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Reflections on Universal pre-school child care from outside the UK

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Outline



- Focus on child cognitive and non cognitive outcomes:
- Economic approach to early child care
- Studies on maternal employment and child outcomes
- Studies on public child care and child outcomes:
- Denmark, Germany, Spain, Norway, Italy
- Conclusions

Economic approach to early child care



- The interest among economists for early child care and child outcomes has grown in the last few years
- motivated by concerns about the potential negative impact of the growth in labor market participation of women with young children.
- Recent data show that mothers' time with children has in fact declined in the last decades, while indicators of several cognitive and non cognitive outcomes of children have worsened.

Economic approach to early child care



- Seminal work by James Heckman and co-authors have shown that children's outcomes (school, health and behavioral) are:
- the object of a production function in which inputs applied by families as well as other institutions (schools, teachers, peers, society..)
- These inputs play a very significant role
- Since cognitive and cognitive outcomes are largely determined early in life

Economic approach to early child care



Among the important results of their studies:

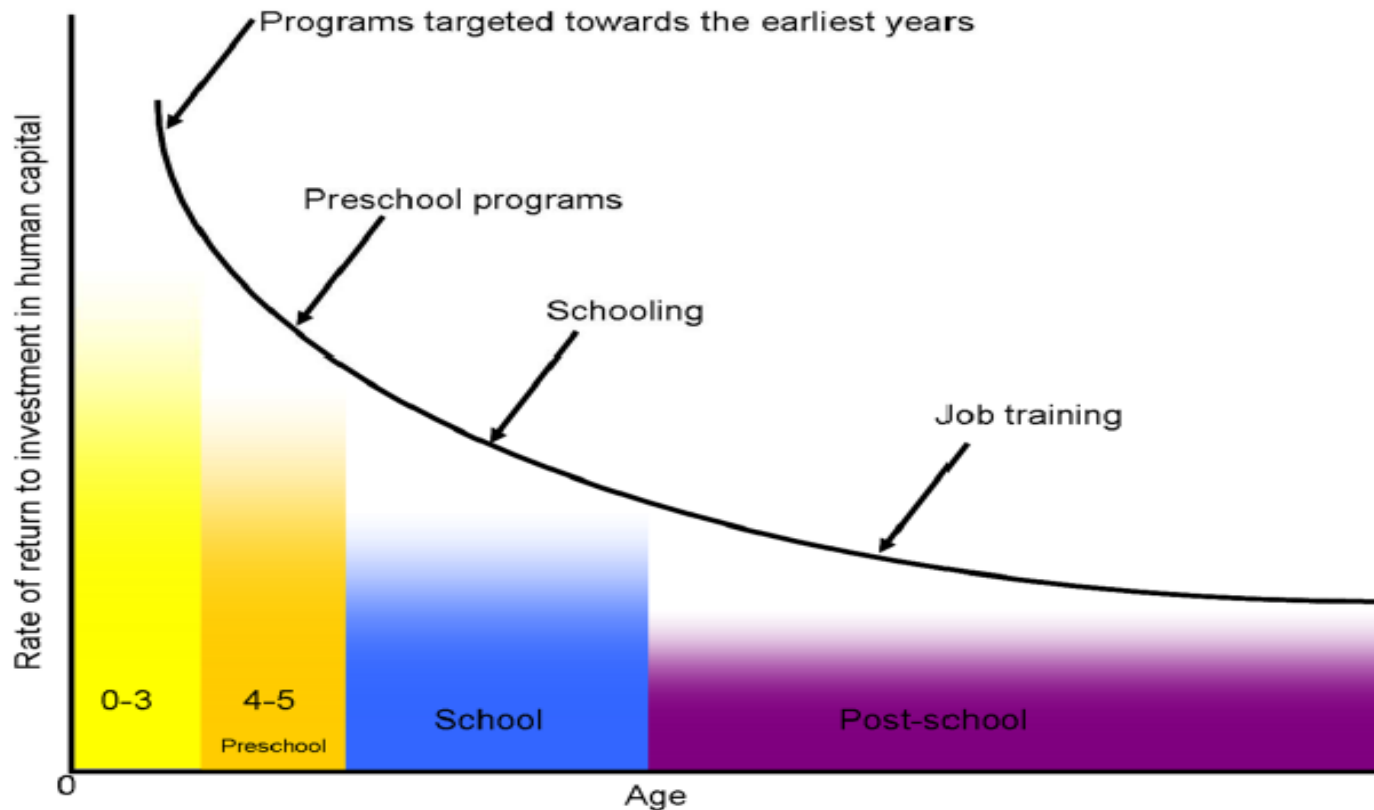
- Cognitive abilities are important for socioeconomic success.
- Personality traits, socio-emotional skills, physical and mental health, perseverance, attention, motivation, self confidence are also important for success in life.
- Link between non cognitive and cognitive outcomes

Economic approach to early child care



- If families and institutions intervene early enough, it can affect cognitive, socio-emotional abilities and health.
- Early interventions promote schooling, reduce crime, promote workforce productivity and reduce teenage pregnancy.
- Early interventions are estimated to have higher rates of return than later interventions (such as reduced pupil-teacher ratios, public job training, convict rehabilitation programs, tuition subsidies).

Economic approach to early child care



Heckman, 2008

Economic approach to early child care



- The economic returns to early investments promote efficiency and reduce inequality.
- Children from advantaged environments by and large receive substantial early investment.
- Children from disadvantaged environments more often do not.
- There is a strong case for public support for funding interventions in early childhood for disadvantaged children.

Studies on maternal employment and child outcomes

- Different studies (for the US, the UK, Germany, and Sweden) have used this framework focusing the impact of maternal employment on child outcomes (Ermisch & 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.

Studies on maternal employment and child outcomes

- 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.
- Her findings suggest that maternal time may differentially affect children because women differ in their ability to influence their children's cognitive development.

Studies on maternal employment and child outcomes



- Other inputs. While mother's time is widely recognized as a crucial input in the production process of child outcomes, father's time may be equally productive especially in some stages of child life.
- In the last few decades, fathers' time has increased remarkably, partly offsetting the decline in mother's time
- 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.

Studies on maternal employment and child outcomes



- 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
- Del Boca, Flinn and Wiswall (2010) show that both parents' inputs are important for 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.

Studies on maternal employment and child outcomes



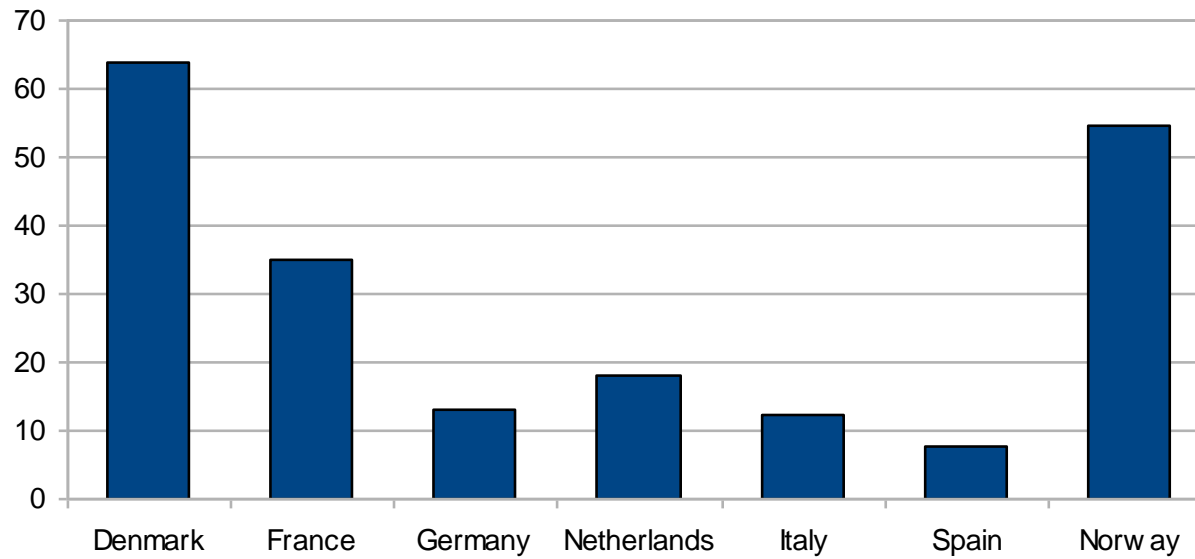
- The implication of their results is that policy makers should carefully consider both parents' responses when designing programs to improve child cognitive outcomes.
- Also grandparents care may affect child outcomes
- Using Millenium cohort data (Del Boca and Pronzato, 2012) show that grandparents' time with children is associated with better child health and lower probability of illness but worse cognitive outcomes than formal child care.

Studies on maternal employment and child outcomes



- Other differences in the findings can be attributed to the fact that parents' inputs interact with other inputs, such as the type of child care.
- School inputs are important and quality changes by school types
- We focus on public child care which is on average high quality care, more homogenous across schools.
- Literature from different countries characterized by different availability of child care.

Public Child Care / 0-2 years



Studies on the impact of child care on child outcomes: Denmark



- Datta Gupta and Simonsen (2010) analyze the case of Denmark (high quality and almost universal child care)
- Estimate the effects of having attended a high quality preschool in Denmark versus family day care services (less regulated) and parental care, on children's behavioral index measured at age 7.
- Using OLS and IV strategies, they find that children cared in public school have less behavioral problems than those cared for informal day care services.

Studies on the impact of child care on child outcomes: Germany



- Felfe and Lalive (2012) study the West German setting, where high quality center-based care is available, but severely rationed.
- Using as instrument for child care attendance the within state differences in child care supply,
- They 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.

Studies on the impact of child care on child outcomes: Spain



- 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, exploiting data for PISA 2003, 2006 and 2009.
- They estimate a sizable increase in reading and math test scores following the reform.
- These estimates show the effect of crowding out mothers or grandmothers care in favor of formal child care, since private child care was very limited at the time of the reform.
- They also find stronger effects for girls and for children with low educated parents.

Studies on the impact of child care on child outcomes: France



- Dumas and Lefranc (2010) estimate the long term effects of child care in France where child care is high quality and widely available.
- They analyze the impact of duration of child care attendance.
- 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.

Studies on the impact of child care on child outcomes: Norway



- 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, and the impact is much stronger for children of low educated parents.
- Their results suggest a positive and significant impact of childcare coverage on educational outcomes, such as years of education and college attendance, but also on long-term outcomes, such as adult earnings.

Studies on the impact of child care on child outcomes: Italy



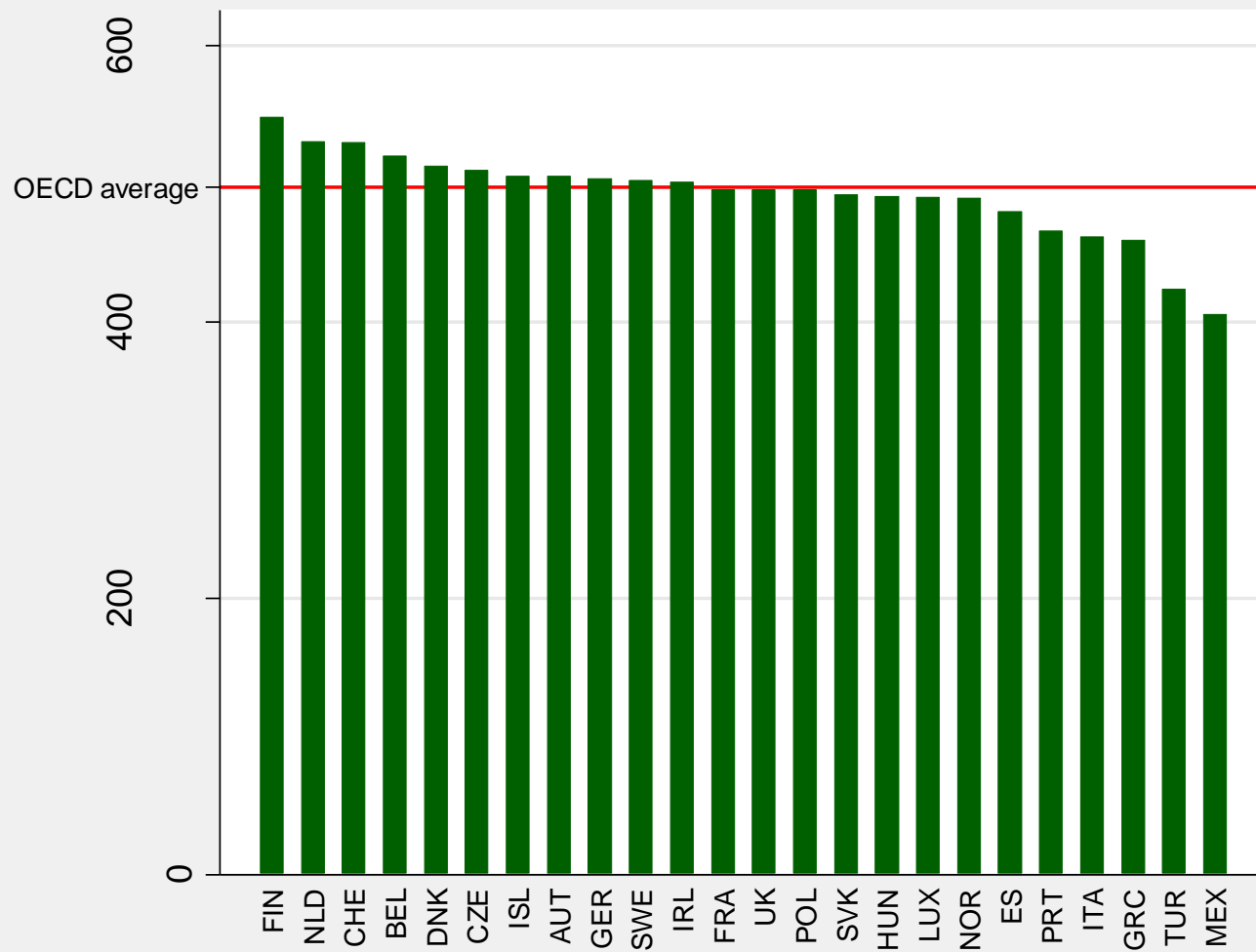
- In Italy (as in other Mediterranean countries) the debate on the importance of the educational strategies of *early intervention* has been neglected.
- Given the low proportion of working mothers in Italy and the low birth rate, one could argue that the problem is less crucial with respect to other countries.
- Italian families should have more time to dedicate to their children, with positive implications for their cognitive and behavioural development.

Studies on the impact of child care and child outcomes: Italy

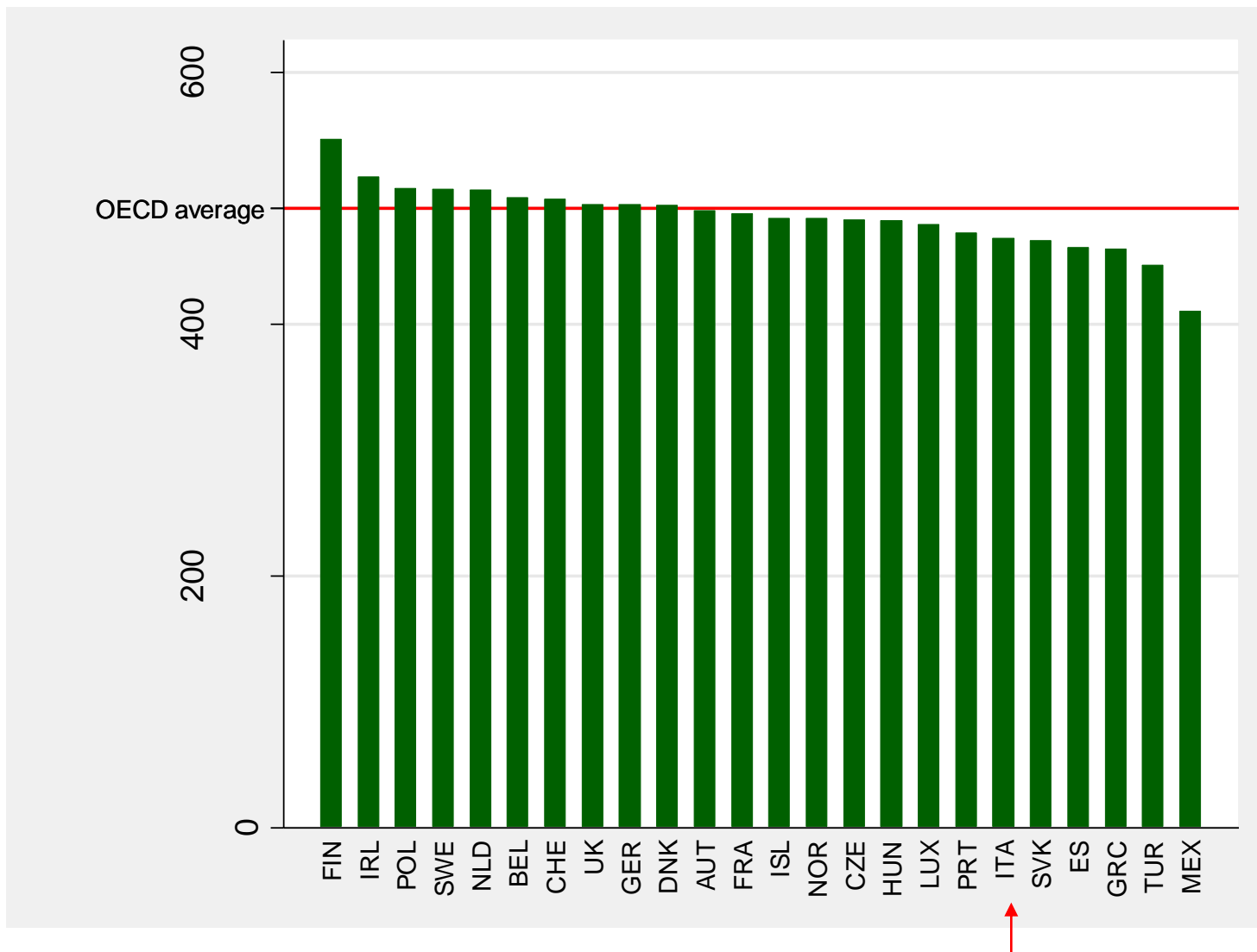


- However, from the comparative data it can be seen that:
- Italian children do not obtain better results than children of the same age in other industrialised countries
- and for many years fifteen-year-old Italians have even obtain worse results (PISA-OECD).

PISA math



PISA reading



Studies on the impact of child care on child outcomes: Italy



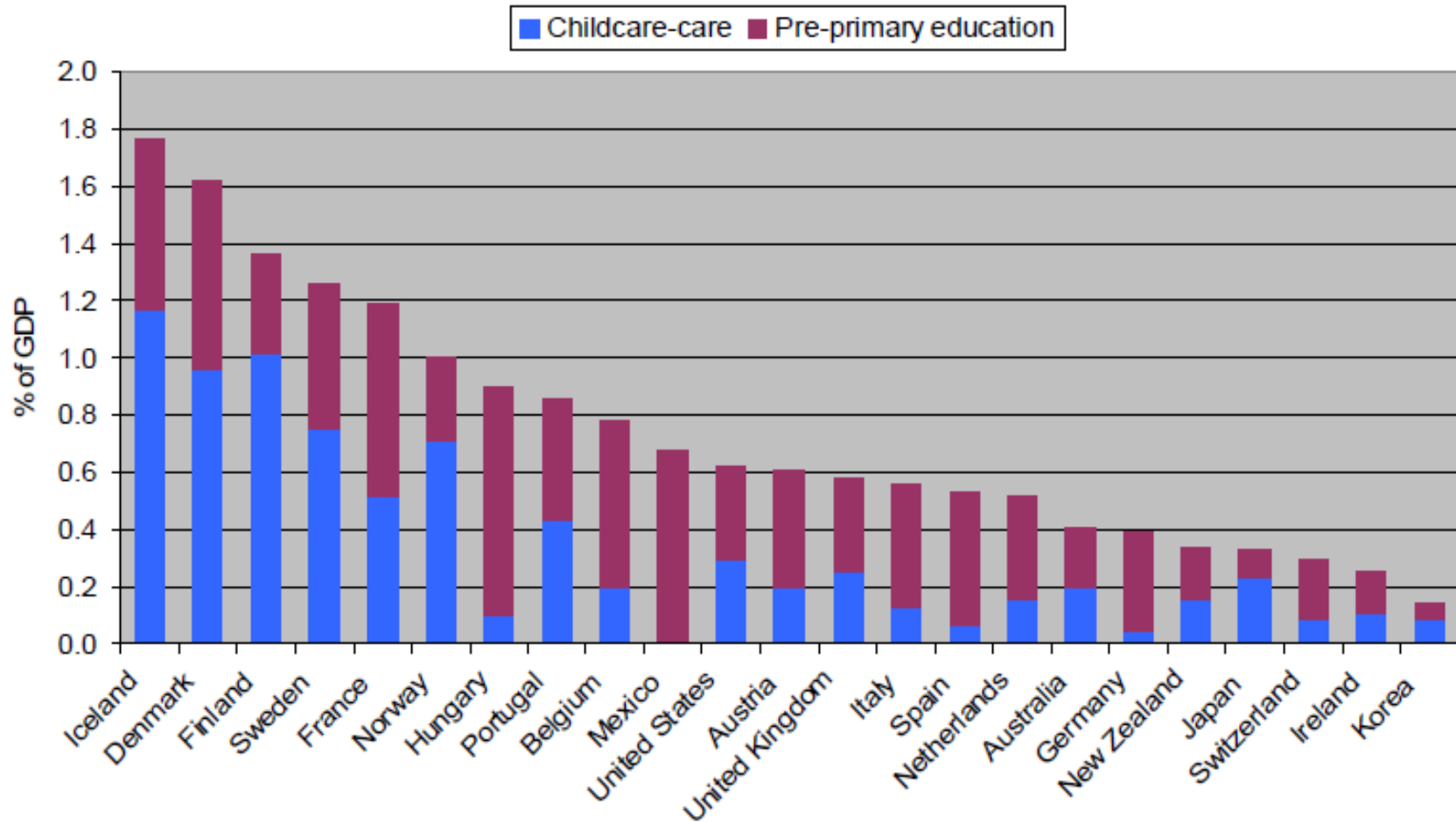
- One explanation is that the average of the non working women in Italy have a considerably lower level of education than women who do work; consequently their input in the children development process is less.
- Second, it is probable that child outcomes depend not only on the quality of the investments (monetary and in terms of time) made by the parents, but also on the quality of the inputs that the parents choose as substitute during their absence at work (such as formal childcare).

Studies on the impact of child care on child outcomes: Italy



- 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 (which is about the same as the OECD average),
- in contrast with the *early intervention* approach.

Public expenditure on early childhood services (0-6 years) as a percentage of GDP in selected OECD countries



Studies on the impact of child care on child outcomes: Italy



- Since 2009, the Italian Institute for the Evaluation of the Education System (INVALSI) provides the only ongoing national survey of students' educational achievements at primary school.
- These assessments measure the abilities of students in second and fifth grades normally aged 7 and 10 years
- In addition to test scores, INVALSI provides information on the children's and parents' characteristics reported by the schools.

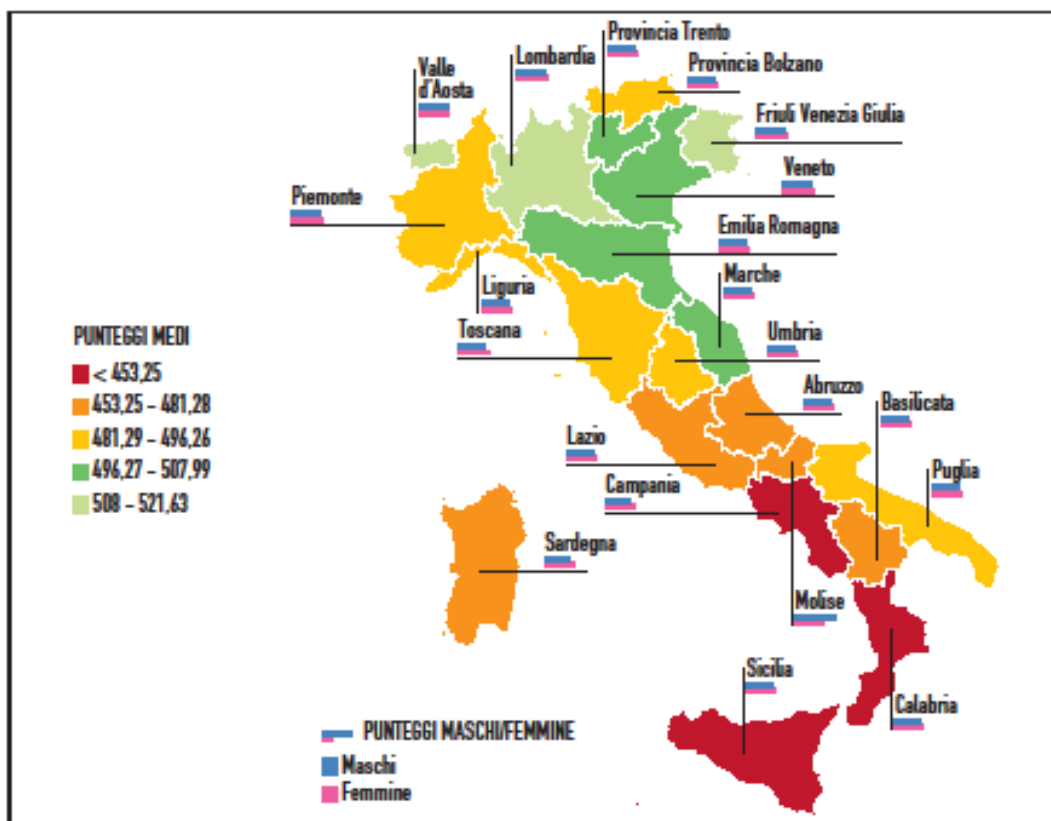
Studies on the impact of child care on child outcomes: Italy



Brilli Del Boca and Pronzato (2012) use INVALSI data which provide information on:

- Cognitive outcomes II elementary school
- Mothers labor market participation
- Mothers education
- Fathers education
- Child gender
- Immigration status
- Public Child care 0-3 (province level)

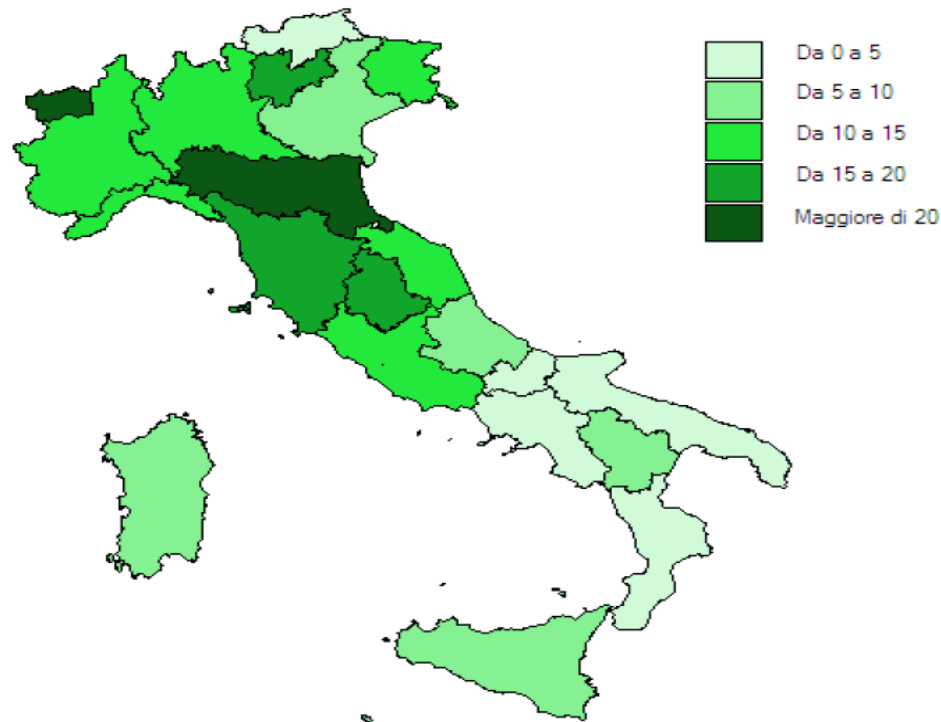
Test scores by regions



Fonte: PISA / Ocse

Availability of public child care by region

(childcare/n. of children 0-3)

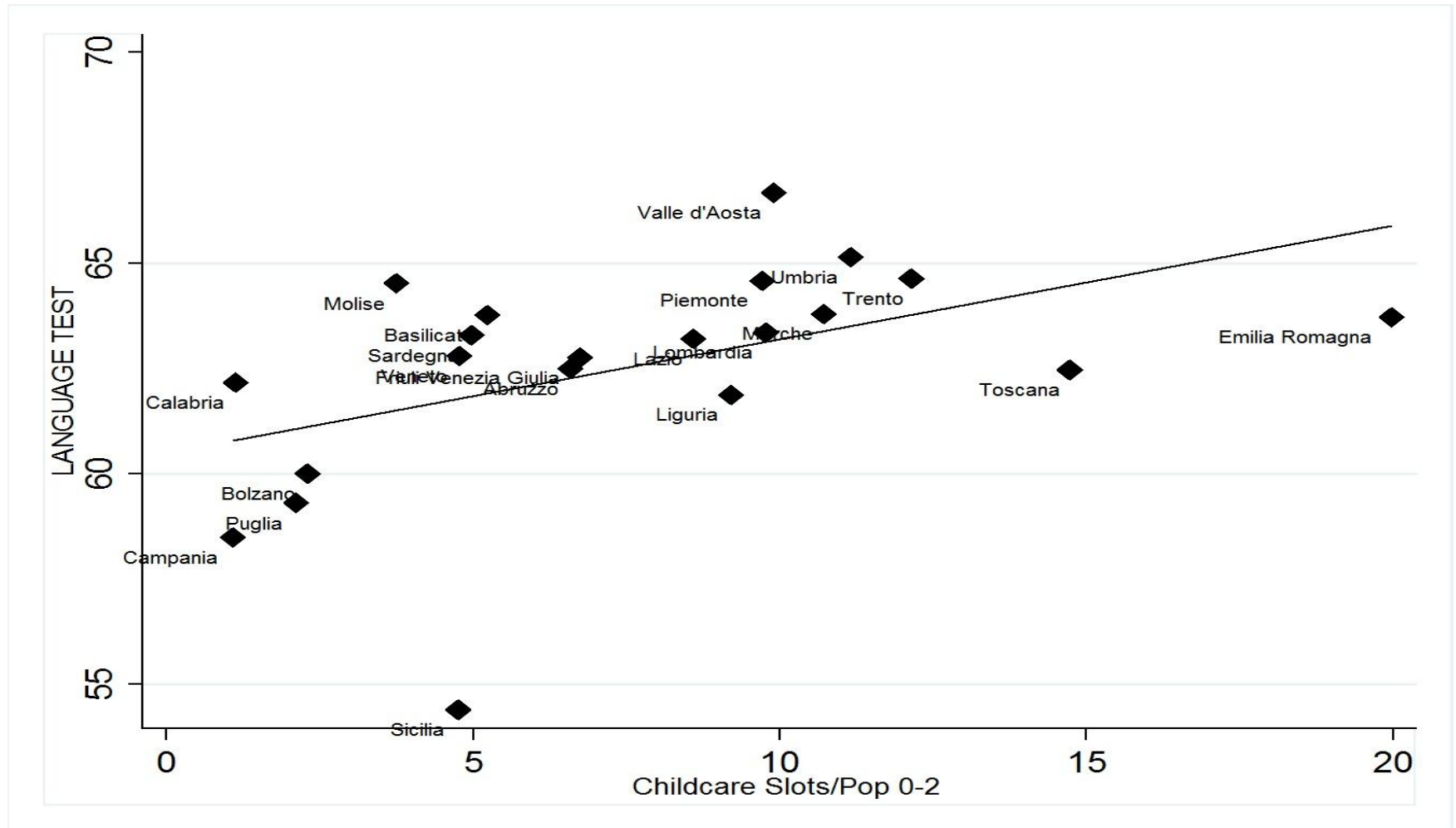


Studies on the impact of child care on child outcomes: Italy

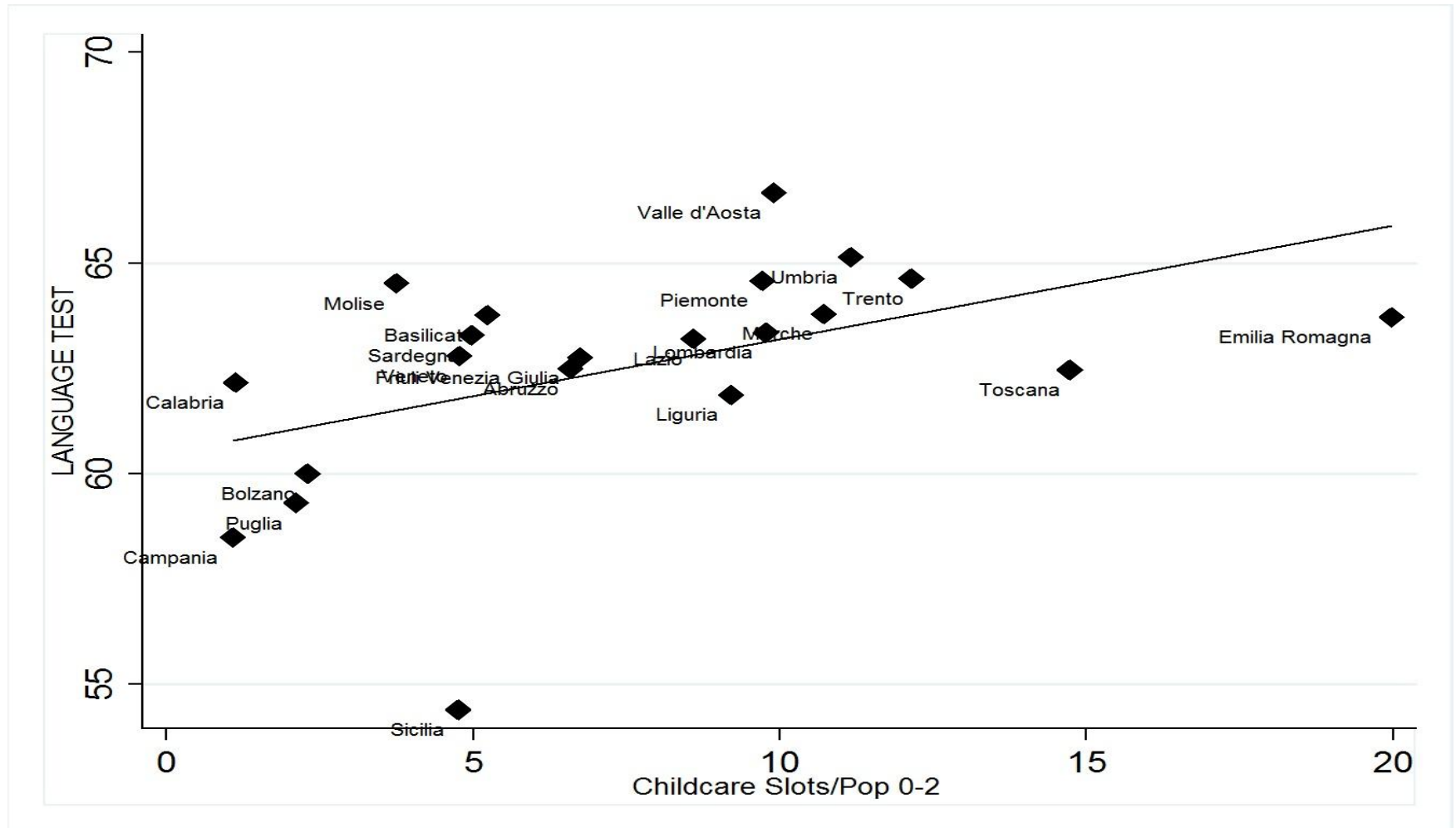


- They analyze the effects of public child care availability in Italy on mothers' working status and children's scholastic achievements
- Their estimates indicate that child care availability has positive and significant effects on both mothers' working status and children's Language test scores.
- Moreover, the effect of a percentage change in public child care on mother's employment and Language test score is greater if child care availability is scarce, i.e., the service is more rationed and in disadvantaged areas.

Correlation child care and mothers work



Correlation child care and test scores (reading)



Studies on the impact of child care on child outcomes: Italy



Variables	Mother works	Reading	Math
Public child care	+	+	n.s.
Male	n.s.	-	+
Non Italian	-	-	-
Mother college+	+	+	+
Father college +	+	+	+

Studies on the impact of child care on child outcomes: Italy



Another data set Department of Psychology
University of Turin

- Information on children in I – IV elementary school in 2008-09 Cuneo, Asti e Torino
- Have attended public child care
- Parents characteristics
- Non-cognitive outcomes:
 - *listening;*
 - *concentration;*
 - *make friends;*
 - *creativity in play,*
 - *cooperation with peers*

Studies on the impact of child care on child outcomes: Italy



Descriptive statistics

listening	27.0%
concentration	24.1%
Make friends	24.0%
creatività in playing	20.0%
Cooperation with peers	16.9%
Intact family	90.9%

Studies on the impact of child care on child outcomes: Italy



Descriptive statistics

Mother full-time	38.2%
Mother part-time	35.6%
Father College	21.8%
Mother college	22.0%
<i>childcare</i>	32.8%
Asti	25.4%
Cuneo	63.0%
Torino	11.6%
n.	880

Studies on the impact of child care on child outcomes: Italy



Results on behavioral outcomes

	<i>Child care</i>	<i>Madre works</i>	
		<i>full-time</i>	<i>part-time</i>
listening	+	-	n.S.
Concentration	+	-	n.S.
Make friends	+	-	n.S.
creativity in play	+	-	-
Cooperation with peers	+	-	-

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

Conclusions

- 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.

Conclusions

- 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.