

Putting Child Care in the Regional Economy: Empirical and Conceptual Challenges and Economic Development Prospects

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In the past four years, more than fifty states and localities have formed teams that have attempted to measure the economic importance of child care from a regional perspective, from a labor mobilization perspective, and from a human development perspective. Conceptual and empirical problems abound. Data to measure these economic effects are inadequate, in part because data systems were not designed to count care work. Conceptually, the fit with economic models is awkward. This suggests the need for new regional economic paradigms and new data systems. Recognizing the child care system as an underdeveloped market also offers the potential for new approaches to economic development policy, if the conceptual and methodological challenges can be overcome.

Keywords: child care, economic development, regional economic impact

Traditionally, child care has been thought of from an education or welfare perspective. This is primarily because public funding for early care and education¹ has been limited to programs focused at the preschool level (Head Start or pre-kindergarten) and targeted to poor children (subsidies for low income parents). An interesting shift has happened in the last few years as the early care and education field has begun to measure its importance for families and the broader economy. Since 2000, fifty-eight states and localities have completed regional economic analyses of their child care sector, and thirteen more studies are in progress. This paper presents a review of these studies and shows how they illustrate fundamental conceptual and methodological problems with how regional economists handle care sectors and their role in the regional economy.

Child care is an interesting and unique sector because of its multifaceted role in the regional economy. First, it can be conceived as an economic sector in its own right with establishments, employees, and linkage to other sectors. Second, it plays a critical social infrastructure support role in the regional economy by enabling parents to work. Third, it has a long term economic impact by supporting the human development of children—the next generation of workers. Although the state and local studies primarily focus on measuring child care as a sector in its own right, they also address the parents' and children's effects and try to integrate them into a broader community development perspective.

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Table 1. Recently Completed State and Local Studies on the Economic Impact of the Child Care Sector

2000	
Tompkins County, New York	
2001	
San Mateo County, California	State of California
2002	
Butte County, California	State of Vermont
United States	Mariposa County, California
Sonoma County, California	Orange County, California
Santa Clara County, California	Alameda County, California
Milwaukee, Wisconsin	
2003	
State of Texas	State of Maine
State of Mississippi	State of Rhode Island
State of Florida	State of Kansas
State of Minnesota	Rowan County, North Carolina
State of New York	Contra Costa County, California
Boulder County, Colorado	Monterey, California
Larimer County, Colorado	Merced County, California
Minneapolis, Minnesota	Solano County, California
2004	
Shelby County, Tennessee	Winnipeg, Canada
State of Colorado	State of Connecticut
State of Virginia	State of North Carolina
New York City, New York	Jefferson & Hardin Counties, Kentucky
Chemung County, New York	State of Arizona
State of South Dakota	Long Island, New York
State of Ohio	State of Oklahoma
State of Washington	State of Massachusetts
State of North Dakota	
2005	
State of West Virginia	State of Oregon
Riverside County, California	State of Hawaii
State of Missouri	State of Louisiana
Monroe County, New York	Middlesex County, New Jersey
Central New Hampshire	State of Illinois
State of Iowa	
2006	
State of New Jersey	San Francisco, California

Source: Cornell Linking Economic Development and Child Care project. Pdf files for all studies are available at <http://economicdevelopment.cce.cornell.edu>

This paper lays out some of the key empirical and conceptual challenges these state and local teams have faced as they have tried to articulate the economic importance of the early care and education sector in the regional economy. These studies primarily focus on measuring the size of the sector and its place in the regional economy. There is no economic model that considers all three elements of the economic importance of the early care and education sector simultaneously, but these studies have taken a first step in calculating the size of the sector, its linkages to other industries, and in attempting to integrate parent and child effects with the regional focus.

These studies have contributed to framing child care as part of the regional economy. This allows recognition that some of the problems of the sector are challenges of an underdeveloped market that can be addressed with economic development policy tools. This new economic development framing creates a new opportunity for community developers to integrate attention to social welfare in regional economic modeling and economic development planning by considering it as a social infrastructure for economic development.

Cornell's Linking Economic Development and Child Care project has been tracking all the state and local studies of the regional economic impact of child care for the last several years. Their authors and hotlinks to the reports are found on the project Website, <http://economicdevelopment.cce.cornell.edu>, and described in Table 1. These studies are typically spearheaded by state child care administrators and child care resource and referral networks. Policy advocates, economic developers, and business leaders typically form part of the study teams. Often a university economist or economic consultant is retained to help with the analysis. We developed a database of nationally available data on the sector to compare with the values found by the state and local teams who more typically relied on state administrative data and surveys. We also provided technical assistance to many of the teams and conducted thirty-one in-depth interviews with study leaders to discuss data and conceptual problems encountered in the study process. In this paper, we present an analysis of the data measurement and conceptual problems faced by these study teams. We conclude with a discussion of policy options that arise from this economic development frame and opportunities this new frame presents for community developers.

METHODOLOGICAL AND CONCEPTUAL CHALLENGES ILLUSTRATED BY THE STATE AND LOCAL STUDIES

Measurement and Data Challenges

The first step in a regional economic analysis is to measure the size of the early care and education (ECE) sector. In order to provide a better understanding of the importance of the sector in the regional economy, teams typically measure number of establishments, size of labor force, gross receipts, and number of children and parents served. This section describes how these teams measure these basic components of sector size, highlighting common approaches, illustrating discrepancies across data sources, and describing some unique solutions tried by some of the teams.

Each of the state teams has found basic data of the size of the ECE sector to be a difficult and time consuming task. The difficulty stems from multiple sources: 1) the complex nature of the sector, which includes a mixture of public, private for-profit and non-profit providers in a variety of settings—homes, schools, churches and community-based organizations; 2) the predominance of small (typically self-employed) providers who are undercounted in establishment-based Economic Census data, 3) the focus of government data systems on children and providers covered by their funding streams, leaving the majority of privately paid care uncounted, 4) the large number of informal providers not counted in either the

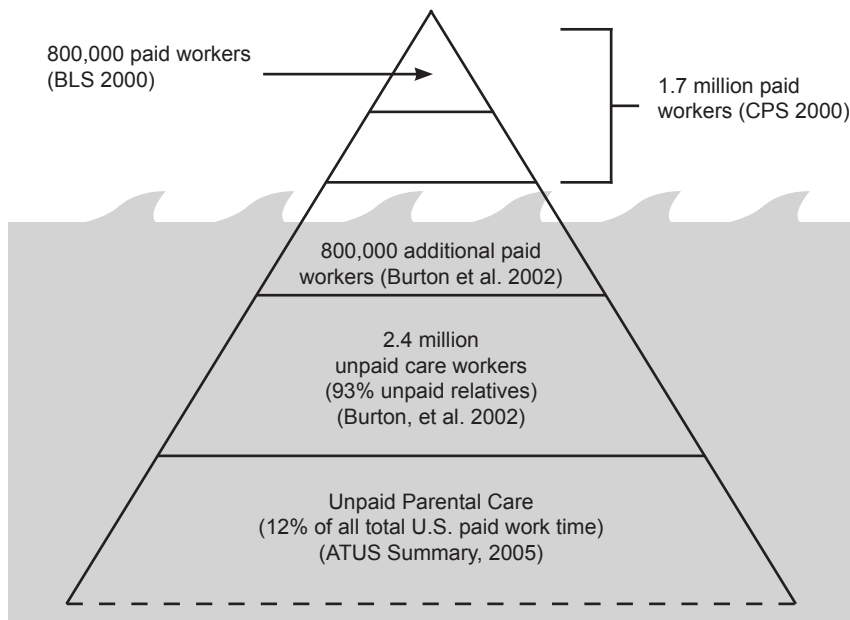
Economic Census or government licensing systems, 5) the difficulty presented by non-market care work when using transaction-based data in national income accounts (an issue further addressed by Folbre, 2006), and 6) gender bias in economic conceptions of value as regards some aspects of care work.

How do these state teams go about the difficult task of measuring the basic size of the sector given the wide differences in numbers that purportedly measure the same sector? Should all workers be counted or just those in the formal regulated sector? What about informal providers and unpaid family members? Should all children be counted or just those served by government programs? Should estimates of gross receipts include those portions of the ECE sector that are government sponsored, such as pre-kindergarten?

I liken the child care sector to an iceberg—most of it lies below the water line. Standard economic census data based on establishment reports undercount sectors dominated by many small providers. This undercount explains the large discrepancy between Bureau of Labor Statistics data (based largely on unemployment insurance data from Covered Employment and Workers) and the Current Population Survey estimates that are based on household employment reports. See Figure 1.

Below the formal child care component lies the unknown amount of paid family, friend, and neighbor care that is part of the informal economy. And the foundation of it all is unpaid family, friend, and neighbor care—part of the non-market referenced by Folbre (2006) as so important. Census data and the state studies measure the size of the sector from the supply side. A recent study used a demand-based approach, building from parent child care usage reports from the National Household Education Survey (NHES-99), to estimate the size of the child care workforce including unpaid non-parental care (Burton et al., 2002).² They estimated 2.5 million paid workers as compared to 800,000 in BLS, and 4.9 million if unpaid relative care was included. They did not estimate unpaid parental care, but a preliminary summary of 2005 American Time Use Survey data indicates that the total U.S. hours of unpaid parental child care may be as large in size as 12% of total U.S. paid work time.

Figure 1. Counting Child Care Workers: Most of the Iceberg Lies below the Water Line



Based in part on Burton, et al. 2002, and ATUS 2005.

The state and local studies have typically restricted themselves to measuring the formal, regulated portions of the child care sector (the part above the waterline). But even this tip of the iceberg is much larger than standard economic data suggest. Clearly, data systems that are more comprehensive are needed to measure the size of the child care sector adequately.

Size of Labor Force and Number of Establishments

State teams typically triangulate data from several different sources to try to capture a more complete picture of the child care sector. State licensing data provide a useful source of information on number of regulated establishments, legal capacity of children, and staffing ratios. Interestingly, none of the state study teams has been content to rely on Census data, which undercounts the size of the sector. Census data do not capture many home-based child care providers who are not covered by Unemployment Insurance—a key source for the Covered Employment and Workers data. Typically, state teams focus on the regulated portions of the sector that can be counted in state licensing data and find between 20% and 300% more employees than reported in County Business Patterns depending on the coverage of state administrative data. For example, the New York study found a total of 22,000 providers representing 119,000 workers (Warner et al., 2004a). By contrast, County Business Patterns reports only 3,900 employers and 53,000 workers. Similarly in Kansas, the County Business Patterns reported 700 providers with 6,600 workers as compared to state licensing data that found 8,600 providers and 15,000 workers (Stoney et al., 2003). Such huge discrepancies illustrate how poorly data series based on Economic Census establishment reports measure the child care sector.

State regulatory data provide broader coverage than Census data provide—but often exclude a large percentage of child care providers. Government agencies typically maintain data only on the programs they fund. Market rate surveys can provide information on price of care by type of provider, location, and age of child—but these samples are often dominated by child care programs that serve subsidized children. However, programs receiving multiple funding sources (e.g., Head Start, public pre-kindergarten, child care subsidies, etc.) may be counted in more than one data set, and providers who do not accept any public or philanthropic funding may not be included in any database.

The child care sector has a large informal component of providers exempt from regulation. This group is divided into two parts: those who abide by or are exempt from regulations, and those who operate outside the regulatory system. Some of these home-based providers are captured in state licensing data, but an even larger number is not counted. This part of the market is difficult to measure from published sources. Some teams conducted surveys with Child Care Resource and Referral (CCR&R) agencies (Kansas and New York), or of parents (Boulder and Larimer, Colorado; BBC Consulting, 2003). The New York team also used national non-employer data (based on IRS reports) as a proxy for home-based providers not captured in the state licensing system (but this source does not capture informal providers who do not pay taxes). Of the 22,000 providers in New York, 14,600 were regulated home-based providers. By reviewing the non-employer data based on individual (self employed) IRS filings, the study team found an additional 34,400 family day care providers not in the licensing system.

Children Served

Can you imagine a sector that does not know the size of the market it serves? That is the case for the child care sector. When the state and local study teams attempt to count the number of children served, they typically settle for licensed capacity, which can be larger or smaller than enrollment depending on vacancy rate and part time slots. When other

data sources are used, and compared with licensing data, the results can be alarmingly disparate. For example, in Kansas, estimates of number of children served ranged from a high of 250,000 based on a statewide consumer survey conducted by the Kansas Child Care Resource and Referral Network, to a low of 85,000 based on licensed capacity minus a vacancy rate. The New York State study found 1.2 million children under six whose parents worked (either single parents or two-parent households with both parents working). Another 2.2 million children from ages six to thirteen (based on Census 2000) had all parents working, but the total of all licensed slots, pre-kindergarten and Head Start, and subsidies to license-exempt providers only yielded 622,000 spaces. Estimates based on the National Survey of America's Families show 36% of children in New York State are in paid care while their parents work (Sonenstein et al., 2002). By applying that ratio to all children under age thirteen whose parents work, the study estimated there are another 670,000 children in paid care *not* counted in the licensing data.

What we do know a lot about is the small number of children served by government programs. In New York, 67,801 receive subsidies, 28,259 receive free preschool, and 52,158 participate in Head Start. This is an example of the welfare and education frames at work; government data systems capture—at least in some form—children served by government programs. Comprehensive data that include children served by all government funding streams (and don't double count children served by multiple programs) are not available, and for the vast majority of children served by privately paid child care, we lack comprehensive data. If the importance of the child care sector in economic development were recognized, new data systems would be designed to secure data that is more comprehensive on how and where children are served.

Gross Receipts

Most state studies calculated gross receipts using an economic engineering approach multiplying capacity by price based on differences by age, provider type and region and adding direct government subsidies. BEA estimates of gross receipts tend to leave out the government pay portion of the sector (Head Start, pre-kindergarten, quality subsidies), which can be significant in some states. For example, the New York State study estimated child care gross receipts at \$4.7 billion, but the regional economic estimates based on BEA reports by IMPLAN (a common regional economic modeling program used by most teams) were only \$2.6 billion. Similarly, the Kansas study estimated gross receipts at \$500 million, but the IMPLAN estimates were only \$238 million. The differences are primarily attributable to government payments and the better ability of the state teams to capture more family based care.

Parents Served

Counting parents served is equally difficult. The child care sector lacks basic market information to understand the kinds of choices parents make, the programs they need and will use, locational preferences, and what parents might be willing to pay for quality. Parents typically lack adequate information on quality differences in child care choices. As a result, there are few market incentives for improvements in program quality. These issues are discussed in greater detail later in this special issue (Kimmel, 2006; Meyers & Jordan, 2006; Stoney et al., 2006).

Parents served are part of the demand side of the market and critical to labor force mobilization calculations. But whom do we count—just women or both parents? Economic developers need to know how demand for child care will grow with labor force expansion. But parents are also part of the supply of child care. Most care for children is unpaid parental care, and shifts between the paid market care and unpaid care are critically important in understanding the dynamics of the child care market.

Typically, the interest among the study teams is in knowing how many working parents use paid care, but these data are not collected. Thus study teams are left to estimate working parents using paid care either from national surveys (such as the National Survey of America's Families), or extrapolate from Census data on the ratio of working parents to children in general and apply this to the number of child care spaces. The New York and Kansas studies used U.S. tax policy as a guideline and reported the number of parents claiming child care tax credits on their tax returns. To claim child care deductions, the second worker in two-parent households must earn more than is spent on child care, so an unknown number of parents using child care remain uncounted by this source. The New York State study found 750,000 working parents who claimed the Dependent Care Tax Credit and estimated these parents' earnings to be in excess of \$30 billion.

In summary, the state and local teams have had to tackle basic problems with the data systems for child care. They have addressed these by using a community development approach, bringing together data experts from state licensing agencies, universities, and community agencies to assess data sources and determine the root source of differences in measurement, which are often conceptual. Several teams have conducted their own surveys (Kansas, New York, Larimer and Boulder, Colorado) and used this to "triangulate" between sources. The data problems reflect the narrowness of the frames for addressing child care. From a welfare frame, we know about the children who receive subsidies. From an education frame, we know about the children in publicly funded pre-kindergarten. But for the vast majority of children in the private pay early care and education system, we know almost nothing. But that is changing. Not only have these teams begun to measure the entire early care and education sector in their states, most have added staff capacity to develop better data systems for the future.

The Agricultural Census was established in 1920 because economists recognized the importance of agriculture to the nation's economic development. As economists recognize the importance of child care, we may begin to see more national interest in measuring key indicators for the care sector. Currently, we know more about the production of milk by dairy cows than we do about the child care arrangements for our children, especially for the majority of children not supported by government funds. In the 1990s, the Department of Labor instituted an American Time Use Survey to get at parents' unpaid time spent on care, but this needs to be connected to choice and use of paid care to develop a comprehensive picture. The child care sector is a critical infrastructure for economic development, and our data systems need to measure it more accurately.

CONCEPTUAL CHALLENGES

An economic sector is important to the regional economy not only for its direct effects (employment, gross receipts) but also for its linkage effects in the broader economy. Industries buy and sell from each other and with households. Regional economists give special importance to backward, supply linkages (e.g., purchases of labor, materials, other inputs needed to produce a good or service) that keep money circulating in the regional economy, stimulating other businesses. The majority of the state and local studies uses input-output analysis to describe these backward supply linkages, known as multipliers, as one more element to understand how the child care sector is articulated in the regional economy.

Like most service sectors, child care primarily serves local demand. This raises challenges for how we conceptualize the regional accounting framework (an issue discussed in more detail by Pratt and Kay, 2006). Unlike other service sectors, child care has a parent labor mobilization effect that is not measured in standard regional economic models. The

long-term effect on children is typically not included in regional economic models either. In this section, I discuss each of these three conceptual problems, using examples from state and local teams to show how they are struggling to incorporate child care into a regional economic framework.

Direct Effects

The data limitations described in the first section of this paper are the primary problem in measuring direct effects. However, even measuring basic data on the size of the sector has run into conceptual roadblocks. Most of the state teams measure the full range of care from birth to after school care and include both the care and education components of the sector. However, in the Boulder and Larimer County Colorado studies, the modelers argued, “As a supportive industry, only the fees spent by parents who would change their labor force participation in the absence of paid child care qualify as true direct impacts on the economy” (BBC Consulting, 2003: 9). Thus in their estimates of the size and regional impact of the child care sector, they only counted care for children whose parents said that “but for” paid child care they would reduce their labor force participation (assumed to be 74 and 60% of child care spaces in the two counties respectively). This deliberately undercounts the actual size of the child care sector, though the team hoped its household survey would capture more of the informal sector and thus make up some of the difference. Failure to count child care used purely for educational purposes denies the intrinsic human development value of child care and focuses solely upon its support in mobilizing parental labor. In effect, this approach says the care sector, even the commodified portion, does not count unless parent labor is mobilized because in a “real” sense total economic activity remains unchanged (children were cared for at home before). This is comparable to asking the restaurant industry to count as its economic contribution only that portion of its meals sold to people who could not otherwise cook at home. No one suggests this approach for the restaurant industry, so why suggest it for child care? This is partly due to the fact that the consumption and investment roles of child care as education have not been considered legitimate subjects of regional economic analysis. This point is argued in more detail by Pratt and Kay, Meyers and Jordan, and Folbre in this volume.

Articulating the Child Care Sector in the Regional Economy

Backward Linkage Multipliers

Input-output impact models are based on the modeling imperative that final demand, commonly understood as coming from export income, drives the system. For many service sectors such as child care, in which most demand is local, from households, there are questions as to how relevant multipliers derived from input-output modeling are for predicting changes in economic activity. Care to measure just the “export” portion of the sector is the primary reason the Boulder and Larimer studies limited their measurements to that portion of the sector in which parents said they would leave the labor force *but for* paid care.

Multipliers, in any event, are valuable as descriptive summaries of the extent of backward linkages in the local chain of supply. This holds regardless of the fact that some economists discount the use of multipliers for the child care sector because the money is already in the regional economy and being spent elsewhere. Interestingly, when Quebec dramatically increased public funding for child care, economists failed to look at the regional linkages of the sector; they were surprised when they ran into supply shortages in

the construction sector as a result of new child care construction (Child Care for a Change Conference, 2004). Shifting spending to child care altered demand for other sectors, precisely because of the nature of the regional economic linkages. Multipliers are designed to measure these linkages.

Accounting Frame

A second and closely related conceptual problem with using input-output impact models for household service sectors like child care is determining whether households should be modeled as inside or outside the regional economy. If households are considered external, then the final demand problem is resolved because household demand is treated as external to the economy by assumption. But then the linkages between households and industry sectors can not be counted. If households are instead considered inside the regional economy, then the only external demand for child care is government funding (such as federal funding in a state model). Several studies have used multipliers to assess the full impact of reductions in federal funding for child care on the state economy (Kansas, New York, Rhode Island, San Antonio, Texas, and Tompkins County, New York).

Traditionally, service sectors have been considered residual and somehow less important to the regional economy than manufacturing precisely because demand is primarily local and therefore inside the regional economy (Tiebout, 1956, Hirschman, 1958). Regional economic models based on export theories of growth, have trouble accommodating service sectors (Pratt & Kay, 2006; Warner & Liu 2005). As the importance of service sectors has grown in terms of employment and GDP, some economists have begun to acknowledge a more critical role for services in economic development (Markusen et al., 2004; Florida 2002; Porter 2003). However, questions remain about how to measure the importance of this sector and its diverse components. Services reflect, in part, commodified household production, and blindness to the value of household production has plagued neoclassical economics for more than a century (Folbre, 1994; 2001; 2006). Even when commodified, some analysts are reluctant to count the full value of the sector.

Conducting a comprehensive analysis of input-output models for all fifty states, we found that child care multipliers compare favorably to other social infrastructure sectors (higher education, job training, elementary and secondary education), and they are higher than many retail and service sectors that are more typical targets for economic development policy (Warner & Liu, 2005; 2006; Liu et al., 2004). This finding has opened the way for discussion at the state and local level of new ways to include child care in infrastructure and economic development policy.

Forward Linkages

Multipliers only measure backward linkages, and child care, like many service sectors, may be most important for its forward linkages. An important forward linkage is that child care enables parents to work. The Connecticut study constrained the input-output model to see what would happen to the state economy if the child care sector disappeared. Using national survey data on labor force participation rates and child care utilization rates of working parents, and allowing for labor imports, they predicted a 10% reduction in the state labor force if the child care sector disappeared (McMillan & Parr, 2004). Oregon focused on export sectors in the state economy and their workers' dependence on child care to get a measure of the larger economic export "footprint" of the child care sector (Sorte et al., 2005).

Miller and Lahr (2001) and Pratt and Kay (2006) have been working on an alternative technique, hypothetical extraction, which uses the input/output framework to measure both the forward and backward linkages of a sector by hypothetically removing that sector from the local economy. This method may offer more promise for service sectors such as child care.

Addressing the Impact on Parents

Most economists turn first to the labor mobilization or parent effect. Child care forms part of the social infrastructure for the economy by providing care so parents can work. This represents a forward linkage not captured in the backward linkage multiplier. Many studies attempt to measure the number of working parents associated with children in paid care. Some then use the median or average wage to estimate total parent earnings. Two early studies attempted to measure this forward linkage in an I/O framework by taking the marginal parent in the two-parent households (assumed to be a lower waged woman) and the sole parent in the single parent household and assumed that all the wages earned by these parents and all the linkage effects of the industries where these parents work were attributable to child care. They concluded that child care was larger than the movie industry in California (M-Cubed, 2001) and larger than agriculture in the U.S. economy as a whole (M-Cubed, 2002). This estimate both over and under counts the impact. The over-count is that they assumed 100% of the marginal parents' work is attributed solely to child care. Although women's labor force participation is sensitive to child care costs, child care is only one factor affecting that participation (Kimmel, 2006). Although there is evidence of some labor market exit at the upper ends of the income spectrum (Wallis, 2004; Kimmel, 2006), with welfare reform, pressure for low income women to work outside the home is increasing. The California and National studies over counted even more by running a multiplier on these parents' wages. This approach attributed all parent labor income and the productivity of the industries in which parents work to the child care provider. Thus, these studies gave no value to the human capital investment of these parent workers or the industries in which they work. In attempting to value child care, they totally undervalued the educational investments and economic productivity of mothers.

The undercount is in assuming child care only affects the secondary parent. Although this approach is standard among economists, it is not standard among business leaders. Although some economists argue that only one parent is released to work because of child care, most state and local studies count *all* parents in recognition that parent flexibility arising from shared responsibility for child rearing facilitates both parents' participation in the labor force. In terms of purchasing power, clearly both parents are important in the child care market. By *not* gendering their economic analyses of child care, these studies hope to expand the base of interest and support for the sector. In addition, this approach reflects current business and human resource practice. In Tompkins County, the President of the Chamber of Commerce described it this way, "The business community does not want to be in the business of saying one parent should stay home to care for children" (McPheeters, 2002). Human resource policy requires nondiscrimination. Although feminists recognize that women face unequal constraints (Folbre, 1994), U.S. employment policy does not. This is why we see the emergence of parental leave, not maternity leave. In states where business leaders were on the study teams, you are less likely to see gender differentiation in discussing the parents supported by child care.

More research is needed to measure adequately the labor productivity impact of child care. Research by corporate work-life policy analysts suggests that the productivity impacts of child care are primarily found in reduced turnover and absenteeism (Carillo, 2004; Phillips & Reisman, 1992), but this finding represents only a small portion of parent earnings. However, these benefits are high enough to justify employer investment in flexible work hours/locations and subsidies for child care (Shellenback, 2004). Gornick and Meyers in their recent book (2003) argue that the United States has a long way to go in providing flexible work place support and child care for working parents. Stoney et al. (2006) argue that work place regulation must be part of a comprehensive ECE policy. Failure to address these factors has particularly negative impacts on women. Costs in

terms of career trajectories and wage discrepancies are high, and research shows these may be primarily due to a “mommy” gap rather than a gender gap (Crittenden, 2001; Kimmel, 2006).

Addressing the Impact on Children

Child care may be most important for its long-term impact on human development of children. Although the state and local teams lack access to longitudinal data at the state and local level to measure this component, they have relied on popular reports by economists who have looked at the few existing longitudinal studies. Most study teams have quoted a popular study by the Federal Reserve Bank in Minneapolis (Rolnick & Grunewald, 2003), which shows internal rates of return of 16% based on the Perry Preschool project (an intervention with 123 (64 in the treatment group) children in Ypsilanti, Michigan, in the 1960s and 1970s). In the last couple of years, several economists have applied cost/benefit and return on investment analysis to the handful of longitudinal studies (Abecedarian, Chicago Parent Child Center, Elmira Prenatal/Early Infancy and Perry Pre-School) and have used this approach to argue for increased investment from a fiscal and economic growth perspective. Meta analysis across these studies is presented in the article by Barnett and Ackerman (2006). Benefits typically measured in these studies include better school performance for children, higher labor force attachment, better health, lower welfare usage, and lower incarceration rates in later life (Masse & Barnett, 2002; Heckman & Masterov, 2004; Lynch, 2004). These studies have picked up national attention and the support of the Committee for Economic Development that has called for universally accessible, publicly funded preschool for all (2002). What is exciting about these analyses is that they turn what has traditionally been conceived of as a welfare expenditure, and thus a negative in national fiscal analysis, into a positive investment in long-term economic competitiveness.

Turning welfare expenditures into economic development investments stems from two intellectual strands. The first is the human capital literature that had its birth with Theodore Schultz (1961), which later was extended to early care by James Heckman (1999) who argues “learning begets learning” and investments in early education have the highest returns—higher than investments in adults. The second intellectual strand comes from the new inter-generational accounting and fiscal imbalance literature, which looks at the costs and benefits of public tax and expenditure across generations (Kotlikoff, 1992). Used to push for reform of Social Security and Medicare (Gokhale & Smetters, 2003), it also has been applied to child care to show the public finance value of children is positive and the fiscal burden, because of deficit spending and entitlements for the elderly, is too large (Gokhale, 2003). To the extent investments in early education will raise the productivity of future generations, they will help address long-term fiscal imbalance and inter-generational equity.

One problem with this type of analysis is that it still does not positively value care work itself. In his analysis of the lifetime public finance value of children, Gokhale (2003) found girls to be worth less than boys precisely because girls were assumed to spend some years out of the labor force, presumably caring for children. Because this care work was given no value in his analysis, he calculated the public finance value of girls to be (negative) -\$4,400 compared to boys at +\$210,000. Heckman and Masterov (2004) and Rolnick and Grunewald (2003) fall into a similar trap by leaning heavily on reductions in crime for their benefit measures. Because women’s incarceration rates are lower, the positive return to society of early care is lower for women. Because the negative costs of crime are part of the public budget, reducing them has real, countable value in the economy. But, the positive benefits of care, largely private and unpaid, are not measured in any government or economic accounts; thus their value is unknown, and according to these analyses, irrelevant. This

disregard may explain why most economists who look at these long-term studies are silent on the stressors on family caregivers because of rising labor force participation of women. This point was profiled in a recent American Psychological Association report (Halpern, 2004) elaborated with an emphasis on policy by Gornick and Meyers (2003), and described in more detail in the papers by Kimmel (2006) and Meyers and Jordan (2006).

Feminist economists (Crittenden, 2001; Folbre, 1994, 2001) have pointed out this blindness to the positive value of care work and the costs to women in wages and career trajectories. Typically, the state and local teams put child development in the context of working families and focus on the rising labor force participation of women. Unlike the longitudinal studies that treat women's care work as invisible or negative, the state and local teams make the positive value of child care visible to business and economic development leaders.

REFRAMING CHILD CARE AS ECONOMIC DEVELOPMENT: IMPLICATIONS FOR POLICY

These state and local regional economic impact studies illustrate how the child care sector is beginning to recognize itself as an economic sector in its own right. For the first time, the child care sector is beginning to present itself in standard economic terms. In so doing, it is recognizing the salience of economic discourse to policy making and the limitations of being marginalized from this discourse. By using standard economic measures and terminology, the sector is claiming a place in economic development dialogues and building collaborative relations with economic development and business leaders. This effort is not meant to replace the earlier foci on education and welfare impacts of the sector, but rather to broaden the understanding of the sector to include discussion of its role and importance in the regional economy.

Both child care policymakers and business leaders are keenly aware of the problems an inadequate child care sector presents for economic development. These studies represent an effort to redefine child care as part of the social infrastructure for the economy. In Tompkins County, New York, the Chamber of Commerce launched an Early Education Partnership in response to employer concerns of labor shortage and the links between an inadequate supply of high quality, affordable child care and parent labor mobilization. The New York State Study determined that fully 63% of the sector's revenues come from parent fees and compared this to the "token" 26% of total costs riders pay for public transportation, another important infrastructure for economic development (The Urban Transit Fact Book based on 2002 data of 53 largest metropolitan areas). In Kansas, the state legislature and governor rejected a proposal to drop eligibility levels for child care subsidies, recognizing that these subsidies are part of an economic development strategy for the State of Kansas that "makes work pay" for lower income parents. In Vermont, the State Child Care administrator renamed the market rate survey (required for determining state reimbursement rates) a market analysis of the child care industry. Since their report, the state has added child care as one of thirteen goals that planning boards must address in local economic development plans. And the examples go on.

As the child care sector becomes aware of the market challenges it faces as an underdeveloped market sector, it is recognizing that policy approaches drawn from the economic development field can be used to address these problems, providing a complement to welfare- and education-based policy tools. A brief list of these market challenges is given below and is described in further detail in Warner et al., 2004b.

The core problem signifying underdevelopment in the sector is *lack of adequate financing*. High quality child care is costly. Although some analysts have recommended 20% of family income above the poverty line as a goal for what families should spend

(Helburn & Bergmann, 2002), the reality is that many low and middle income parents spend much more or exit the regulated system (Giannarelli & Barsimantor, 2000). This lack of purchasing power fuels the large unregulated market of family, friend, and neighbor care and sends market signals that discourage higher quality. Poor quality has negative long-term societal consequences, but *lack of information* makes it difficult for parents to distinguish quality and for quality providers to differentiate their service.

A second problem is *lack of economies of scale*. Even the formal, regulated portion of the sector is primarily composed of small businesses, either home-based care or small centers. Although for-profit chains may attain some economies of scale, for most providers lack of intermediaries to promote economies of scale further undermines their sustainability (Stoney, 2004a). Ease of entry and low profitability contribute to turnover rates estimated as high as 40% (Helburn & Bergmann, 2002).

Each of these market challenges could be addressed in part with economic development interventions that are typically brought into play in other economically significant sectors. Tax credits for parents, subsidies from employers and the public sector, and employer work-life policies could increase effective demand. This approach would be in keeping with the historical preference for employment-based benefits in U.S. social welfare policy (Katz, 2001). Business retention and expansion policies could be applied to strengthen sustainability among child care providers. Many states are already supporting wage and education incentives to promote worker professionalization and the emergence of a career ladder in the field (Stoney, 2004b). Much work has been done on facilities finance (Stoney et al., 2001), but the continuing challenge is how to address operating capital. A better developed intermediary structure is needed—to network providers to facilitate information exchange and economies of scale, and to provide better consumer information to parents. Tiered reimbursement rates and quality rating systems are gaining momentum, and these approaches recognize the power of market signals to promote quality choices by both providers and parents (Stoney et al., 2006).

However, economic development strategies alone can not address the full array of challenges the child care sector faces. As a public good, child care has market failures that limit quality—a positive externality of care. Competition erodes quality in care work (Folbre, 2001), and the sector requires regulation to ensure quality. The core determinant of quality is the nature of the interaction between provider and child, and thus states set clear requirements on staff: child ratios. The sector is labor intensive, and there are limited opportunities for technological improvements to productivity. Providers, seeking to improve their bottom line, will understaff if not properly regulated. This is happening in Australia where community controlled child care has not kept pace with demand, and private for profit chains have come to dominate the market and influence regulatory oversight (Birch & Rogers, 2004).

Because most of the benefits to children occur over a longer term than is considered by many parents making child care decisions, public investment is required to ensure that parents do not under-invest in the human development impacts of child care in the short term. We also need to identify public support to reduce stressors on parents (as argued by Kimmel, 2006, and Meyers & Jordan, 2006) and to bolster the unpaid non-market care that forms the foundation for the market economy (as argued by Folbre, 2006). While recognizing that child care is an economic sector in its own right, we must not forget the broader economic importance of child care to family and community development.

CONCLUSION

The state and local teams conducting the child care studies reviewed here started with what seemed to be a simple question: How does the child care sector fit in the broader regional economy? They have discovered all sorts of conceptual and methodological problems. How do we count care work in the economy? Do we count all of the sector or just

those portions that mobilize parental labor? What about the long-term impact on the human development of children? Can that be incorporated in our regional economic models? These conceptual challenges are complicated by serious data limitations that are, in part, also a result of conceptual barriers. To incorporate child care into community economic development requires stepping outside traditional conceptions and opening debate to new ideas and possibilities. These state and local regional economic impact studies have begun that process. Incorporating child care in our regional development models requires a more comprehensive integration of export and locally serving sectors, market and non market work, and short-term and long-term development. The implications for community economic development theory and practice are truly exciting.

NOTES

1 Child care is used in this report as short hand for the full range of early care and education programs, public and private, including after school care.

2 Extrapolating from data on 6936 households' use of out-of-home care for children aged 0-5, Burton et al (2002) estimated the child care work force for this age group at 2.5 million paid workers. This estimate is considerably larger than the 800,000 estimate of the BLS (based on establishment reports), or the 1.7 million estimated by the CPS. They also calculated unpaid non parental care at an additional 2.5 million, 93% of whom are unpaid relatives. Although this unpaid care is not counted in standard economic accounts, it obviously makes a substantial economic contribution. Unpaid parental care was not included in their estimates.

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