The Economics of Early Childhood Care and Education: Implications for the Child Care Workforce

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Overview

• The market for early childhood care and education
  – Demand
  – Supply
  – Equilibrium

• Implications for the child care work force
Why are we concerned about the child care work force?

- Because we (society, policymakers, parents, researchers) care about the development and well being of young children.

- Pay, benefits, working conditions, training, education, opportunities for advancement, “appreciation and recognition” are important issues for the child care work force, as they are for workers in any occupation or industry.

- We pay special attention to the child care work force rather than other high-skill low-paid occupations such as social workers, community organizers, artists, because we believe that child care workers have an impact on children.
The Market for Child Care

- Early childhood care and education is a service, provided and purchased for a fee (usually)

- Outcomes (quantity, quality, price) are determined by “market forces”

- What are these market forces, and how do they influence outcomes of interest in the child care labor market?

- What are the problems in the child care market, and how do these problems affect the child care work force?
Demand

• Demand for child care is a market force

• Parents’ beliefs, preferences, income, etc. influence willingness to purchase child care at alternative prices, according to:
  – The type of care arrangement: center, family day care, nanny
  – The developmental quality of the care arrangement
  – The convenience and reliability of the care arrangement

• A key aspect of preferences is **willingness to substitute** among care arrangements of different types and quality, in response to relative prices

• Evidence suggests moderate degree of willingness to substitute
Supply

• Supply of child care is a market force

• The “technology” of producing child care, and the prices of the “inputs” (staff, by skill level) determine willingness of providers to offer child care at alternative prices according to quality, type, location etc.

• A key aspect of supply is the degree of flexibility of technology: is there more than one way to produce child care of a given developmental quality?
  – Evidence suggests considerable flexibility

• Another key aspect of supply is the degree of input specialization: how useful are the skills of child care workers in other occupations and industries?
  – If the skills that are valued in child care are also valued in alternative uses, then inputs are not very specialized, and the supply of labor to child care will be elastic
  – Evidence suggests a relatively high elasticity of child care labor supply with respect to the wage rate available in child care relative to wages in other sectors
Equilibrium

- Demand for and supply of child care by type, quality, location, etc. determine the market equilibrium distributions of price and quality, and the quantity of each type/quality of child care provided and used.

- Equilibrium prices by type and quality of care are interrelated, as a result of consumer willingness to substitute, and flexibility of technology.

- “Outside forces” including government policy can affect equilibrium outcomes by (1) influencing demand, (2) influencing supply, (3) imposing standards, and (4) public sector provision of child care.

- The effects of such outside forces depend crucially on the nature of demand and supply in the child care market.
Implications for the workforce

• Demand for the services of child care workers is derived from consumer demand for child care
  – Features of consumer demand influence demand for labor:
    – Consumer willingness to substitute among types and quality of care
    – Flexibility of technology affects nature of demand for child care labor

• Labor is the main input in production of child care
  – Absence of input specialization => elastic supply of labor

• Equilibrium outcomes (wages, employment) in the market for child care labor by skill (education, experience) are interrelated

• Outcomes in the child care labor market are interrelated with outcomes in other labor markets in which the skills of child care workers are useful: K-12 education, for example
Empirical analysis of the child care market and the labor market for child care shows:

• Relatively low demand by parents for higher-quality care => relatively low demand for skilled staff

• Relatively elastic supply of child care labor => increase in demand for child care does not put much upward pressure on wages of child care workers

• Skilled staff have good opportunities in other occupations and industries => hard to keep good staff

• Are these examples of “market failure,” justifying intervention in the market to improve outcomes?
What is market failure?

• A market fails when the market equilibrium quantity of the service is not equal to the socially optimal quantity
  – For example, too little high-developmental-quality child care

• But how do we know the socially optimal quantity, or even whether the equilibrium quantity is too high or too low?

• As researchers, we don’t know, for two reasons:
  – Evidence on the long run benefits of high quality child care is scarce
  – And social optimality is determined in part by value judgments

• Can we look at outcomes in the child care market and determine whether the market has failed?
Trends in family child care expenditure

- Average annual rate of growth in:
  - Real (inflation adjusted) weekly child care expenditure per family: 3.3%
  - Number of families paying for care (in units of 100,000): 2.9%
  - Total weekly expenditure (in units of $10m): 6.3%

Source: Survey of Income and Program Participation
Trends in number of establishments and employees

- Average annual rate of growth in:
  - Number of establishments with payroll: 3.6%
  - Number of employees: 4.8%
  - Number of establishments without payroll: 9.0%

Source: Census of Services
Trends in receipts and payroll

- Average annual rate of growth in:
  - Receipts of establishments with payroll: 6.2%
  - Payroll: 5.9%
  - Receipts of establishments without payroll: 8.2%

Source: Census of Services
Trends in employment

- Average annual growth rate in:
  - Number of child care workers: 4.6%
  - Number of preschool teachers: 1.4%
  - Total employment, all occupations (millions): 0.3%

Source: Occupational Employment Statistics
Trends in hourly wages

• Average annual growth rate in:
  
  – Hourly wage rate of child care workers: 0.5%
  
  – Hourly wage rate of preschool teachers: 0.8%
  
  – Hourly wage, all workers: 0.7%

Source: Occupational Employment Statistics

Average hourly wage rate

2009 dollars per hour

Year

Child_care_workers
Preschool_teachers
All_workers
Summary of trends

• Child care employment, number of establishments, receipts, and payroll all rose rapidly

• Child care wages rose very slowly

• National average wage rose slowly too, but growth in national employment was slow

• Why didn’t growth in the child care sector drive up wages of child care workers?

• Most likely, because of highly elastic supply of labor
Example: immigration of low-skill women

- Female immigrants with low skill have few good employment options => might be willing to work in child care for a relatively low wage

- An increase in low-skill immigration will cause decline in wages of low-skill child care workers

- The wages of higher-skill workers will decline too, as a result of consumer willingness to substitute (and, maybe, flexibility of technology)

- Evidence (Furtado & Hock, 2010)
  http://www.deliafurtado.uconn.edu/index_files/pdfs/Hock-Furtado_current.pdf
  - Low-skill immigrant share of the U.S. working population rose from 6.1% in 1980 to 10.1% in 2000
  - This caused the child care wage rate to decline, compared to what it would have been in the absence of the increase in immigration, by:
    - 19% at the 25th percentile of the child care wage distribution
    - 13% at the median
    - 8% at the 75th percentile
Do these trends imply market failure?

• No. They reflect normal market responses, given the nature of demand for and supply of child care
  – Elastic labor supply, consumer willingness to substitute

• Is there market failure in child care?

• This is a matter of opinion; facts should influence opinion, but value judgment is required as well
  – My opinion: there is a market failure
Source of market failure in child care

- The market failure is not on the supply side

- The market failure is on the demand side: willingness of parents to pay for high quality child care is too low

- High quality child care is beneficial for children and society

- When deciding on willingness to pay for high-quality care, parents consider the benefits for children (we hope), but not the additional (external) social benefits

- Evidence from evaluations of Perry Preschool, Abcedarian, and other programs show large long run social benefits of very high quality intensive preschool for very disadvantaged children

- This evidence, together with value judgment that society should help disadvantaged children, makes it easy to argue in favor of public intervention to improve access of disadvantaged children to high quality care
What about advantaged children and high quality child care?

• Evidence of long run benefits is very limited, so the argument for market failure in this case is mostly driven by value judgments.

• But the case for public intervention is harder without good evidence.

• For example, in K-12 education, there is abundant evidence that effective teachers have a strong effect on student learning.

• But little evidence that specific qualifications such as degrees, training, and experience (beyond the first 3-4 years) can explain which teachers are successful.

• This has led to considerable skepticism about the social benefits of increased spending on well-educated and trained staff as a solution to problems in schools.
Implications for the child care workforce

- Public policy will be more effective if it targets the source of the market failure: market demand for high quality care is too low, compared to the social optimum

- Subsidies for high quality care and public awareness campaigns will increase demand for high quality care

- This in turn will stimulate demand for skilled staff, hopefully increasing the payoff to investment in early education skill

- Compensation will improve, effectively paid for by the subsidies

- Why not target the supply side: more stringent education and training regulations, subsidies for training, wage subsidies?

- Regulations are “unfunded mandates” that have a variety of unintended consequences

- In a labor market with elastic supply, wage subsidies are not very effective, and training subsidies may not be very effective if the high-skill child care jobs have low wages