



CENTRE
FOR

HOUSEHOLD, INCOME, LABOUR AND DEMOGRAPHIC ECONOMICS



Parental and public investment and children outcomes

Silvia Pasqua

*Università di Torino
Child – Collegio Carlo Alberto*

Outline

- Why economists care about early investment in children?
- Which outcomes are relevant?
- Which parental and public investment in children are relevant?
- Summarize results of our research group (CHILD) studies
- Conclusions

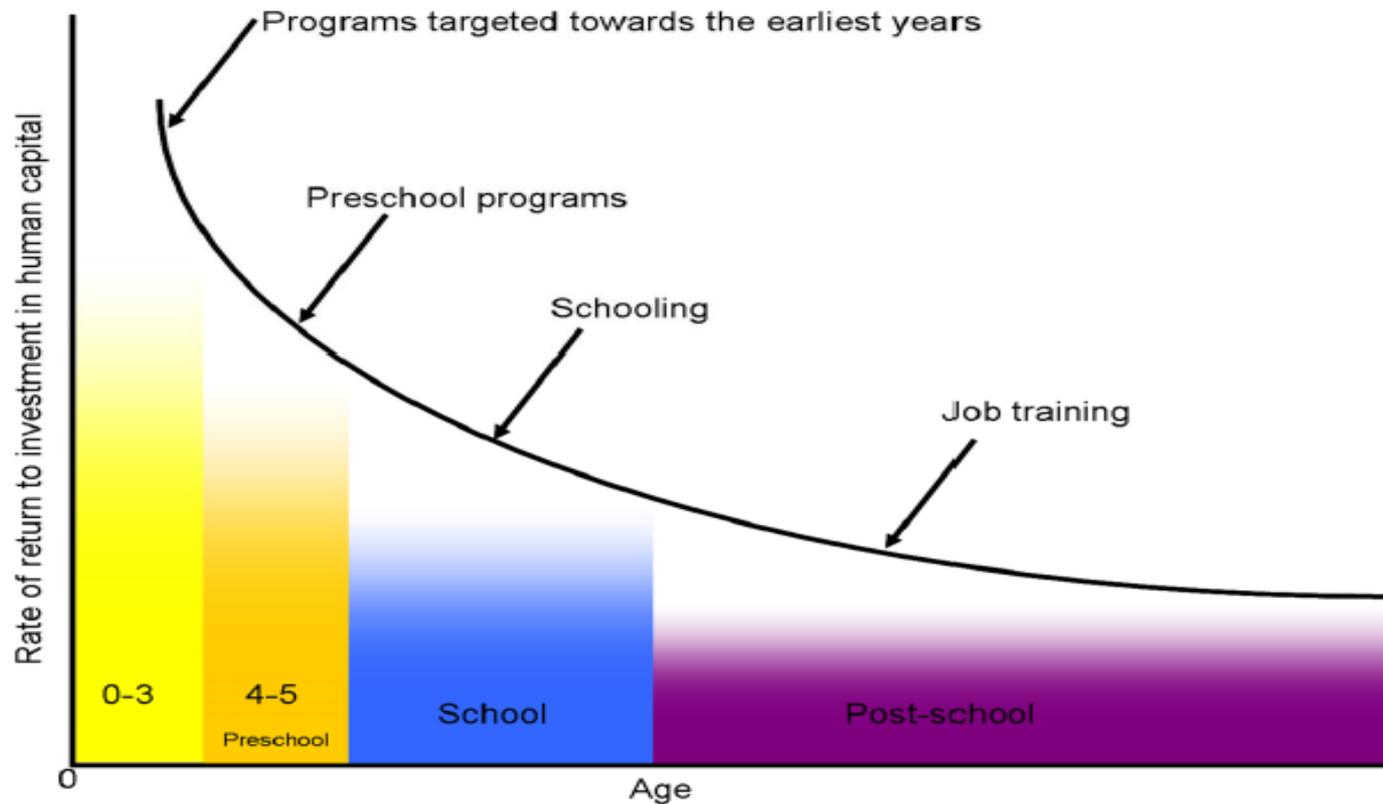
Why economists care about early investment in children?

The interest among economists for early investment in children has grown in the last few years:

- in recent economics research children's outcomes (school, behavioral, health) are considered as the output of a production function in which inputs come from their families as well as from schools, teachers, and peers. Parental and school inputs play a very significant role in cognitive and non-cognitive development of individuals

- the effects of parental and public investment in children are largely determined early in life (Heckman and other): if families and institutions intervene early enough, they can affect cognitive, socio-emotional abilities and health. Early interventions promote also later outcomes, *i.e.* higher workforce productivity, higher wages, lower probability of teenage pregnancy and welfare dependency...
- children from disadvantaged environments receive less early investment than children from advantaged backgrounds. Therefore, there is a strong case for public support for funding interventions in early childhood for (disadvantaged) children.

- early interventions are estimated to have higher rates of return than later interventions (such as reduced pupil-teacher ratios, tuition subsidies, public job training, rehabilitation programs)



Which outcomes are relevant?

- **Cognitive outcomes:**
 - level of education achieved
 - school grades
 - test scores
- **Non-cognitive outcomes:**
 - soft skills (personality traits, socio-emotional skills, communication, language, physical and mental health, personal habits, friendliness, attention, motivation, self confidence, optimism) (Heckman and Kautz, 2012)
 - link between non-cognitive and cognitive outcomes

Which parental and public investment in children are relevant?

- **Economic resources:**
 - better educated/richer parents can invest more resources on children (more and better education, more non-scholastic activities, more stimulating environment)
 - however, potential negative impact of the growth in labour market participation of women with young children. Recent data show that mothers' time with children has declined over the last decades, while indicators of several cognitive and non-cognitive outcomes of children have worsened

- Mother's time, father's time:
 - while mother's time is a crucial input in the production process of child outcomes, other inputs are also important
 - father's time is also important, especially in some stages in the child's development process. Time spent with children by fathers has increased over time, partly offsetting the decline in mother's time spent with the child

- **Grandparents time**
 - little attention to the role of extended family members, in spite of their growing importance, in particular of the strong involvement of grandparents caring for grandchildren
 - grandparents' care is the second most significant group of non-maternal care, second to the partner
- **Childcare**
 - role of childcare as a substitute of mothers' time
 - role of childcare for children from disadvantaged backgrounds
 - role of childcare in promoting equal opportunities

Results of studies

Studies on maternal employment and child outcomes

- Different studies (for the US, the UK, Germany, and Sweden) focused on the impact of maternal employment on child outcomes (Ermisch and Francesconi, 2005)
- This literature reports mixed results:
 - while the loss of the mother's child-care time has a negative effect on the child's well-being
 - it is also the case that the additional income from mother's employment has positive implications for expenditures on goods consumed by the child

- Reasons for the diversity of the results are associated with the quality of inputs
 - Hsin (2009), using Child Development Supplement of the PSID, finds a positive and persistent effect of the time mothers spend with children on language test scores, but only for highly educated mothers
 - Mancini and Pasqua (2012) show that Italian working mothers, with respect to non-working ones, tend to reduce the “basic care” time, but not “quality care” time devoted to their children (reading stories or helping them with homework, taking their children to a museum or to theatre)

- **Our researches:**
 - **Del Boca, Monfardini, Nicoletti (2012):** using PSID CDS data they find that child's investments matter more than mother's investments during adolescence, while mother's time investments are more important during childhood
 - **Del Boca, Pasqua, Suardi (2012):** using Italian data (ISFOL-Plus) on grades in secondary school we find that mother's employment status when the individual was younger than 3 has not a significant effect on children outcomes

Studies that consider also fathers

- Averett et al. (2005) show that fathers' care for infants is no better or worse than other types of arrangements and that there is a long term benefit of paternal involvement
- Time use data show that a greater proportion of fathers' time, relative to mothers' time, is spent in playing and teaching activities (such as helping with homework), as opposed to physical care such as bathing and feeding

- **Our researches:**
 - **Del Boca, Flinn and Wiswall (2010):** using PSID data they show that fathers' time is as important as mothers' time child cognitive development, but they have different impacts across different phases of the child's life. While mothers' time is important for younger children, fathers' time become more important when the child grow up
 - **Mancini, Monfardini, Pasqua (2011):** using Italian Time Use data we show that the probability of children reading increases significantly after they have seen their parents reading. A mother's imitation effect increases the probability that the child reads from about 4% to about 34%. The father's imitation effect is similar, raising the probability from about 5% to about 36%

Studies that look at family structure

- Many studies show that children of divorced parents / single mothers have worse outcomes in school (higher drop-out, lower cognitive test scores), in the labor market (future earnings, employment status, welfare dependency), in behavior (teenage pregnancy, divorce..). This is because children in intact and single-mother families receive different investment (amount of resources and parental time) (Craig and Mullan, 2012; Keding and Bianchi, 2008)
- ...but when the endogeneity of family structure is taken into account small or negligible effects (Aughinbaugh, 2005; Hofferth, 2006; Bjorklund and Sundstrom, 2006; Sanz-de-Galdeano and Vuri, 2007; Finlay and Neumark, 2008; Francesconi et al., 2010; Corack, 2011)

- **Our researches:**
 - **Mencarini, Pasqua, Romiti (2013):** using Italian Time Use data we look at the time children devote to human capital accumulating activities (reading and studying) in single-mother households and households in which both parents are present. Differently from previous results, we find that family structure in Italy does matter: living with a single mother negatively affects the time children devote to reading and studying activities and the effect is stronger for children with poor and poorly educated parents, for children with no siblings and for older children

Studies that consider grandparents

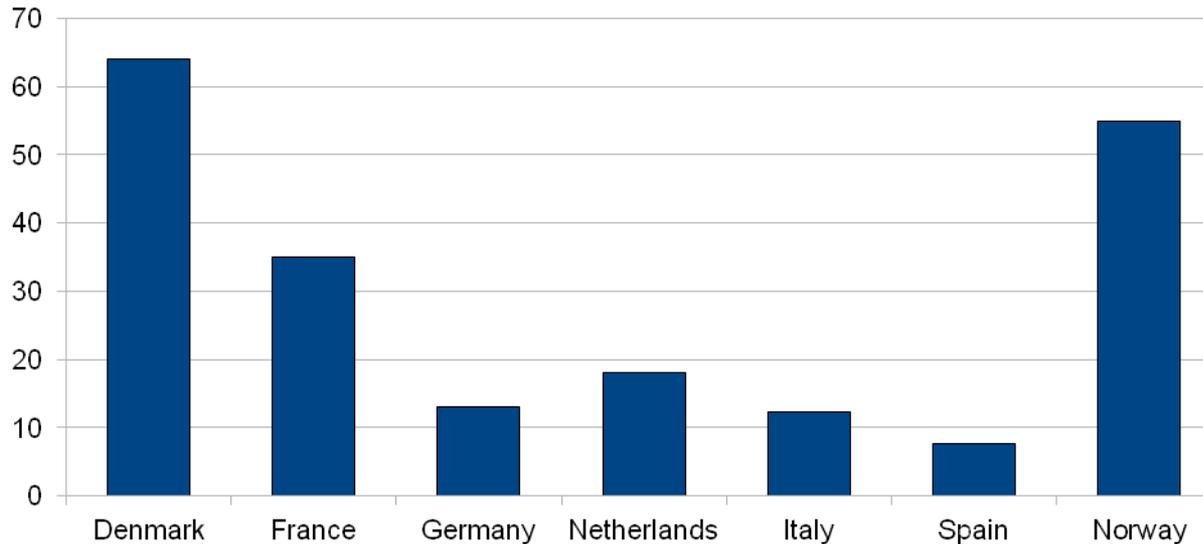
- Reasons for using grandparents' care (Brewer et al., 2010):
 - most trustworthy; safe and protecting nurturing environment
 - most convenient;
 - most flexible
- Positive effect of grandparents' care on vocabulary, but it increases peer problems (Hansen and Hawkes, 2009)

- **Our researches:**
 - **Del Boca, Piazzalunga and Pronzato (2013):** using the Millennium Cohort Survey data for the UK and look at children outcomes at ages 3, 5, 7. They find that grandparents' care has a positive impact on naming ability for children from rich families. Grandparents' care has a negative impact on other cognitive outcomes (school readiness and construction ability) for children from poor families

Studies on child care and child outcomes

- School inputs are important and quality changes by school types
- Literature from different countries characterized by different availability of child care

Public Child Care / 0-2 years

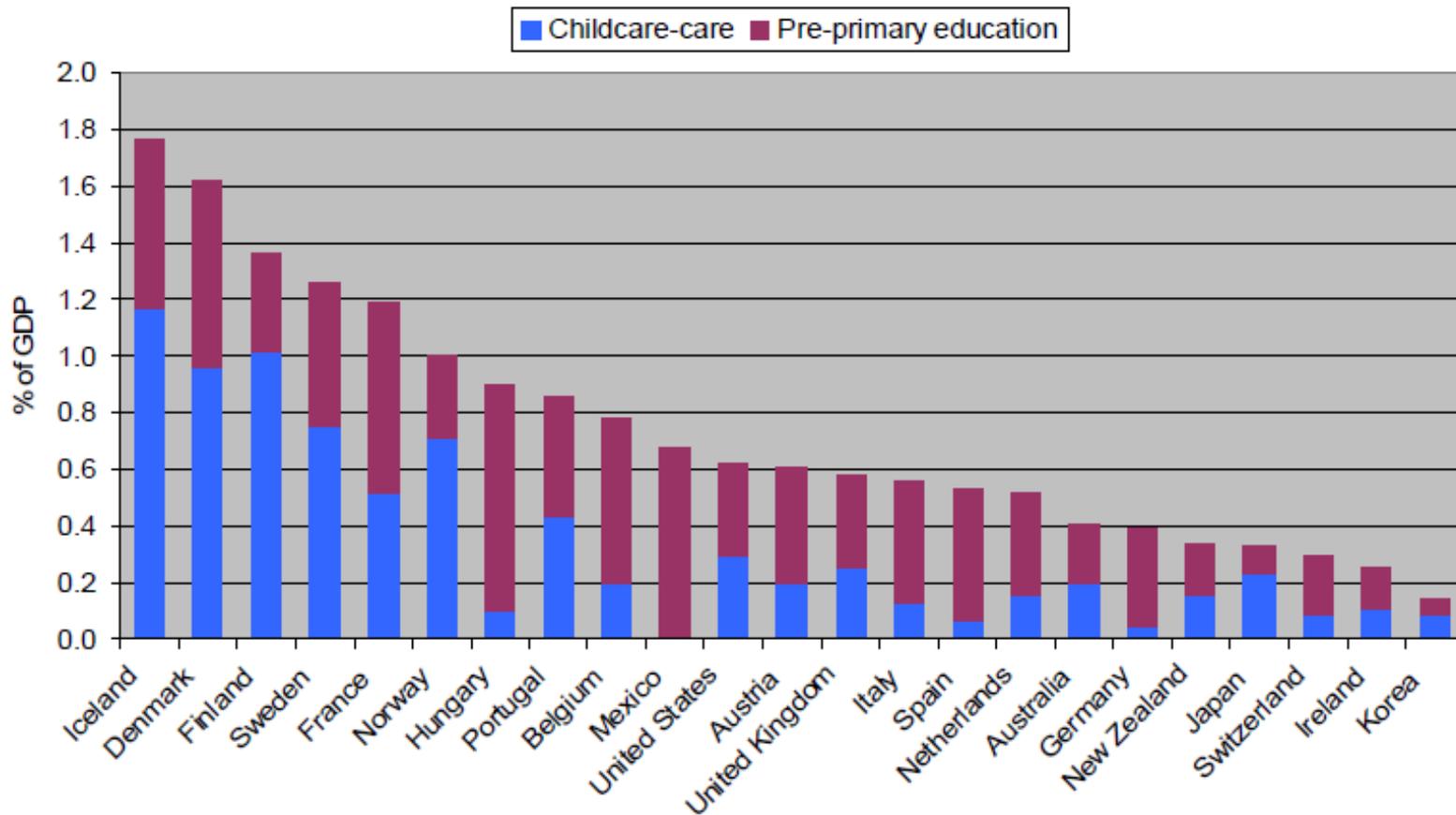


- Havnes and Mogstad (2009 and 2010) analyze the impact of a large increase in childcare supply in Norway (widely available and high quality). Their results show strong positive impacts on children's outcomes (years of education and college attendance), and the impact is much stronger for children of low educated parents. They did not find any impact on long-term outcomes, such as adult earnings.
- Datta Gupta and Simonsen (2010) analyze the case of Denmark. They estimate the effects of having attended a preschool (high quality and almost universal child care) versus family day care services (less regulated) and parental care on children's behavioral index measured at age 7 and find that children cared in public school have less behavioral problems than those cared for informal day care services

- Felfe and Lalive (2012) study the West German setting, where high quality center-based care is available, but severely rationed and find positive and significant effects of child care on language skills in the short run and on school grades in the medium run. Children who benefit more are those coming from families where parents have lower education
- Dumas and Lefranc (2010) estimate the long term effects of child care in France where child care is high quality and widely available and they find long term effects: staying in preschool 2 or 3 years has a strong and positive effect on wages measured at age 20-43
- Felfe et al. (2012) analyze the effects of introduction of universal child care for 3-years old children in Spain (highly rationed) on their cognitive outcomes at 15 (PISA data). They find a sizable increase in reading and math test scores following the reform. The effect is stronger for girls and for children with low educated parents

- In Italy (as in other Mediterranean countries) the debate on the importance of the educational strategies of *early intervention* has been neglected until recently
- Given the low proportion of working mothers in Italy and the low birth rate, one could argue that the problem is less crucial with respect to other countries. Italian families should have more time to dedicate to their children, with positive implications for their cognitive and behavioural development
- However, from comparative data it can be seen that Italian children do not obtain better results than children of the same age in other industrialised countries. On the contrary, for many years, fifteen-year-old Italians have obtained worse results (PISA-OECD)

- As recent OECD data show Italy spends much less than other countries for children in preschool age, less with respect to the spending for older children, in contrast with the *early intervention* approach



- **Our researches:**
 - **Brilli, del Boca, Pronzato (2013):** using Italian INVALSI (Italian Institute for the Evaluation of the Education System) data they estimate the effects of childcare availability on children's performances at primary school, measured by Language and Math scores in second grade. They find a positive and significant effect of childcare availability on Language test scores, while they do not find any effect on Math. The strongest effect is found in areas where childcare availability is lower
 - **Del Boca, Pasqua and Suardi (2013):** using Italian data (ISFOL-Plus) on grades in secondary school we find that attending childcare when very young has a positive and significant effect. The positive impact of childcare is particularly relevant for children from households with less education since it may compensate for lower or insufficient inputs potentially received in their families

Conclusions

- These results show that mothers' work, reducing the time dedicated to the children, has negative effects on child cognitive and non cognitive outcomes
- However this impact is compensated by the use of high quality/public childcare which has short term and long term impacts
- The positive effects of childcare are greater for the children who come from families with a lower level of education/income and immigrants
- Childcare is important not only as a support for parents to conciliating work and the family but also for the cognitive and non cognitive outcomes of the children,
- Both roles are important, especially in disadvantaged contexts contributing to compensate for the inequalities.
- Most of our results indicate the importance of taking into account not only mothers' time but also other members of the family

- What conclusions can we draw from the study in terms of possible policies?
- It is crucial to invest more to increase the availability of public child care especially in countries such as Italy, Germany and Spain.
- Nevertheless, increasing the quantity is not sufficient. It is necessary to investing in the quality of the service
- This is the only guarantee that the childcare maintain its role of early investment

Bibliography

- Anna Laura Mancini and Silvia Pasqua (2012), “Asymmetries and interdependencies in time use between Italian spouses”, *Applied Economics*, vol. 44(32)
- Daniela Del Boca, Chiara Monfardini and Cheti Nicoletti (2012), “Self investments of adolescents and their cognitive development”, Discussion Papers 12/24, Department of Economics, University of York
- Daniela Del Boca, Silvia Pasqua and Simona Suardi (2012), “Childcare, family characteristics and child outcomes: an analysis on Italian data”, Child Working Paper 09/2012
- Daniela Del Boca, Christopher Flinn and Matthew Wiswall (2012), “Transfers to households with children and child development”, Carlo Alberto Notebooks 273, Collegio Carlo Alberto
- Anna Laura Mancini, Chiara Monfardini and Silvia Pasqua (2011), “On Intergenerational Transmission of Reading Habits in Italy: Is a Good Example the Best Sermon?”, Carlo Alberto Notebooks N. 218/2011 and WP IZA 6038

- Letizia Mencarini, Silvia Pasqua, Agnese Romiti (2013), “Children’s time use in two-parent and single-mother families in Italy”, mimeo
- Daniela Del Boca, Daniela Piazzalunga and Chiara Pronzato (2013), “Early child care and child outcomes: the role of grandparents. Evidence from the Millennium Cohort Study”, mimeo
- Yleni Brilli, Daniela Del Boca and Chiara Pronzato (2013), “Does child care availability play a role in maternal employment and children's development? Evidence from Italy”, forthcoming *Review of Economics of the Household*