their own children. In some countries, private funding supplements the public funding to raise the full amount of ECCE to a desired level (typically, families will pay for more hours or longer days than are publicly funded); or, even where programs are free at point of enrollment, parents may be expected to contribute for some extra services. In other cases, family incomes may be the only way for families to choose different types of early education.

Other private sources may also be available to fund ECCE. These include donations by independent entities, such as churches, charities, or companies. Private groups may offer funds only for some inputs (e.g. facilities or capacity building) or for a restricted time period (e.g. capital grants). Private funding also comes from loans or grants by supranational agencies, such as the World Bank. (During the 1990s, the World Bank committed funds in many countries, totalling \$770 million for freestanding ECCE projects and \$600 million for integrated projects).

Public and private funding sources are interdependent (Scrivner and Wolfe, 2003). In some countries public funding is only available for those with low incomes or in deprived areas; wealthier families must make larger private contributions. Given high demand for ECCE in countries where female labor force participation rates are high, families are likely to make private efforts even where public funding is scarce. Moreover, private cost-sharing (i.e. families paying some amount towards the provision of ECCE) is often essential to ensure that public funds are deployed efficiently according to need. (Where ECCE is free, it will be over-used). In some cases, public funds are used to establish a functioning pre-school market (e.g. with inspections and codes of registration for providers); families then choose and pay within the framework of a regulated market.

2.2 Financing mechanisms

Various financing mechanisms are used to allocate public funds for ECCE (CGECCD, 2005). See column 2 of Schema 1.

Higher-level government agencies may raise revenues for ECCE as a block grant, and then either provide the service directly or give local authorities flexibility over how the grant is allocated; as well, higher-level agencies may mandate that local governments contribute matching or partial-matching funds. (Indeed, decentralization appears to be a general international trend across education financing, UNESCO, 2003). Local governments may organize so that funds are raised directly from within the local community, e.g. through donations to groups or social clubs; government agencies are in effect acting as a coordinator of services within the region.

Alternatively, funds for ECCE may be earmarked as a “Children’s Trust Fund” within government revenues, either as a proportion of total revenues or set against specific revenues (such as property taxes or ‘sin taxes’). The advantage of earmarked financing is that there is a guarantee of regular funding separate from political decisions; the disadvantage is that only earmarked funds are considered for supporting ECCE, rather than funding based on an objective evaluation of needs.

Funds may be allocated to families in the form of child care vouchers (conditional cash transfers). Vouchers are coupons that families can use to pay for services at any eligible pre-school. Where the ECCE programs emphasize child care, families may themselves receive home-based subsidies directly (Waiser, 1999). Finally, government may subsidize particular components of ECCE, such as the buildings or the curriculum; or, the government may regulate ECCE so as to ensure a minimum quality standard.

Funds may be allocated to ECCE providers which may be publicly or privately owned. Provider-types are varied, depending on the age group and the services offered; they include: pre-schools (with formal education and trained teachers); day-care centers; playgroups; pre-kindergartens (serving as a reception year for school); health clubs (e.g. for immunization and nutritional programs); nurseries/creches; and home-based care. Provision also varies in terms of the duration (full- versus part-year; full-day versus part-day).

Whereas private ownership and management may allow for a more flexible and customer-driven ECCE system, publicly run systems may ensure a more uniform quality of provision. This uniformity arises because public programs are more highly regulated and top-up fees are less common. Currently, as most government allocations are in the forms of grants, public funding implies public provision.

In addition to direct mechanisms for ECCE expenditures, there are also important policies that indirectly affect private ECCE investments. These include: prescribing income eligibility rules for public ECCE; settling the amounts of co-payments (either in absolute terms or as a sliding scale proportion of the costs of the program); and structuring parental leave policies (Waldfogel, 2001). Regarding the last of these, most countries mandate paid parental leave after childbirth (typically at around 12-20 weeks at 100% of wage replacement, SSA, 2005): this subsidy assists parents in making investments in their infants’ development. Corporations may contribute either in kind, or through financial allocations directly (e.g., the creation of a company ECCE center), or indirectly (e.g., giving workers a child care benefit as part of their wage or allowing parents paid leave to give child care). By changing the tax code, governments may encourage such contributions.

Other options may be appropriate in situations where government funds are insufficient to offer formal ECCE. (It is important to recognize that legislation may establish ECCE programs, but such legislation cannot be implemented without sufficient funding.) These include: micro-enterprise loans to child carers who will set up home-based day care; bundling of day care with other services (such as primary schooling or health centers); or use of grants and loans from supranational agencies (such as the World Bank).

2.3 Amounts of funding per child

Research evidence strongly suggests that high-quality ECCE has beneficial impacts on children's development (Belfield, 2005). However, specifying 'high-quality' in terms of inputs or program design is not straightforward, so one approach is to assume that quality is associated with adequate levels of funding per child. Where per-child funding is higher, quality is also assumed to be better.

Calculating the public and private investments in ECCE is very problematic. First, ECCE systems vary as to how many children are served and whether the goal is universal coverage or ECCE targeted according to income, region, or need. (And some children will be enrolled in more than one program). In addition, many systems distinguish between child care, nutrition, and health programs for those aged 0-3 versus educational programs for 4-6 year olds (pre-schoolers). Inevitably, governments face a trade-off between investing intensively per child in targeted programs versus investing extensively per age cohort in universal programs; countries with low per-child expenditures but universal coverage may in fact be investing more than countries with high per-child expenditures but targeted coverage.

Aggregate government data should also be viewed with caution because local agencies may disburse funds received from national government budgets. This raises the danger of double-counting resource amounts and of attributing to local governments more fiscal autonomy than in fact exists. Also, child development assistance may include some support for mothers; because this is often allocated through Health ministries as a component of a general health program it may not be possible to separate out the ECCE expenditure.

Second, all countries allow for some private ECCE provision, either home-based or center-based by families themselves or as donations by non-governmental entities (companies, churches, or charities). Simply, the true opportunity cost of private family investments cannot be known accurately: it is difficult – if not impossible – to calculate the value of the time that families spend out of the labor market in caring for their children; this time is not an expenditure paid to anyone and is not easily 'priced'. Donations too may be hard to value: churches may rent out space at below market rates or contribute time without pay; and companies may offer 'free'

child care along with lower wages. Most national accounts do not adequately assess these amounts.

Therefore, because the total of private investment is not clearly known, calculating the ratio of private versus public investments in ECCE must be performed extremely cautiously. Ratios of ECCE spending to primary school spending or to GDP may be more informative about the public commitment to ECCE than are absolute funding amounts (assuming no errors in measuring public expenditures). Also, cross-country comparisons must be sensitive to nuances. Measuring overall commitment to ECCE requires a multi-faceted approach: in some countries ECCE may be heavily market-oriented, in others it is the responsibility of the private family at home, and in others it is a state responsibility; it may not be possible to say which invests the most. Countries define ECCE differently (with respect to day care, for example). Purchasing power varies across countries, as does the opportunity cost of parents' time.

Thus, a range of financial data is presented here. Enrollment data are also reported: where it is not possible to get accurate financial information, ECCE funding may be inferred from reported enrollment rates in public institutions.

3. Country case studies

3.1 Brazil

Brazil has three layers of government – federal, state, and municipality – but ‘basic education’ up to secondary level is the responsibility of states and municipalities (Schady, 2005). Public investments in ECCE are made through the Ministry of Education (with other contributions from the Ministries of Health, and Social Assistance). Funding for basic education is earmarked as 25% of the state’s net tax revenues and 25% of the municipality’s net tax revenues (and 18% of federal revenues). However, because the earmarked funding is to be applied to all education, and primary and secondary education is mandatory, there is no specific commitment for ECCE.

In total, public expenditure on ECCE is approximately 0.4% of GDP, with a gross enrollment rate in pre-primary education of 57% by age 5-6 (UNESCO, 2003). Although this is a relatively high percentage given absolute per capita GDP in Brazil, approximately one-third of ECCE enrollments are in the private sector. (Federal agencies have established curriculum requirements). At younger ages (0-3), enrollment levels in day care centers are relatively low, such that per pupil expenditures are high for those enrolled: at approximately \$1,000, this is greater than per-pupil primary school expenditures. (Again, privately-funded provision is more common for day care). Provision also varies with location: in the poorer northern regions of Brazil, pre-school rates are considerably below those of the wealthier southern regions because

funding is lower. Another inequity is the very high public spending on higher education relative to spending on pre-primary education.

3.2 China

In China, ECCE is divided such that kindergartens for children aged 3-6 are the responsibility of the Ministry of Education and nurseries for children under age 3 are the responsibility of the Ministry of Health (Wong and Pang, 2002). The national Ministry of Education is responsible for the development and implementation of policy and regulations of kindergartens and early education more broadly. However, ECCE is administered, organized, and funded primarily within local settings. With some public funding, and state guidelines and regulations, private providers operate nurseries and kindergartens. (Spending on pre-primary enrollees is approximately one-third of the amount spent on primary school enrollees.) In general, non-state entities are charged with the responsibility of providing ECCE and of obtaining funds from all sources. In some provinces, pre-primary provision may be attached to primary school provision, with some sharing of facilities.

Parents are expected to contribute significantly for ECCE, with tax exemptions to encourage such investments. Private funding from international aid agencies has been targeted at disadvantaged, rural areas, as well as areas with minority populations; ECCE within these settings is less formal.

Recent data indicate that fewer than 1 in 5 children aged 3-6 attend kindergarten, with double the rate in urban areas over rural areas. (The gross pre-primary enrollment rate is estimated at 36%, UNESCO, 2003). Given the reliance on local agencies, the availability and quality of ECCE varies considerably across regions in China.

3.3 Cuba

Public ECCE programs in Cuba offer universal provision at age 5, with infant care from six months. The state provides free childcare for working mothers, and approximately 18% of children are enrolled; other children are cared for in private homes. With public, free provision, enrollment rates are high. No private provision is admitted.

3.4 Egypt

Government support for ECCE in Egypt has been relatively recent, beginning with construction of facilities and capacity building at the national level in the 1990s. Most nurseries are run either as non-governmental agencies or privately, although the Ministry of Insurance and Social Affairs plays a supervisory role. A national curriculum has also been developed by the central government.

The gross pre-primary enrollment rate is very low, at 14%; and approximately half of these enrollees are in private programs (often paid for by religious groups or employers). However, this rate is considerably above the rate in 1990, indicating a substantial increase in resources for ECCE in Egypt. In part, this growth has been with international agencies on public projects. By 2001, expenditures per child per year were \$300, with approximately 25% being paid directly by parents.

3.5 France

Funding for ECCE in France is primarily the responsibility of the national government, which finances the instructional component of ECCE (i.e., the teachers, Neuman and Peer, 2002). Local governments must provide support for facilities, administration, and other services.

Coverage is extensive. There is universal access for 3-5 year olds, although class sizes are relatively large (above 20). Also, funding is targeted according to need, with greater funding allocated to areas of regional deprivation. This funding may be used for more intensive ECCE or for ECCE offered to younger children (aged 2). *Creches* (for children aged 0-36 months) are open full-day, full-year; they are regulated through the national Ministry for Social Affairs. *Ecoles maternelle* (for children aged 2-5 years) are open during term times and are regulated by the national Ministry of Education. Funding is for 6 hours per day; additional services are extra. Funding amounts were estimated at \$4,500 per enrollee in 2002. As of 1998, public ECCE expenditures amounted to 0.66% of GDP, a proportion considerably above most OECD countries (UNESCO, 2003).

There are some parental co-payments. For infant-toddler services outside the education system, parents pay based on national guidelines with rates that vary according to family income: the amount ranges up to 12-15%, depending on the number of children (Meyers and Gornick, 2000, Table 2). Subsidies for the purchase of private care are available: parents using registered family day carers may claim up to \$160 per month at ages 0-3; up to \$100 per month at ages 3-6; and for social security contributions for in-home providers up to \$800. Employers contribute to the cost of service through compulsory payments into the Family Allowance Funds; these contributions cover approximately 25% of the costs. There are tax reductions for employed parents of up to 25% of child care costs (max \$800 per child per year) and 50% of costs for in-home care (up to \$12,000). Parents must also pay for supplemental services, with co-payments based on a sliding income scale. Tax subsidies are also available to encourage private providers of ECCE.

The burden of ECCE expenditures is shared. The national government pays about 25% of the child care expenditures. The state about one-third, and local governments about one-

eighth; employers pay around 25% and families 23-28%. For pre-primary, the national government pays a larger proportion of total expenditures.

3.6 Germany

In Germany, ECCE is split in varying extents between state and local governments. *Krippe* (for children aged 0-36 months) are open full hours through the year; they are funded through the local authorities. Kindergarten (for children aged 3-5 years) are open mainly during term times; they are funded by the *Laender* and the Ministries of Social Affairs and Education. Coverage is broadly comprehensive, with most children in public school by age 5. As of 1998, public ECCE expenditures amounted to 0.36% of GDP (UNESCO, 2003), with funding per enrollee at around \$5,000 by 2002.

There are parental copayments. These vary by *Laender* but cover 15-30% of costs. They also vary according to income, number of children and type of care, but do not exceed \$350 per year. There are some subsidies for low-income families who use private family day care services; these subsidies are paid directly to the day carer or center. There are also tax deductions available for working lone parents and for married couples if one parent is sick/disabled.

The burden of funding falls mainly on the state; parental copays are generally less than one-fifth of the total formal child care. For pre-school, state governments pay 40% and local governments pay 60% of the public expenditures.

3.7 India

ECCE in India is primarily the responsibility of the national government, with funding for supplemental services paid for at the local level. The centrally-funded Integrated Child Development Services Programme (ICDS) provides an integrated package of health, nutrition, and early education services to children up to six years of age from low income and rural households. Targeted at children aged 3 to 6, it currently covers approximately 20% of the population, funded at \$10-\$22 per child per year (with other ECE centers, creches, day-care centers, and pre-primary schools, UNESCO, 2004).

The Indian ECCE system includes private cost-sharing, with direct parent fees for public programs (Kammerman, 2005). Thus, many families must rely on the private market for ECCE provision (either subsidised or at full fee). However, India has received World Bank support: over the period 1991-98, the World Bank committed \$396 million in bank credits/loans for the ICDS programme. Private funding is also being obtained to integrate pre-primary and primary services.

Coverage is targeted according to geographical impoverishment, but the ICDS programme still has uneven provision across regions and spending is a fraction of that for primary

education. Contributing to equity, the policy is directed at expanding coverage rather than ensuring high quality, but some regions (Bihar and Uttar Pradesh) still have very low rates of provision.

3.8 Indonesia

In Indonesia, ECCE is a family responsibility and is not part of the formal education system. Some small amounts of resource are contributed by several government ministries (Religious Affairs, Education). These fund (privately-operated) child care centers, particularly in urban areas and for younger children (aged 0-3), with some programs for preschoolers aged 5-6. In addition, the government sponsors an ECCE Forum and Consortium, to develop policies and protocols for ECCE.

Thus, the burden of funding for pre-school falls almost entirely on private families. Public contributions are estimated at <\$100, or 5% of the total amount of funding. (Also, there is no formal mandate for parental leave at childbirth, SSA, 2005). Correspondingly, the gross pre-primary enrollment rate is very low, at 19% (UNESCO, 2004); almost all of these enrollees are in private pre-schools. The starting age for compulsory schooling is also late, at age seven.

3.9 Kenya

Kenya relies mainly on private systems for ECCE (see Pence, 2004). Total Government of Kenya expenditures for ECCE are less than \$1 per child (less than 2% of the expenditure per child in primary schooling in Kenya). There is only limited government monitoring of ECCE and no formal linkages between pre-schooling and primary education. However, the training of caregivers (along with curriculum support and information services) is funded at the central government level. Local districts and communities provide the physical sites for preschool programs and perform managerial tasks. District public funds are used to fund program officers to train ECCE teachers and to develop the ECCE curriculum.

Families are the primary payees for ECCE, contributing largely to paying the salaries of the ECCE teachers. Families either use informal care or privately-owned nurseries. Their expenditures are estimated at \$10 per child per year, about 50% below estimates of the cost for quality ECCE. Local communities may collectively organize services in kind, providing land and facilities for example. Although there are no employer-provided services for ECCE in Kenya, there are funds from private agencies. Over the period 1997-2003, Kenya received \$28 million in World Bank funding (with funding from UNICEF in the 1980s).

Coverage is extremely variable and largely dependent on family income or community involvement; it is estimated that around 40%-50% of children have access to some ECCE provision (<http://www.education.go.ke/Statistics/ECDNationalGER.htm>). However, access for

low-income groups is poor; provision is under-funded; and there is little regulation or monitoring of ECCE (see Choi, 2005).

3.10 Korea

ECCE in Korea is predominantly provided by private institutions and parents are expected to fund the full cost of provision (UNESCO, 2000). Companies also contribute funds (but there is no formal mandate for paid parental leave at childbirth, SSA, 2005). About half (45%) of children attend kindergartens and large numbers attend private tutoring agencies, often on a full-day schedule. However, the central government has encouraged an independent private market. This market is high quality, based on the education credentials of the teachers.

Where available, central government funding from the Ministry of Education has been targeted at providing kindergartens in rural areas, but direct parental fees for public provision are applied (Kamerman, 2005). In addition, state support is funded through the activities of the Ministry of Health and Welfare, particularly for 3-5 year-olds. As of 2003, public ECCE expenditures amounted to 0.13% of GDP, a proportion significantly below most OECD countries (UNESCO, 2003). But, given social expectations and some public support, the gross pre-primary enrollment rate is 32% for ages 3-5, rising significantly for those aged 5.

3.11 Mexico

ECCE in Mexico is considered part of mandatory basic education at ages 3-5, leading to primary school. In 2002, 20% of 3 year olds, 63% of 4 year olds, and 81% of 5 year olds were enrolled for an overall country average of 56%. Many of these are half-day programs, with separate morning and afternoon shifts.

The burden of financing for ECCE in Mexico is shared across public agencies – including different government ministries – and private entities. The funds for preschool education come mainly from the national budget but are supplemented by other agencies, the states, municipalities and parent fees or contributions. The federal government provides resources to state governments and the state and local governments share in the funding of the programs.

In Mexico, only one in ten enrollees was in a private pre-school. But families must also pay for some of the public pre-school provision they receive. As of 1998, public ECCE expenditures were 0.32% of GDP (UNESCO, 2003) and expenditures per enrollee were \$1,600 by 2002.

As well, innovative, but small-scale, programs have been implemented to increase enrollment rates. Mexico's Oportunidades (PROGRESA) program involves large cash transfers (approximately 20-35% of household income) for children to be in school (Schultz, 2004). Other funding for pre-school has come from the World Bank and the Inter-American Development

Bank. Over the period 1993-96, the World Bank committed \$80 million in Mexico for an Initial Education Project, and an additional \$94 million in 2001-07.

3.12 Poland

As one of the former communist countries, Poland has followed the general trend of decentralization of government, along with an increased reliance on families to pay for ECCE (Rostgaard, 2004). The state has set up a 'minimum curriculum' for pre-school for those aged 3-6 to ensure standards.

In the late 1990s, local self-governments and communes (*gminy*) became responsible for pre-schooling. By 1998, public ECCE expenditures amounted to 0.52% of GDP (UNESCO, 2003). Pre-school is not heavily subsidized, but day care is; state expenditures are therefore relatively high, at \$2,691 per enrollee. In Poland by 1997, 5% of the age cohort are in nurseries and 48% in kindergartens, with a total gross pre-primary enrollment rate of 51%. The starting age for compulsory schooling is also late, at age seven. (Legislation introduced in 2004 stipulates a new zero grade at age 6). However, as the country adjusted to a market economy and with a changing demography, pre-school enrollments trended downward in the early 1990s. Differences across areas also developed: enrollment rates in urban areas are approximately 1.8 times higher than in rural areas.

3.13 Russian Federation

ECCE in Russia has followed most closely the Nordic model of full-time, heavily subsidized programs with the dual goal of supporting working parents and promoting child development (Rostaard, 2004). With low parental payments for infant development programmes, enrollment rates are high: as of 1997, 65% of children were in kindergarten and 20% were in nurseries (of various types). In addition, maternal leave policies have been influential for ECCE for children under 3: this has reduced the pressure on public provision.

3.14 Senegal

Funding and organization of ECCE in Senegal is coordinated as part of the Ministry of Family and Early Childhood (Rayna, 2003). A formal pre-school system is relatively recent, and less than 3% of children were receiving pre-schooling in this sector, which was composed of public nursery schools and private day care centers. The Ministry budget in 2002 was \$5.6 million, with the majority of this funding allocated to staffing for central services to regulate, train, build capacity, and inspect the pre-school centers. However, \$1.8 million is allocated to physical facilities in rural areas.

Private ECCE has two spheres: one is private formal pre-schooling, which is limited to wealthier families in urban areas who can afford the fees; the other is private religious pre-

schooling, which is low cost for families because it is subsidized by the church. Rayna (2003) lists several NGO-funded initiatives to improve childcare in Senegal by direct provision of community and day-care centers. Other local ECCE provision is organized informally. However, these initiatives do not offer comprehensive care to children.

3.15 South Africa

Funding of ECCE in South Africa is largely through a private market (Kamerma, 2005). This market may include: independent reception years (e.g. at the local public school); nursery programs; day care; and home-based provision.

There are considerable differences across ethnic groups in enrollment rates (Statistics SA, 2005). The overall pre-primary gross enrollment rate is 32%, but whereas the rates for whites at ages 2, 3, and 4 are 31%, 46%, and 59%, the respective rates for black Africans are 11%, 18%, and 28%. The disparities are greater for other ethnic groups (e.g. Indians).

3.16 Sweden

Funding for ECCE in Sweden is primarily the responsibility of the local municipality, which funds ECCE primarily from income taxes (Gunnarsson et al., 1999). The municipalities also receive block and equalization grants from the national government, with oversight by the National Ministry of Education and Science. Amounts of funding per child are high: Sweden spends around \$4,100-\$5,200 on services and subsidies for ECCE with programs covering the full working day. There are no subsidies for private care, no employer contributions, and there is no opportunity for tax relief against child care expenses. However, funds may be used for local authorities to contract with private providers. As of 1998, public ECCE expenditures amounted to 0.59% of GDP, a proportion considerably above most OECD countries (UNESCO, 2003).

Parents do pay some fees, but these are quite low at around 1-3% of family income and cover less than 20% of the operating costs of the ECCE programs (approximately, the parental contribution is \$170 per year for the first child). The formulas for fees are set by the local authorities. (Some mothers – those who are employed or are students – are guaranteed ECCE placements; unemployed parents are guaranteed part-time provision).

Therefore, the burden of funding falls mainly on the local government: approximately 55% paid by local government, 35% by the national government, with 10% coming from other sources. In most cases the government funds cover a large proportion of the total costs of ECCE; for 4-5 year olds, government offers full funding for part-day participation. Consequently, enrollments are very high, even for those aged under 3. Finally, although ECCE programs are integrated into the school system, there is considerable variation across municipalities in the components of the programs.

3.17 Turkey

ECCE in Turkey includes pre-schools, child care centers, and program services, such as the Mother-Child Education Programs which are aimed at improving maternal care of children (OECD, 2000). Some children may access pre-schooling through a reception year at the public school. (This may be subsidized, in that it uses public school facilities).

As of 1998, public ECCE expenditures amounted to 0.01% of GDP, a proportion much below the OECD average (UNESCO, 2003). As a result, publicly-funded pre-school enrollments in Turkey are low, estimated at 8%; and private enrollment rates at private institutions are significant, estimated at 47% of the age cohort.

3.18 USA

The ECCE system in the United States has significant federal and state/local components (Witte and Trowbridge, 2004; OECD, 2004).

The federal components are Head Start and the Child Care Development Fund. Head Start is a direct grant for comprehensive child development services part-day and part-year for 3-5 year olds with incomes below the federal poverty line. States must contribute a matching 20% amount (some contribute more). Per-child, annual Head Start funding is \$7,200 (2004 dollars). The Child Care Development Fund is a voucher program allocated as a direct block grant to states. States may allocate funds flexibly, but parents are given vouchers to purchase child care from licensed private providers (or, in approximately one-quarter of cases, from less formal sources such as family members). In total, government expenditures amount to \$13-\$15 billion annually, but this covers children from ages birth to 6. As of a proportion of GDP, public ECCE expenditures are below 0.4% of GDP (UNESCO, 2003).

At the state level, pre-K programs help disadvantaged four year olds to prepare for school (only three states run universally accessible programs). Most funds are allocated through the public school system, but some private providers operate. There are a variety of state-level funding sources. States use tax revenue from either general funds, sales taxes, and excise taxes. Most states fund pre-K as a line item in state budgets, or education budgets, or as part of the state aid formula. Other states earmark taxes – such as ‘sin taxes’ on alcohol, tobacco, or gambling – for ECCE. Local districts with independent taxing authority may impose additional property or sales taxes. Some states impose child care fees and co-payments, but these are not a major source of funds. Some states collaborate with private agencies (including for-profit providers) to provide childcare. Others encourage businesses to subsidize child care for their workers. Families may also claim non-refundable tax credits of \$1,000 per child.

The burden of funding for ECCE in the US falls mainly with families: Barnett and Masse (OECD, 2004) estimate that families pay 60%, the federal government 25%, and states contribute 15% as of 1999 (in addition, philanthropies contribute perhaps another 1%-5%). However, state funding has grown since 2000.

Publicly funded ECCE in the US is targeted to disadvantaged children, but public expenditures fall short of providing full-day, full-year programs and standards are not fully enforced. The federal Head Start program has never been funded sufficiently to serve all children, and poorer counties often receive lower levels of Head Start funding. In terms of child care, there is variation in income eligibility and parental co-payments. Also, wealthier families are more like to use the dependent care tax credit; the credit is not refundable for those who do not pay taxes.

3.19 Viet Nam

ECCE in Viet Nam is primarily a family endeavor, but with growing support from the state. Many young children in Viet Nam are cared for within the family. Private providers cover approximately 8% of the population, but they are typically too expensive for most families.

There are state-run childcare services (for children aged 0-3), kindergartens and parent education programmes (De los Angeles Bantista, 2004). However, some of these programs are only partly subsidized by the state. Government funding for ECCE is mandated to be 10% of the national budget for education, but financial constraints have prevented most provinces from reaching that threshold. Government agencies are also charged with developing programs and standards for ECCE. Separately, health ministries are responsible for immunization and nutritional programs.

There is also a strong community-run system of day-care and kindergarten. At the community level, NGOs play an important role in building the capacity for ECCE, as well as in training ECCE teachers; these providers may be better resourced than the state-run kindergartens.

4. Equity in ECCE

The equity of ECCE systems is a function of who enrolls in ECCE and what the quality of that program is. Given the variation in financing ECCE across countries, it is likely that some financing mechanisms will be more equitable than others. On one definition, ECCE systems are equitable if they give all children equal opportunities (e.g. by gender, ethnicity); a stronger definition would require more ECCE resources allocated to low-income children (or a correlate, children in disadvantaged regions).

Based on review of data from 12 countries, there is no reported evidence of a gender disparity in ECCE enrollments. However, there are differences across regions and socio-

economic status (and a correlate, ethnicity): more rural areas and families with lower economic security are less likely to be enrolled in ECCE. In part, this reflects the absence of supply: ECCE is less available in rural areas, and it may be of lower quality. This is the case even for some of the public programs, because high-income areas can raise more government funds (and some public programs require top-up fees, precluding enrollment by low income families). However, governments are seeking to target programs to rural or low-income areas (e.g. in west China, co-funded by the Ministry of Education and UNICEF). These targeted programs should make the system more equitable.

It is likely that purely private systems have greater inequities in provision (even if private systems are more efficient). These disparities reflect both supply and demand issues. For low-income families, there is unlikely to be a supply of private programs, because these are beyond the purchasing power of many families; and in rural areas the sparse population may make provision more expensive (even where, as in Korea, there is a strong social expectation of pre-schooling). Demand may be high across all parents, but families may not have the information to choose the best type of provision. Government financing of a regulatory framework on which providers are most effective and on how parents can choose between them should improve equity.

These conclusions have several implications for ECCE programs.

First, public programs can offset (private) inequities in ECCE, but these need to be targeted to, weighted in favor of, or means-tested for disadvantaged families. However, the extent of funding to compensate for inequities may be considerable.

Second, higher amounts of funding are likely to be more beneficial, but these may be inequitable if resources are concentrated for only a proportion of the age cohort. Even with targeted programs, there will be equity implications if targeting is inefficient.

Third, state funds may be used to generate standards for teacher training, curricula, and other program inputs and to monitor providers; this will help to ensure that, even when parents are privately paying for ECCE, there are guarantees as to the quality of provision.

Fourth, a full assessment of the equity of ECCE programs must take account of where funds are sourced from: for example, federal funds – levied on all taxpayers – may be used to subsidize provision in urban areas. Imposing a tax on families to ensure that pre-schooling is “affordable” is not a satisfactory solution.

5. Conclusion

The above review shows a wide variety of financing systems and funding levels for ECCE. Country case studies can be related to Schema 1. An example of a country that draws on

supranational public funds is India; a country where private family financing is dominant, Korea; where community groups play a strong role, Kenya; a country with a national framework, France; and a country with strong regional systems, Sweden. Thus, it is hard to evaluate these systems according to a simple scale.

Nevertheless, a few principles for any ECCE financing system may be considered (for a longer list, see Gomby et al., 1996). First, *there should be opportunities for parental choice and private payments across ECCE providers, including home provision*. Given the different preferences and circumstances of families, parental choice may enhance the effectiveness of the ECCE system. Also, choice will stimulate competition between providers, encouraging them to improve quality. Second, *the financing system should be simple in terms administration and access*. Funding for child care should fit with funding for early education. Families should not have to choose between the two; and administration and bureaucracy should not be duplicated. Tax and subsidy policies should be coherent in encouraging families to take up ECCE. Funding streams should be consolidated across the levels of government. Third, *the financing system should include regulations to ensure quality and these regulations should be enforced*. Because in almost all countries some ECCE funds are public, government agencies must monitor the quality of provision: families should be given information on providers; and low quality providers must be closed.

These principles may help because there is limited evidence on the optimal amount to invest in ECCE or which particular inputs should be purchased to raise ECCE quality. In fact, the optimal amount of ECCE spending will vary across countries depending on several economic indicators. For example, where female labor market participation rates are high, the demand for ECCE will be higher. Demographics also play a role: in former communist countries (and China), for example, falling fertility has meant that ECCE funds now cover more children. The characteristics of the primary school system, including the school start age, will also matter.

The motivation to fund (or not fund) ECCE has been described as ‘political’, but there is considerable economic evidence that public funding of ECCE yields high social returns and that – regardless of political persuasion – it is an efficient investment. In most countries, additional funding should generate strong fiscal benefits, (almost) regardless of the current level of expenditure. Moreover, given the high rates of private ECCE enrollments by higher-income families, most allocations of additional public funding would reduce inequities across socio-economic status, race and locality.

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Schema 1. Funding Sources and Financing Mechanisms for ECCE

Funding Sources		Financing Mechanisms	
Public:	Supranational National State/local	Direct:	Block grant Earmarked against specific revenues Matching funds from public/private agencies Vouchers to providers or families Direct subsidy of capital facilities; curriculum development; or quality assurance systems
		Indirect:	Sliding scale subsidies to parents Top-up fee eligibility Tax credits Parental leave policies
Private:	Families Community groups Churches / employers	Direct:	Payments to providers
		Indirect:	Lower wages Donations to church Time

Table 1. Annual Expenditure Per Student (2002-03)

	Pre-primary school expenditures^[1]	Ratio pre-primary / primary expenditure	Pre-primary gross enrollment rate^[2]
Brazil	\$ 965	1.15	57%
China	..	..	36%
Cuba	..	..	100%+
Egypt	..	..	14%
France	\$ 4,512	0.90	100%+
Germany	\$ 4,999	1.10	100%+
India	\$ 79	0.20	34%
Indonesia	\$ 64	0.58	21%
Kenya	..	..	48%
Korea	\$ 2,497	0.70	83%
Mexico	\$ 1,643	1.12	81%
Poland	\$ 2,691	1.04	51%
Russian Federation	\$ 1,092	..	98%
Senegal	..	..	3%
South Africa	..	..	32%
Sweden	\$ 4,107	0.57	81%
Turkey	..	..	8%
United States	\$ 7,881	0.98	58%
Viet Nam	..	..	~50%

Sources: www.oecd.org/dataoecd/2/12/35286348.xls; www.uis.unesco.org/TEMPLATE/html/Exceltables/education/gerner_preprimary.xls; www.childpolicyintl.org; www.oecd.org.

Notes: [1] In equivalent US dollars converted using PPPs for GDP, by level of education, based on full-time equivalents. [2] Gross enrollment rates may exceed 100%.