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LESSONS FROM A DECADE OF CHILDCARE REFORMS

WHEN CONTEXT DOES MATTER. CHILDCARE AND MATERNAL EMPLOYMENT: TRYING TO SOLVE THE PUZZLE

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Introduction

The relationship between childcare provision and maternal employment appears simple: childcare availability should facilitate the reconciliation of work and family duties, and hence have a positive effect on mothers working. Despite the apparently simple connection between the two concepts, the question of whether childcare provision affects maternal employment has been widely debated. Does childcare provision really influence maternal employment? Is reducing childcare costs a better solution than increasing the number of childcare places available? Providing conclusive answers to these questions is no easy task.

When scholars attempt to solve this kind of complex puzzle in order to obtain definite policy implications, the final answer can nearly always summarised as: “It all depends on...”. The case of childcare is no exception to this rule. Indeed, political and institutional frameworks are very important in shaping the possible effects related to formal childcare provision. The same policy applied in a country such as Sweden – where childcare is universally provided and female participation is extremely high – is likely to achieve different results when applied in countries with lower childcare coverage and female labour market participation (e.g. Italy or Spain).

This paper begins by exploring the relationship between childcare utilisation and maternal employment through a cross-country comparison. The positive correlation between maternal employment and childcare utilisation will appear evident, suggesting not only differences

across countries, but also within the same country. We then propose a brief overview of recent studies on this topic, emphasising in particular the institutional context in which such studies are carried out. We conclude with a simple empirical analysis applied to the Italian case, which highlights the heterogeneous effects of childcare availability across mothers who are more or less attached to the labour market.

Childcare provision and maternal employment: a cross-country comparison

The importance of the institutional and political context in shaping the effectiveness of childcare related policies is indisputable. The first important step towards forecasting the potential outcomes induced by investment in childcare services is gaining an understanding of the “environment” in which the policy will be implemented. The best way to pinpoint institutional contexts is a simple analysis of female labour market participation and childcare availability.

To this end, we graphically represent the relationship between childcare utilisation – used as a proxy for availability – and maternal employment across European countries using EU-SILC data.^{2,3} As shown in Figure 1, the correlation between mothers’ employment and childcare utilisation is positive and extremely high, with a value around 0.7.^{4,5} Countries with low levels of childcare utilisation are grouped in the left part of the graph.

² The European Union Statistics on Income and Living Conditions (EU-SILC) aim to collect multidimensional microdata on income, poverty, social exclusion and living conditions across European countries. For further details see: http://ec.europa.eu/eurostat/web/microdata/european_union_statistics_on_income_and_living_conditions.

³ Childcare utilisation is a weighted average at a country (regional) level of children using childcare for at least one hour a week. Maternal employment is a weighted average at a country (regional) level of mothers working full or part-time. Childcare coverage is measured in 2009 for children born in 2007. Maternal employment is measured in 2010 for mothers with a child born in 2007. We exclude from our analyses countries (regions) reporting extreme values (0 or 1) for childcare utilisation or maternal employment.

⁴ Reduced sample size could influence the reliability of some of our figures. Despite this potential limitation, our analysis seems very reliable if we compare, for example, our measure for childcare coverage with data provided by the OECD (2014). More specifically, the ranking – in terms of childcare availability – obtained by our analysis is very close to the one in: http://www.oecd.org/els/soc/PF3_2_Enrolment_in_childcare_and_preschools.pdf (page 2).

⁵ This simple analysis does not address the endogeneity issue due to the fact that countries/regions with higher availability of childcare may be characterised by mothers more willing to work.



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Figure 1

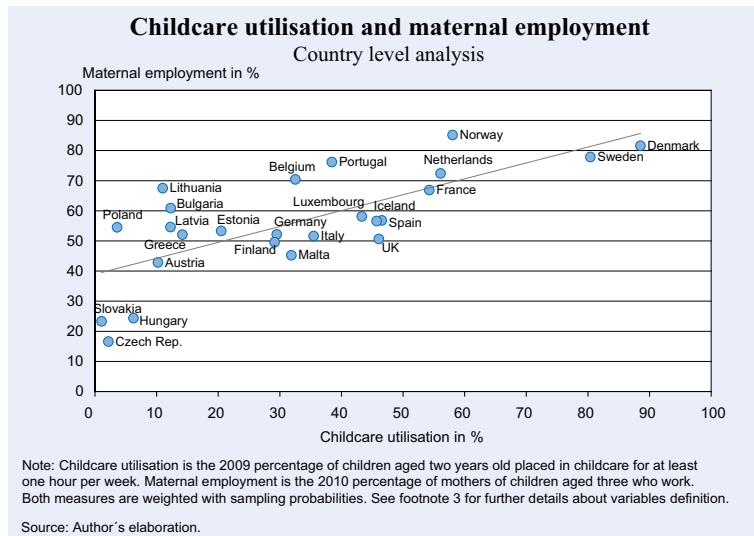
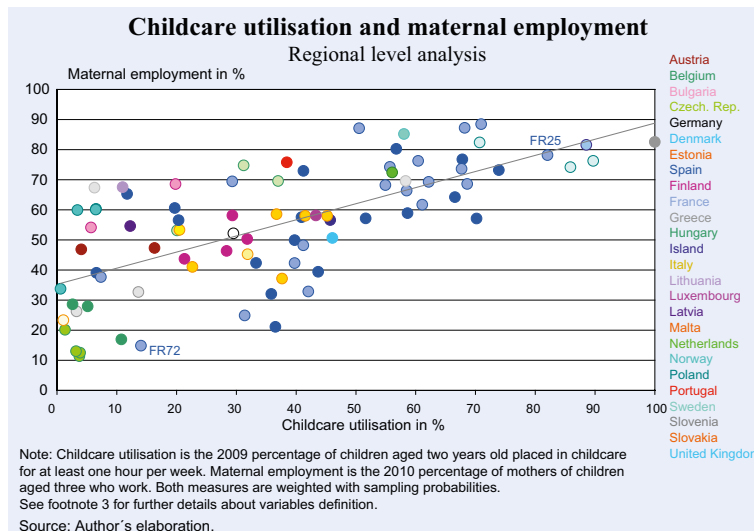


Figure 2



Many of these countries are situated in Eastern Europe (e.g. Hungary, Czech Republic, etc.). In the central section of the graph we see countries with a medium level of childcare utilisation like Italy, Germany and Finland. These two groups of countries – as pointed out in the previous section – are likely to be particularly sensitive with respect to childcare policies. Not surprisingly, countries like Norway, Sweden or Denmark are characterised by a very high level of formal childcare associated with high mothers' participation rate.

In Figure 2 a similar analysis is performed, this time dividing observations at a regional level. More specifically, we use NUTS territorial classification to identify

our regions of interest.⁶ The aim of this representation is to understand the importance – if any – of intra-country variability. Obviously, the positive relationship between childcare utilisation and maternal employment is confirmed, yet interesting insights arise when attention shifts to within-country analysis. By keeping in mind some of the potential limitations previously mentioned (see footnote 4), the intra-country variability appears, in fact, to be extremely relevant in many cases. France is an exhaustive example of the phenomenon: as shown, some regions (e.g. FR72 – Auvergne) in France are dominated by both a low level of childcare and of maternal employment, while others (FR25 – Basse Normandie) are close to the top European performers. The case of Spain appears to be similar.

Therefore, a very simple graphical analysis is sufficient to draw at least two general conclusions. On the one hand, with very few exceptions, a higher level of formal childcare utilisation is often associated with higher maternal participation in the labour force. The investment in childcare provision seems to be effective in reducing female exclusion from the labour market. On the other, differences within the same country often appear as particularly important. This would imply caution when aggregate results – at a national level – are discussed. The presented evidence clarifies the necessity to adopt a multiple perspective in designing childcare policies. In particular, the central government and local institutions need to strongly interact to avoid the risk of not addressing specific territorial needs.

⁶ The NUTS classification of European territory was introduced by Eurostat in 1988 to make easier the comparison between within-country territorial units.

Much evidence for (too) many results?

Formal childcare is considered a fundamental service for fostering child development and promoting maternal employment. Understanding the causal impact of childcare on female labour supply is particularly challenging due to the possible differences between mothers asking for childcare service and mothers not interested in the service (Coneus, Goeggel and Muehler 2009). In addition, studies carried out using data from different countries often report very different results. This heterogeneity of findings means that caution is required when extrapolating results about childcare across time periods or across different populations (Fitzpatrick 2012). These conceptual and methodological difficulties complicate policymakers' decisions when asked to choose whether to invest in cost reduction or to increase service availability. The mentioned uncertainty is the main responsible for a flourishing literature on the topics. We present a short overview of the more recent works and distinguish them on the basis of political and institutional contexts.

An important effect of a cost reduction on mother's labour supply is found in Lefebvre and Merrigan (2008) for the Canadian case. They use a new childcare policy based on a reduced fee applied to children aged four to show that the policy had a large and significant impact on the labour supply of mothers with preschool children. More specifically, the policy increased the participation rate of mothers with at least one child in age one to five by around eight percentage points. The policy was not only effective in the short-term but had also an important long-term labour supply effects particularly relevant for less educated women (Lefebvre, Merrigan and Verstraete 2009).

It is sufficient to move from Canada to the US to understand how heterogeneous results are the rule when investigating childcare effects. Not only heterogeneity across countries is relevant, but often also heterogeneity within each country needs attention. Specifically, according to Fitzpatrick (2012) in the US context childcare subsidisation seems to play a marginal role in shaping maternal employment. The study – which analyses the case of public kindergartens – shows how public school subsidy was responsible for an increase in employment of solely single mothers without additional young children. The effect of this kind of subsidies policy seems partially confirmed by Cascio (2009). More specifically, a relatively large employment effect for single mothers of five-year-olds with no younger children is

found, while no effects emerge for other mothers. On the contrary, universal preschool subsidisation is found to have almost no effect on maternal labour supply in Fitzpatrick (2010).

The difficulty of detecting a unique and similar conclusion persists when attention shifts to the European contexts. Extensive social, political and institutional differences among countries stimulate a very broad-ranging debate on which aspects of childcare are to be privileged as a result of policy design. A rough classification of institutional contexts would be based on the identification of two groups of countries. On the one hand, countries such as Norway or Sweden are characterised by universal childcare provision. On the other, there are countries like Italy where the availability of formal childcare is limited and in which limitations are often particularly striking in the public sector.⁷

When focusing on the first group of countries, it is no surprise to find that childcare investments hardly have any effect on female labour supply. The extremely high levels of both childcare coverage and female participation limit the effect of new reforms.

As a result, Lundin Mörk and Öckert (2008) estimate a “close-to-zero” effect of the reduction in childcare costs on female labour supply for the case of Sweden. Similarly, a cash benefit for one-to-two year olds not using subsidised childcare in Norway induces a very small effect on mothers' labour supply (Rønsen 2009). The same lack of a causal effect of subsidised childcare on maternal employment arises in Havnes and Mogstad (2011). This peculiarity of Northern countries makes it difficult to understand the external validity of the results detailed above. How do the specific institutional contexts analysed really matter in shaping the effects induced by childcare policies?

Analysing other territorial contexts is the best way of trying to answer the question. The choice between cost reduction and an increase in availability is examined in Vandellannoote, Vanleenhove and Decoster (2014) using Belgium as a case study. The attempt to disentangle the cost effect on female labour supply from the availability effect for a country with a relatively generous service supply highlights that maternal labour supply seems more sensitive to changes in the availability of care, rather than in price.

⁷ See Brilli, Del Boca and Pronzato (2015) for a detailed analysis of Italian public childcare supply.

Germany also constitutes another particularly interesting case. In Germany subsidised childcare is rationed,⁸ while private childcare is far more expensive than the public care option. This particular framework seems conducive to the implementation of childcare policies and the understanding of their potential consequences. At first sight, the efficiency of childcare related investments appears to be on the increase compared to the previously selected cases. As a matter of fact, the introduction of a childcare subsidy is found to be responsible for a marked increase in the labour supply of all women (Haan and Wrohlich 2011). Bauernschuster and Schlotter (2015) report a similar result and, more specifically, they estimate that a ten percentage point increase in public childcare provision increases the employment of mothers whose youngest child is three-to-four years old by roughly 3.5 percentage points. Similar to the Belgian case, German women also seem to respond more to an extension of childcare places than to a reduction in the price of existing places (Wrohlich 2011).

Childcare provision and related outcomes is also widely debated within Mediterranean countries. In France, e.g., Goux and Maurin (2010) find that early school availability for two-year olds has a significant employment effect on single mothers, while the effect is almost in-existent for two-parent families. Labour market general conditions and, in particular, high female labour force participation are likely to be the main drivers of modest effects related to childcare provision. With this perspective, Nollenberger and Rodríguez-Planas (2015) chose the case of Spain in order to analyse a context with low labour demand and depressed wages. They find that around two mothers become employed for every ten additional children enrolled in public childcare. Because of the peculiarity of the institutional context, it is not clear whether or not this effect should be seen as modest.

The analysis of a similar institutional and cultural context such as the Italian one appears enlightening instead. In Italy the level of women's labour market participation is significantly low and calls for interventions aimed at fostering employment.⁹ Brilli et al. (2015) investigate the effect of public childcare availability on mothers' working status, and find that a percentage change in

public childcare coverage increases the probability of mothers being employed by 1.3 percentage points.

As previously mentioned, this comparison across countries highlights different results according to different institutional contexts. Suffice it to say that the main driver of female participation appears to be the availability of childcare, while cost seems to play a secondary role. Not surprisingly, childcare provision is often more relevant in shaping individual employment in contexts where the labour market is characterised by a low level of demand.

Who benefits more from childcare provision?

On a macro level, the existing literature on this topic highlights the modest effect of childcare provision on female labour supply in countries characterised by high female labour market participation – like Northern European countries – in which childcare is universally provided. Conversely, the effect seems more relevant in contexts with low levels of female labour market participation. On a micro-level, we wish to investigate whether the effect of childcare provision is heterogeneous across mothers more or less attached to the labour market.

In this specific framework, the Italian case is particularly appealing due to its labour market in which female participation is at one of the lowest levels across Europe (see footnote 9). To understand the potential of childcare-related policies, we perform a very simple empirical analysis to show the possible relation between childcare provision and maternal employment. Our interest resides in understanding which groups of mothers are more responsive to childcare availability. Specifically, we want to understand whether childcare availability affects the working behaviour of mothers with different attachments to the labour market. As a proxy of a mother's labour attachment, we use information on her employment situation in the three months prior to the birth of the child. Therefore, we need a complete set of information that allows us to detect working status before childbirth, childcare utilisation and working status in the first years of the child's life.

EU-SILC panel data provide us with all the information that we need.¹⁰ In particular, we focus on the period from 2004 to 2010, collecting all the available information

⁸ By rationed we mean that because the number of applicants is higher than the number of places available in the public childcare system, some individuals may not gain access to the service. Therefore, they evaluate private childcare as a potential option. See Wrohlich (2008) for an analysis of excess demand for subsidised childcare in the German case.

⁹ According to Eurostat, the female employment rate in Italy was 46.5 percent in 2013 compared to an average EU-28 level of 58.8 percent. Only Greece and Croatia performed worst with respect to Italy.

¹⁰ EU-SILC not only provides cross-sectional data described in footnote 4, but also supplies a panel dataset containing information on the same sample of individuals for four consecutive years.

about working status and its time evolution for 921 mothers with a child aged zero to three. The panel nature of the dataset allows us to easily detect mothers' working status in the trimester preceding childbirth and when the child is three years old. Unfortunately, individual information about childcare utilisation is not available for this source of data and, therefore, to overcome this problem we proxy childcare utilisation with a regional coverage rate at a specific point in time.¹¹

We therefore estimate a logistic regression model of mothers' employment controlling for a series of potential determinants of working status (e.g. age, education, household composition etc.). Estimated coefficients for childcare coverage are presented in Table 1. As expected, formal childcare coverage has a positive significant effect on the individual probability of maternal employment. More specifically, a one percentage point increase in childcare availability increases the mothers' probability of working by around 0.6 percentage points. However, the average effect is driven by the sub-sample of mothers who were not working before the birth of the child. Results suggest that, while women closely attached to the labour market are better at organising the care of their child and returning to work, higher childcare provision helps less labour market-attached women to find (return to) a job.

In addition, this simple empirical exercise suggests that childcare-related policies play a key role in shaping female employment in countries characterised by low levels of female participation.

Conclusion

This paper reviews the recent literature on childcare provision and maternal employment, and uses simple statistics to show this relationship across European countries and regions. In particular, it studies how the

¹¹ The use of coverage rate is a reliable proxy for individual childcare utilisation, but also reduces the endogeneity issue related to childcare utilisation. Mothers using childcare are probably different with respect to mothers not using the service in terms of working propensity. Considering regional coverage as a proxy for individual utilisation we employ an Intention to Treat Analysis (ITT).

Table 1

Childcare provision and maternal employment			
	(1)	(2)	(3)
	Whole sample	Working before	Not working before
Formal childcare coverage	0.28** (0.11)	0.23 (0.19)	0.62*** (0.20)
Observations	921	374	547

Dependent variable: Mother's employment. Logistic Regression Model. Clustered at a regional level standard errors in parenthesis. Col. (1) estimates refer to the whole sample. Col. (2) estimates refer to the sample of mothers working before childbirth. Col. (3) estimates refer to the sample of mothers not working before childbirth. Models (1) to (3) contain age, age squared, a secondary schooling dummy, a tertiary schooling dummy, a two-parent household dummy, a dummy for younger siblings and a dummy for older siblings. Models (1) to (3) also contain regional and time dummies. *** indicates significance at 1% level, ** indicates significance at 5% level, * indicates significance at 10% level.

Source: The authors.

association between childcare availability and mothers' labour market participation may vary across different European contexts. Studies using data from Nordic countries – where levels of female market participation are relatively high – tend to find smaller effects of childcare provision than studies using data from Southern countries. The same relationship has been found at a micro-level: focusing on Italy, a country characterised by low female work participation, we have found that childcare availability is more crucial to less labour-attached mothers. This result is in line with studies which find that family policies are particularly important for less educated women (Del Boca, Pasqua and Pronzato 2009; Pronzato 2009).

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