



Use of childcare in the EU Member States and progress towards the Barcelona targets

Short statistical report No. 1

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Use of childcare services in the EU Member States and progress towards the Barcelona targets

Short Statistical Report No. 1

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Preface

This report provides a current analysis of Member States' progress towards meeting the 'Barcelona targets'. It initially examines the progress towards reaching the Barcelona targets by comparing and then extending the results presented in 2008. However, it also extends the previous 2008 analysis in a number of ways, namely it examines: the impact of parenthood on employment, public spending on childcare and the cost, affordability and quality of childcare. The report also summarises the extent to which the Barcelona targets have been met by Member States by the agreed deadline of 2010. Where possible, data were examined for 27 EU Member States and where available, EFTA countries Norway and Iceland.

This short statistical report is part of a series of reports on gender equality in the work force and reconciliation of work, family and private life. These reports have been commissioned by the Justice Directorate General of the European Commission. The study was jointly undertaken by RAND Europe and the University of Groningen. These reports should be of interest to policymakers and academics with an interest in improving gender equality in the work force and improving the compatibility of having a career in combination with a family and private life.

RAND Europe is an independent not-for-profit policy research organisation that aims to improve policy and decision-making in the public interest, through research and analysis. The research group led by Professor Melinda Mills at the University of Groningen focuses on research in the area of cross-national comparative research, gender equality, work-family reconciliation and advanced statistical analysis.

This report has been peer-reviewed in accordance with RAND's quality assurance standards. The authors wish to thank the peer reviewers Jane Lewis (London School of Economics) and Sunil Patil (RAND Europe) for their comments on earlier versions of this document. For more information about RAND Europe or this study, please contact Stijn Hoorens (hoorens@rand.org). For more information about this document, please contact Prof. Melinda Mills (m.c.mills@rug.nl).

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Table of Contents

Preface.....	iii
Table of Contents.....	v
Figures and boxes	vii
Tables.....	ix
Abbreviations	xi
1. Introduction	1
2. Progress towards meeting the Barcelona targets.....	3
2.1. Previous research: progress towards the Barcelona targets until 2006.....	3
2.2. Who has met the Barcelona targets? The situation in 2010	4
2.3. Progress towards the Barcelona targets between 2006 and 2010.....	7
3. Parenthood and employment.....	11
3.1. The potential link between parenthood, employment and childcare	11
3.2. Cultural and normative values about parenthood and childcare	14
4. Availability, affordability and quality of childcare	17
5. Public spending on childcare.....	25
6. Informal childcare.....	27
6.1. Overview of informal childcare in Europe.....	27
6.2. Disentangling different types of informal childcare	30
7. Conclusion and policy recommendations.....	35
7.1. Summary of main findings	35
7.2. Policy recommendations.....	37
7.3. Conclusion	43
References	45

Figures and boxes

Figure 1: Percentage of children up to three years of age cared for by formal arrangements by weekly time spent in care, 2010.....	6
Figure 2: Percentage of children from three years of age to mandatory school age cared for by formal arrangements by weekly time spent in care, 2010.....	7
Figure 3: Changes between 2006 and 2010 in percentage of children under three years cared for by formal arrangements	9
Figure 4: Changes between 2006 and 2010 in percentage of children from three years of age to mandatory school age cared for by formal arrangements	9
Figure 5: Employment rate of women in the EU, 2000–2010	11
Figure 6: Difference between employment rate with and without children under 12, men and women 25–49 years old, 2010.....	12
Figure 7: Full-time employment rate of mothers and full-time formal childcare arrangements for children up to three years old, 2010.....	13
Figure 8: Full-time employment rate of mothers and full-time formal childcare arrangements for children between three years old and mandatory school age, 2006 and 2010	14
Figure 9: (Dis)approval of a full-time working woman with a child under three years of age, by male and female adults.....	15
Figure 10: Components of net childcare costs in 2008 for dual-earner couple family*	18
Figure 11: Reasons linked with childcare/elderly care for which men and women 15–64 are not working or working part-time (EU-27 without DK and SE).....	19
Figure 12: Formal care use by income quintiles, households with a child <3 years, 2010.....	21
Figure 13: Public expenditure on childcare and early education services as percentage of GDP, 2007	26
Figure 14: Percentage of children in informal childcare by age group and country, 2010	28
Figure 15: Percentage of children in informal childcare by age group, number of hours, and country, 2010.....	29
Figure 15a: Prevalence rates of informal childcare of children under the age of three by country and provider group.....	30
Figure 15b: Prevalence rates of informal childcare of children aged between three and mandatory school age by country and provider group.....	31

Figure 16: Prevalence rates of informal childcare of children by age group, country, provider group, and by number of hours33

Figure 17: A typology of the progression towards the Barcelona targets37

Box 1: Coverage rate definition.....3

Tables

Table 1: Women’s (aged 15–64 and with children up to mandatory school age) main reason for not working or working part-time by perceived shortcomings of childcare*	20
Table 2: Indicators of childcare quality	22
Table 3: Mandatory school ages across countries.....	49
Table 4: Impact of availability and affordability of care arrangements as reason for not working or working part-time, women with children under three years and three years to minimum compulsory school age	51
Table 5: Formal care use by income quintiles, households with a child <3 years, 2010.....	53

Abbreviations

	Country	ISO Code
<i>EU 27 Member States</i>	Belgium	BE
	Bulgaria	BG
	Czech Republic	CZ
	Denmark	DK
	Germany	DE
	Estonia	EE
	Ireland	IE
	Greece	EL
	Spain	ES
	France	FR
	Italy	IT
	Cyprus	CY
	Latvia	LV
	Lithuania	LT
	Luxembourg	LU
	Hungary	HU
	Malta	MT
	Netherlands	NL
	Austria	AT
	Poland	PL
	Portugal	PT
	Romania	RO
	Slovenia	SI
	Slovakia	SK
	Finland	FI

	Sweden	SE
	United Kingdom	UK
<i>Acceding state</i>	Croatia	HR
<i>Candidate countries</i>	Montenegro	ME
	Iceland	IS
<i>Additional countries</i>	Norway	NO
	Switzerland	CH

1. Introduction

More than ten years ago, in March 2002, a meeting of the European Council in Barcelona established a set of targets known as the ‘Barcelona targets’. Member States adopted targets to improve the rate of employment of parents of young children and, in particular, women in an effort to achieve greater gender equality in the workforce. This initiative and the material in this report can also be seen in the context of the EU’s social inclusion objective, as parental employment, and particularly maternal employment, has been shown to be the main safeguard against child poverty (Lichter & Eggebeen 1994).

Specifically, the intention was to encourage Member States to ‘remove disincentives to female labour force participation and strive, taking into account the demand for childcare facilities and in line with national patterns of provision, to provide childcare by 2010 to at least 90 per cent of children between 3 years old and the mandatory school age and at least 33 per cent of children under 3 years of age’ (Barcelona European Council 2002). The European Commission reported on a mid-term assessment of progress towards the achievement of these targets in 2008 (European Commission 2008). It showed that the majority of Member States were yet to achieve the Barcelona targets and that some would require considerable further efforts in order to achieve them.

This report provides a current analysis of the progress towards meeting these targets. It initially examines the progress towards reaching the Barcelona targets by comparing and then extending the results presented in 2008. However, it also extends the previous 2008 analysis in a number of ways, namely it examines: the impact of parenthood on employment, public spending on childcare and the cost, affordability and quality of childcare. The report also summarises the extent to which the Barcelona target have been met by Member States by the agreed deadline of 2010. Where possible, data were examined for 27 EU Member States and where available, EFTA countries Norway and Iceland.

The structure for the report is as follows. Section 2 examines progress towards meeting the Barcelona targets. Section 3 examines the impact of parenthood on employment, Section 4 considers the cost, affordability and quality of childcare, Section 5 focuses on public spending on childcare. Section 6 examines the use of informal care and Section 7 summarises the central conclusions and finishes with a reflection on the Barcelona targets and offers policy recommendations.

2. Progress towards meeting the Barcelona targets

2.1. Previous research: progress towards the Barcelona targets until 2006

In 2008, the European Commission presented a report on the implementation of the Barcelona targets (European Commission 2008; SEC 2008). The report examined data for 2006 from the European Union Statistics on Income and Living Condition (EU-SILC) database describing the percentage of children in formal childcare arrangements in the two age groups of under three years of age and between three years of age and the mandatory school age.¹

Box 1: Coverage rate definition

As outlined in SEC (2008), the coverage rates are calculated as the number of children cared for by formal arrangements as a percentage of all children of the same age group. They measure the **actual use** of existing childcare provision in the EU for the two age groups and not directly the provision by Member States for instance in terms of number of childcare places available.

It is important to note that when interpreting the coverage rate statistics in this report, examining the use of childcare facilities does not provide a direct answer to the question of whether demand for childcare has been met. Other external factors can impact the demand for childcare such as the use of informal childcare arrangements by other family members, the maternity/parental leave system and unemployment levels. It is therefore essential to note that a relatively low coverage rate in certain countries may be indicative of alternative strategies to care for young children (e.g. extended parental leave options, informal care) and not necessarily as a shortage of childcare. The impact of parental leave systems on the coverage rate, however, is likely to be very limited due to the fact that parental income replacements are often offered over a period of less than six months in most countries.

The EU-SILC was chosen to be the European statistical source for measuring coverage rates. The indicator is disaggregated by two levels of usage and two age groups. The two levels of usage are: 0 to 29 hours; and 30 hour or more); and the two age groups are: children aged under 3; and children aged between three years and the mandatory school age.

The key findings of the 2008 report were that on average in 2006, 26 per cent of children under three in the EU were cared for under formal arrangements (compared to the Barcelona target of 33 per cent); and 84 per cent of children aged between three and the mandatory school age in the EU were cared for under formal arrangements (compared to a Barcelona target of 90 per cent). It should be noted that the

¹ Mandatory school age is the age at which compulsory education starts. It typically begins between five and seven years of age, however, the exact mandatory school age differs from country to country.

Barcelona targets do not explicitly consider hours of use, and that about half of the children who were cared for under formal arrangements were in formal care for less than 30 hours a week (14 per cent of 26 per cent for those who were under three years of age, and 44 per cent of 84 per cent for those who were aged between three and the mandatory school age).

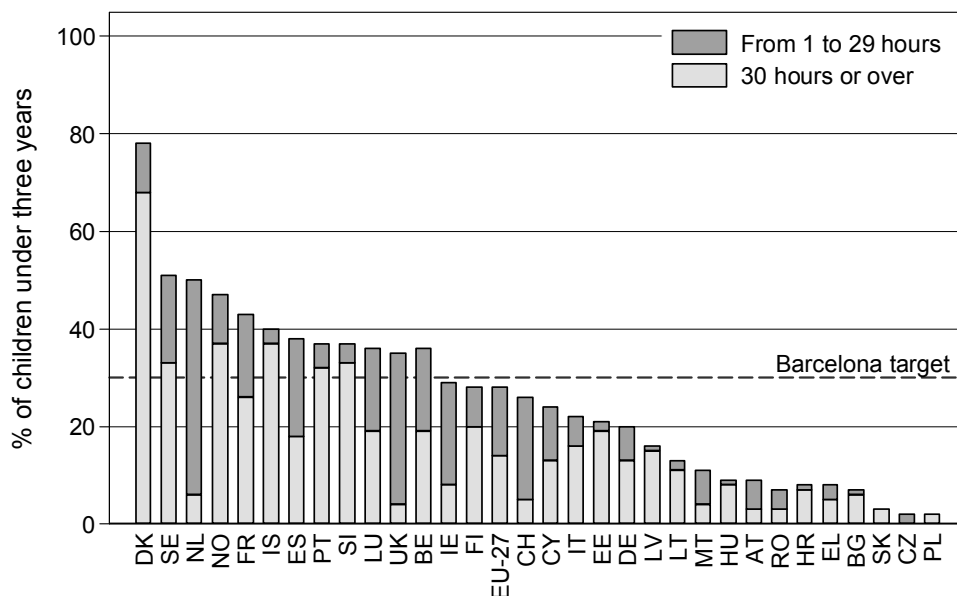
In 2006, there was significant variation across the EU in terms of the use of formal childcare arrangements for both of the age groups defined in the Barcelona targets. Although the average for the EU as a whole was approaching the Barcelona targets for both age groups, it is essential to note that this average was skewed by the fact that some countries (such as Denmark, Sweden and the Netherlands for children under three) were at this point already achieving a percentage considerably higher than the Barcelona target. For childcare under three years of age, many Member States, such as for example, the Czech Republic (2 per cent), Poland (2 per cent) and Austria (4 per cent) still needed to make considerable progress to comply with the targets. The subsequent section now updates and compares these findings with more recent data to judge the progress in meeting the Barcelona targets by 2009/10.

2.2. Who has met the Barcelona targets? The situation in 2010

The following analyses present the percentage of children cared for by formal childcare arrangements, using the EU-SILC 2010 (Eurostat 2012). It is also essential to go beyond the percentage in childcare to also examine the number of hours spent in these arrangements when considering progress towards achievement of the Barcelona targets. Examining simple percentages can be misleading when considered in isolation since formal childcare arrangements may be of little assistance in allowing women with children to enter into paid employment if they only cover a small number of hours per week. In order to enable parents to enter the workforce and sustain employment, childcare needs to cover 30 or more hours per week.

Figure 1 shows the percentage of children *under three years old* cared for by formal arrangements and broken down by the time spent in care per week using the EU-SILC data for 2010. The countries are ordered with the best performing Member States shown on the left. Examining the total coverage irrespective of the number of hours spent in formal childcare arrangements, ten Member States plus Iceland and Norway have met or surpassed the Barcelona objective of a 33 per cent coverage rate (Denmark, Sweden, the Netherlands, (Norway), France, (Iceland), Spain, Portugal, Slovenia, Belgium, Luxembourg and the United Kingdom). Two other Member States (Ireland, Finland) and Switzerland have reached an intermediate level of coverage of over 25 per cent. This means that 15 Member States still need to make considerable progress in order to meet the established targets. Notably, there is large variation between countries in the number of hours spent in formal childcare arrangements. Usage of full time formal childcare (over 30 hours a week) is particularly high in Denmark (68 per cent), and is predominant (with a full time to part time childcare ratio of 90:10 or higher) in four Member States (Slovakia, Poland, Latvia and Estonia) and Iceland. In contrast, in the Czech Republic, the United Kingdom, the Netherlands and Switzerland, the use of formal childcare is predominately part-time (under 30 hours a week).

Figure 1: Percentage of children up to three years of age cared for by formal arrangements by weekly time spent in care, 2010

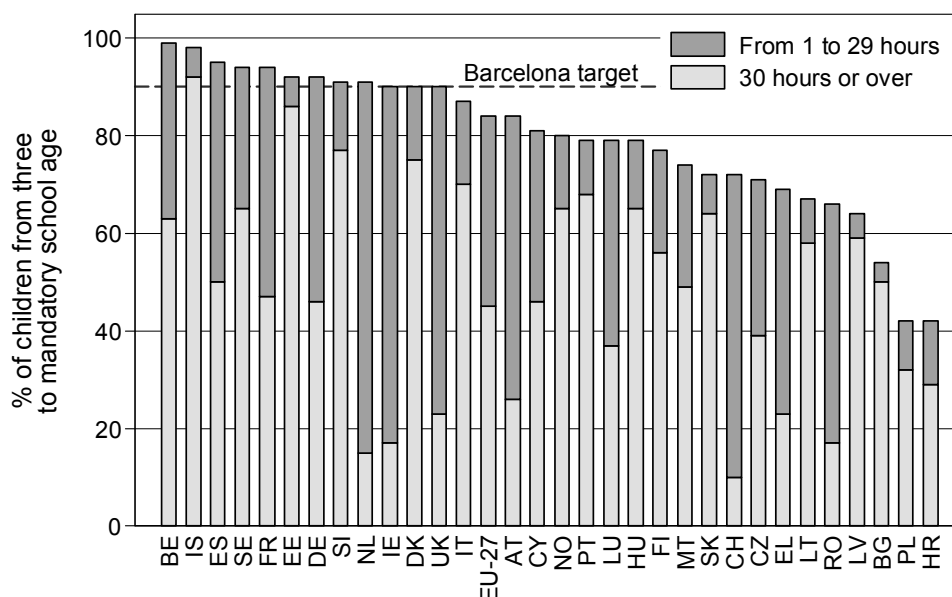


SOURCE: Eurostat, ilc_caindformal, extracted: 12 December 2013.

NOTE: Eurostat has flagged that for Finland (FI) there has been a break in the time series for both data points.

Figure 2 shows the percentage of children *between three years old and the mandatory school age* cared for by formal arrangements broken down by time spent in care per week using the EU-SILC data for 2010. It should be noted that the mandatory school age varies by Member State, and for a summary of these differences, refer to Appendix A. Examining the total coverage irrespective of the number of hours spent in formal childcare arrangements, eleven Member States (Belgium, Spain, France, Sweden, Germany, Estonia, the Netherlands, Slovenia, Ireland, Denmark and the United Kingdom) plus Iceland have met or surpassed the Barcelona objective of a 90 per cent coverage rate. Three other Member States (Italy, Austria, Cyprus) plus Norway are close to achieving the target, having reached an intermediate level of coverage of over 80 per cent or over. (It should also be noted that Luxembourg, Hungary and Portugal all have 79 per cent coverage). This means that 13 Member States still need to make progress in order to meet the established targets. This is particularly the case in some of the Eastern European countries, including acceding country Croatia, but also Lithuania, Romania, Latvia, Greece, Bulgaria, and Poland. Notably, there is large variation between countries in the number of hours spent in formal childcare arrangements. Usage of full time formal childcare (over 30 hours a week) is particularly high in some Member States and countries (in particular, Iceland, Estonia, Slovenia, Italy, Norway and Portugal). In contrast, in the Netherlands, Ireland, the United Kingdom, Austria and Switzerland, the use of formal childcare are predominately part-time (under 30 hours a week).

Figure 2: Percentage of children from three years of age to mandatory school age cared for by formal arrangements by weekly time spent in care, 2010



SOURCE: Eurostat, ilc_caindformal, extracted: 12 December 2013.

NOTE: Mandatory school age varies by country. See Appendix A for a summary. Eurostat has flagged that for Finland (FI) there has been a break in the time series for both data points.

To conclude, when we examined both targets for formal childcare of children under the age of three and aged three years to mandatory school age, eight Member States plus Iceland have met both targets. In addition to Iceland, these are: Belgium, Sweden, Spain, France, the Netherlands, Slovenia, Denmark and the United Kingdom. Fourteen Member States, plus Switzerland and candidate country Croatia have so far failed to meet both targets. These fourteen Member States are: Cyprus, Finland, Italy, Latvia, Lithuania, Malta, Hungary, Austria, Greece, Bulgaria, Slovakia, Romania, Czech Republic and Poland.

2.3. Progress towards the Barcelona targets between 2006 and 2010

Across Europe there has been little progress between 2006 and 2010 in terms of meeting the Barcelona target of childcare for 33 per cent of children under the age of three (as illustrated in Figure 3 and Figure 4). In both figures, the vertical axis represents progress made (i.e. change in percentage points between 2006 and 2010) and the horizontal axis represents performance (i.e. percentage of children in formal care). The graph is then divided into four quadrants:

- The top right quadrant is labeled ‘moving further ahead,’ indicating that the target was met in 2010 and a positive change since 2006.
- The bottom right quadrant represents those ‘losing momentum’, i.e. the target was met in 2010, but a negative or no change since 2006.
- The top left quadrant is the ‘catching up’ group, which indicates that the target has not been met, but that there was a positive change since 2006.

- The bottom left quadrant of is labeled ‘falling further behind’ which indicates that targets were not met, and that there was a negative or no change since 2006.

Those who have moved further ahead include:

- Eight Member States (France, Slovenia, Sweden, Denmark, the Netherlands, Luxembourg, Portugal and United Kingdom) plus Iceland, for the younger age group.
- Seven Member States (Spain, Sweden, Germany, Estonia, the Netherlands, Slovenia, and the United Kingdom) plus Iceland, for the older age group.

Those who have lost momentum include:

- Two Member States (Spain but more so for Belgium) for the younger age group.
- Three Member States (France, Denmark and Belgium) for the older age group.

Those who have been catching up include:

- Nine Member States (Ireland, Lithuania, Austria, Estonia, Malta, Finland, Germany, Hungary, and Czech Republic), for the younger age group.
- Ten Member States (Austria, Luxembourg, Hungary, Portugal, Malta, Czech Republic, Lithuania, Latvia, Poland, and Greece) for the older age group.

Those who have fallen behind include:

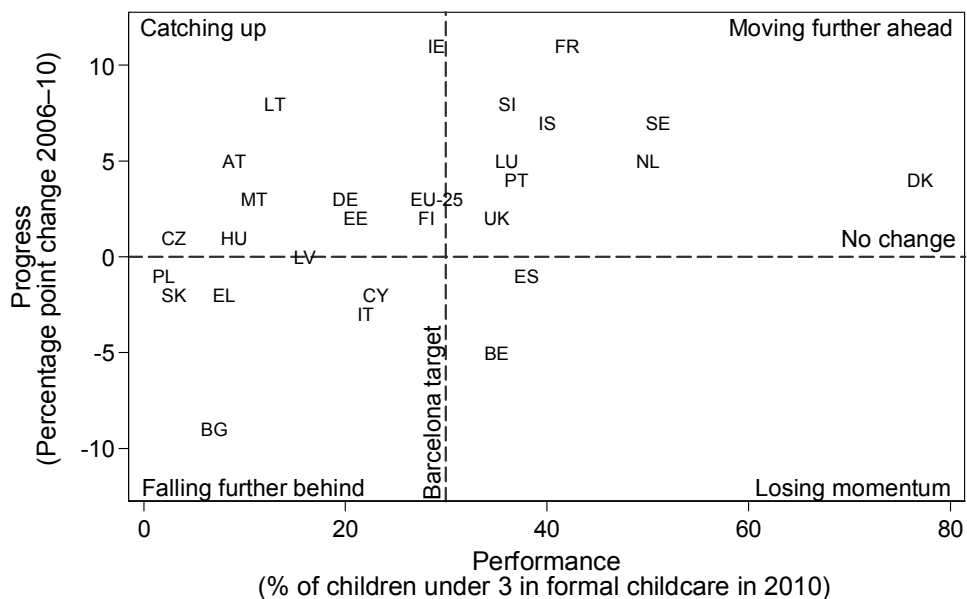
- Seven Member States (Latvia, Cyprus, Poland, Greece, Slovakia, Italy and Bulgaria) for the younger age group.
- Six Member States (Cyprus, Finland, Italy, Slovakia, Bulgaria, and Ireland) for the older age group.

It is encouraging that the majority of the Member States is categorised as either ‘moving further ahead’ or ‘catching up’. Between 2006 and 2010, however, the increase in the percentage of children being cared for under formal arrangements in the EU-25 Member States is small – from 26 per cent to 29 per cent for the less than three years old group and from 84 per cent to 85 per cent for the three to mandatory school age group.

It is essential to note that the EU-SILC data that have been presented here are potentially unreliable due to small sample sizes for some of the countries (see notes under Figure 1 and 2).

Additionally, for the countries that have made no or very little progress, their grouping is often sensitive to rounding errors. For example, Figure 3 shows that Latvia has made no progress, but the manner in which the data is rounded may indicate ‘no change’ even if there was a slight change, but this change was under 1 percentage point (in fact, under 0.5). This would cause the Member State to be reclassified from the ‘catching up’ quadrant to the ‘falling further behind’ quadrant. Conversely, for a country such as the Czech Republic, the data was rounded up to 1 percentage point, which places them in the ‘catching up’ quadrant.

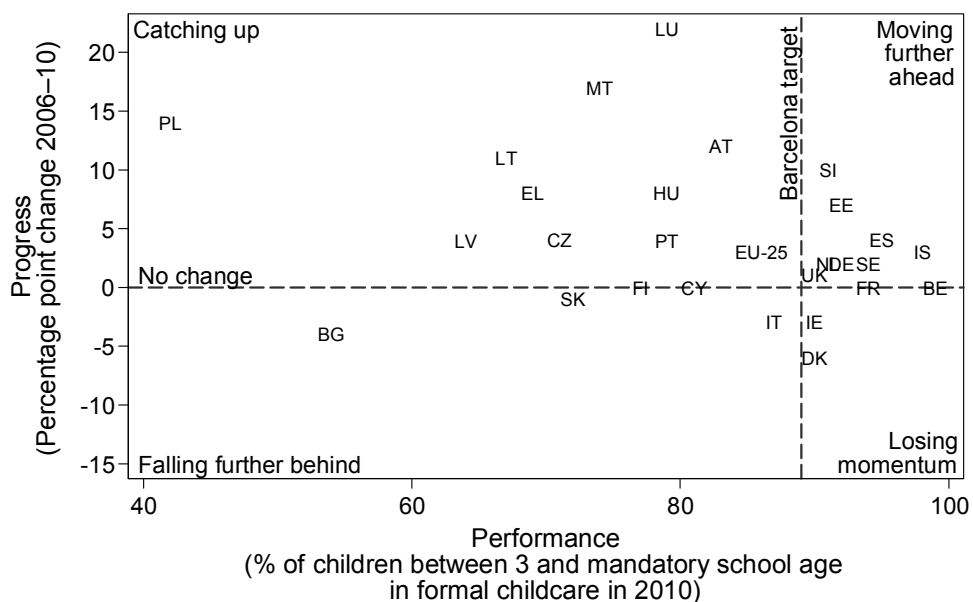
Figure 3: Changes between 2006 and 2010 in percentage of children under three years cared for by formal arrangements



SOURCE: Eurostat, ilc_caindformal, extracted: 15 November 2012.

NOTE: For Norway, Switzerland, Croatia, and Romania, figures were not available for 2006. These countries are therefore not included in this figure.

Figure 4: Changes between 2006 and 2010 in percentage of children from three years of age to mandatory school age cared for by formal arrangements



SOURCE: Eurostat, ilc_caindformal, extracted: 15 November 2012.

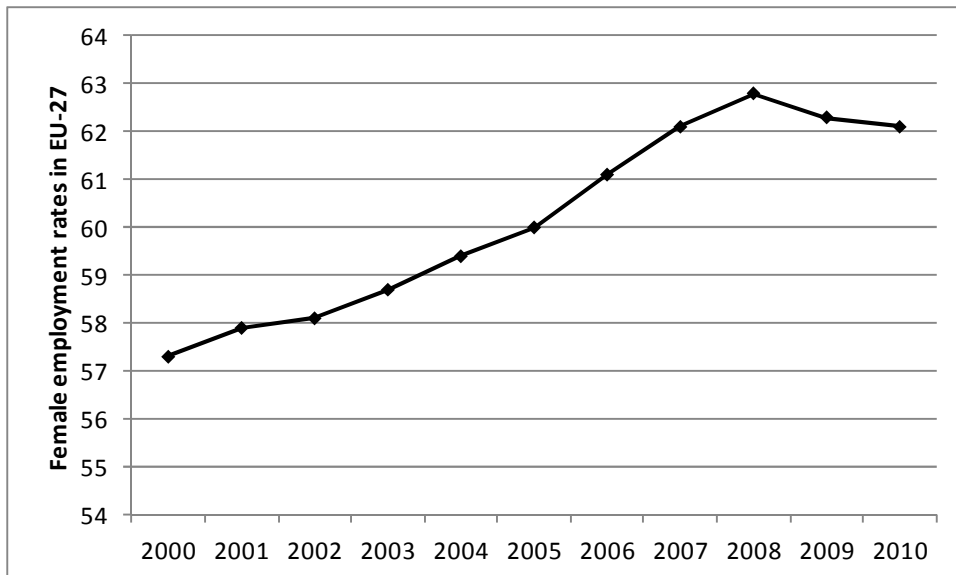
NOTE: See note above. See Appendix A for description of assumptions regarding mandatory school ages.

3. Parenthood and employment

3.1. The potential link between parenthood, employment and childcare

Substantial progress has been made with respect to the employment rate of women over the past 10 years, with an increase of almost 5 percentage points in the EU-27 as a whole (Figure 5). This section examines the employment of women, with a particular focus on how their employment is affected by parenthood.

Figure 5: Employment rate of women in the EU, 2000–2010



SOURCE: Eurostat EU-LFS, data code: tsdec420, extracted: 4 December 2012.

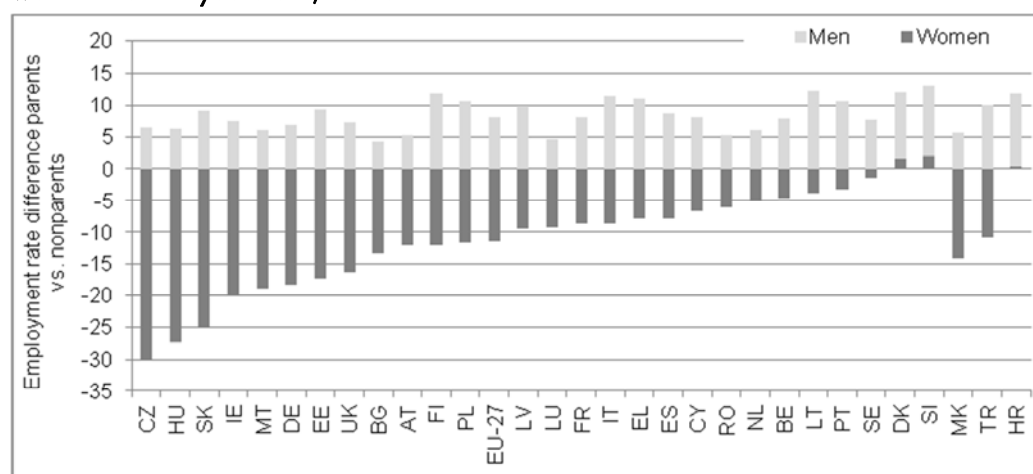
The Barcelona targets were set under the understanding that parenthood has a high impact on employment rate of women. Member States were encouraged to focus on the creation of formal childcare arrangements that cover a sufficient number of hours per week to enable parents to acquire and sustain employment. This was regardless of whether this was achieved through encouraging private-sector provision or via the public sector. It is therefore important to examine the association between parenthood, employment and childcare.

Figure 6 illustrates the potential link between parenthood and employment. It plots the indicator of the employment rate difference of parents versus nonparents for those aged 25-49 years old. Specifically, it is the difference in the employment rate for *persons with at least one child below the age of 12* minus the employment rate of *persons without any children under the age of 12*. The figure demonstrates a substantial

gender divide of parenthood, with men with children under the age of 12 having higher rates of employment compared to those without any children. It also clearly illustrates that motherhood is negatively correlated with employment across the vast majority of European Union Member States, with sizeable differences for some. In the Czech Republic and Hungary, for instance, the employment rate for women with children below the age of twelve is more than 29.9 and 27.4 percentage points lower than their counterparts without children, respectively. Here it is important to note national differences in the length of parental leave and whether woman on parental leave are counted as being employed. In the Czech Republic, for instance, women are provided with 28 weeks of maternity leave (with a replacement wage of 69 per cent) and up to four years of parental leave, but without the provision of subsidised child care (Robila 2012). In Hungary parental leave is up to two years (Robila 2012). Although the previous figure demonstrated that the employment participation of women has increased over the past 10 years, these results demonstrate that the differences in employment between parents and non-parents remain persistent over time. In essence, the underlying goal of the Barcelona targets to increase the employment participation of parents and specifically women, therefore, remains unmet in many countries.

For the EU-27 as a whole, the difference between the employment rate for women with and without children under twelve is greater than 10 percentage points.

Figure 6: Difference between employment rate with and without children under 12, men and women 25–49 years old, 2010



SOURCE: Eurostat EU-LFS data 2010, own calculations.

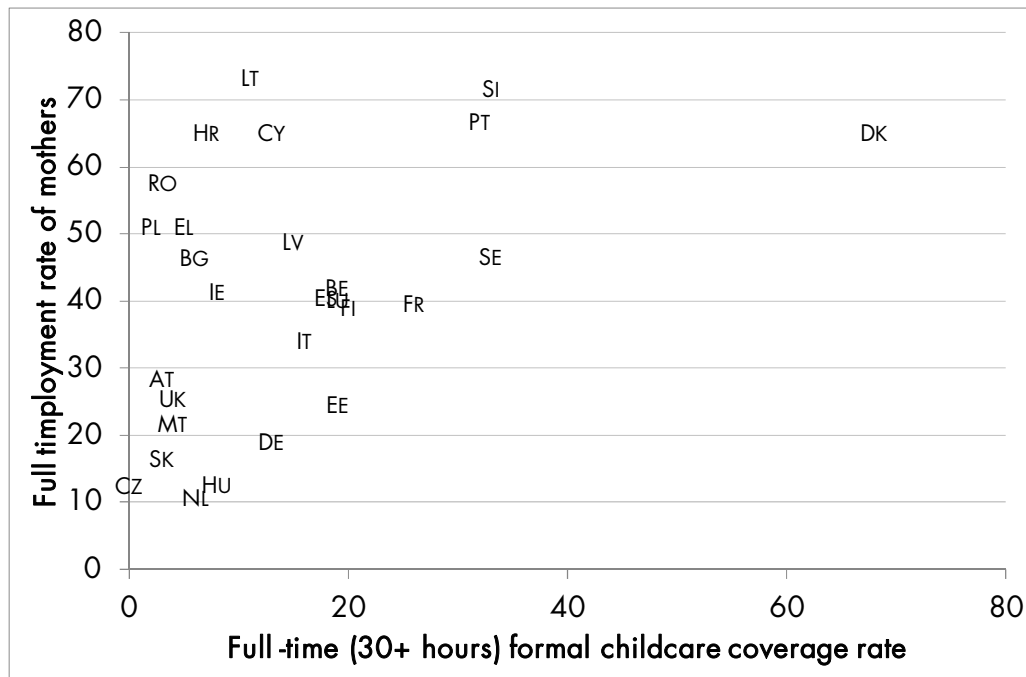
In order to better understand the potential link between formal childcare usage and the employment rates, Figure 7 and Figure 8 below illustrate employment rates of mothers² aged 25–49 and full-time (30+ hours) formal childcare arrangements in the same chart, for the two age groups respectively. The analysis of employment described below covers full-time employment. It should be noted that ‘full-time’ in the context of employment typically refers to 40 hours per week of work (plus the time required for commuting to work), whereas ‘full-time’ in the context of formal childcare is defined as usage of 30 hours

² ‘Mothers’ here refers to those women aged 25–49 living in a household with at least one child under mandatory school age.

or more. In other words, the two definitions of ‘full-time’, one for the working parent and one for the child, are not fully compatible. For example, even if a child spends 30 hours in formal childcare, it may not be sufficient for the mother to take up a full-time job and which may necessitate another form of care if this is not taken up by the father.

Figure 7, the plot of employment rate of mothers of 0–2 year olds against full-time formal care coverage rate, shows only a weak relationship between these mothers’ employment rate and full-time childcare coverage. While many countries conform to the expectation that low full-time usage would be associated with low employment rates (e.g. the Netherlands, Czech Republic, Slovakia and Hungary) and high full-time usage is associated with high employment rates (e.g. Denmark, Slovenia, Portugal and Sweden), some other countries suggest an absence of a correlation, where full-time usage was low but the employment rate was high (e.g. Lithuania, Croatia, Cyprus, Romania, Poland, Greece, Bulgaria, Latvia, Ireland, France, Italy, Austria, United Kingdom, Malta, Slovakia, Hungary, Netherlands, and Czech Republic).

Figure 7: Full-time employment rate of mothers and full-time formal childcare arrangements for children up to three years old, 2010



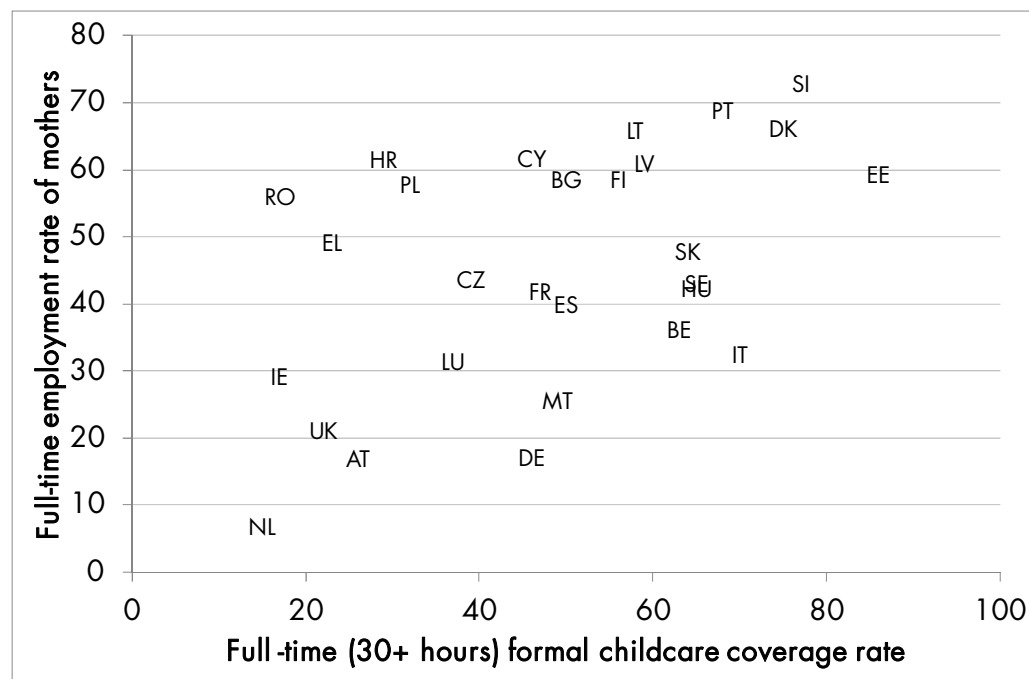
SOURCE: EU-LFS data 2010 and EU-SILC data 2010.

NOTES: A number of data points are computed based on small samples and are not considered statistically reliable. These include: AT, BG, CY, CZ, EL, IE, LT, NL, PL, RO, SK, UK, HR, EE, and MT. The four countries which overlapped with each other (with a full-time childcare coverage rate of 18–20 per cent and employment of 38–42 per cent) were ES, BE, LU and FI.

Figure 8, the plot of employment rate of mothers of three year olds to mandatory school age against full-time formal care coverage rate, shows a potential relationship between these mothers’ employment rate and full-time childcare coverage. For example, Slovenia is characterised by a high employment rate and a high full-time childcare usage, whereas the Netherlands is characterised by a low full-time employment rate and a low full-time childcare usage. However, it is interesting to note that, in a few cases (e.g. Croatia

and Poland) a relatively high employment rate of mothers is still possible at low levels of full-time childcare usage.

Figure 8: Full-time employment rate of mothers and full-time formal childcare arrangements for children between three years old and mandatory school age, 2006 and 2010



SOURCE: EU-LFS data 2010 and EU-SILC data 2010.

NOTE: The data point for RO is computed based on small samples and are not considered statistically reliable.

3.2. Cultural and normative values about parenthood and childcare

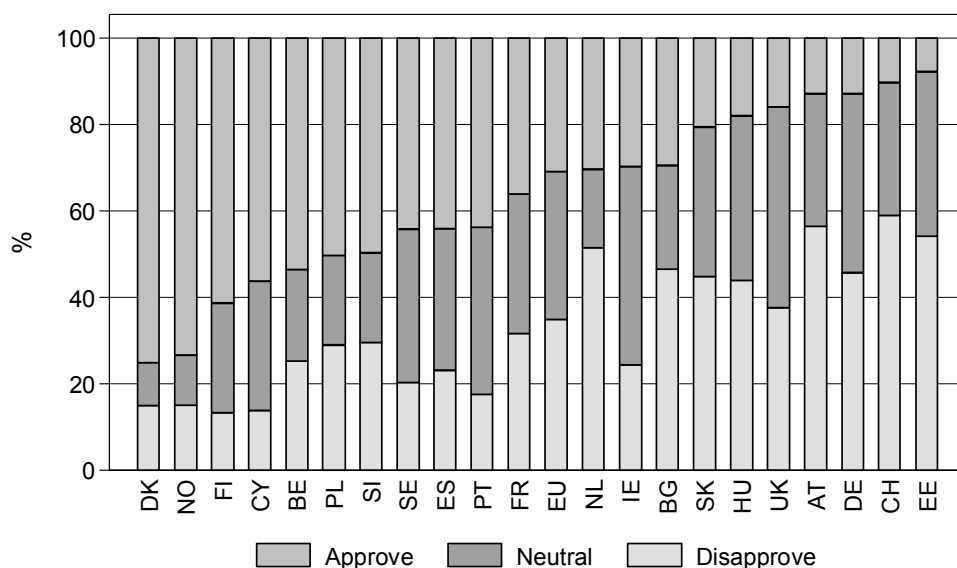
The association observed in Figure 7 and Figure 8 shows that formal childcare services are likely to be only one of the possible determinants in women’s employment. This raises the question as to what other factors may influence the mothers of young children to decide to participate in the labour force. Using the European Social Survey (2006), we engaged in an additional analysis that examines the cultural and normative values about parenthood and childcare of both men and women.

Figure 9 provides evidence of the level of approval, ambivalence (neither approves nor disapproves) and disapproval of whether a woman with a child under three years of age should have a full-time job. A first conclusion is that more than 50 per cent of adults approve that a woman with a child under three years of age should have a full-time job in more than 50 per cent of the countries. Second, there is a striking similarity of the level of approval of women with young children working in a full-time job with the actual levels of childcare enrolment and employment rate found in Figure 7. Third, the low levels of approval in countries such as Switzerland, Austria and Germany provide a further indication as to why some policies may have been ineffective or even non-existent. In these countries, the negative perception of childcare may operate not only as a barrier to the wider use of childcare, but lack of momentum to create policies. Policies to raise awareness of the benefits of childcare may be needed to address this

barrier. Finally, although the full-time employment of young mothers is generally approved in nations such as Poland, Cyprus and Slovenia, there appears to be a gap particularly in the availability and affordability of childcare (see discussion in the next section), which needs to be addressed for women to realise their labour market intentions.

In summary, the large cross-national variation across the EU is related to institutional policies, but also national cultural values concerning mother's obligations and children's needs.

Figure 9: (Dis)approval of a full-time working woman with a child under three years of age, by male and female adults



EU refers to average for the 20 EU Member States in this Figure

SOURCE: European Social Survey 2006/07 (authors' calculations).

Multivariate analysis will be required to better understand the relative effects of these different factors. For example, OECD (2012) found that increased enrolment in childcare has a positive effect on female employment, over and above the effect of public spending on paid leave and tax rates on the second earner. The OECD (2013) finds that the effect of childcare on female employment is even stronger when it is combined with adequate financial incentives for the second earner.

4. Availability, affordability and quality of childcare

It is not necessarily the case that countries that make slow progress towards meeting the Barcelona targets have entirely failed to establish formal childcare arrangements. Rather, it may be that existing arrangements are not perceived as suitable or affordable by those expected to use them. This section therefore evaluates the perceived cost, affordability and quality of childcare across the EU Member States. Childcare arrangements can only assist parents to enter and sustain employment participation if they are considered to be affordable and of sufficient quality.

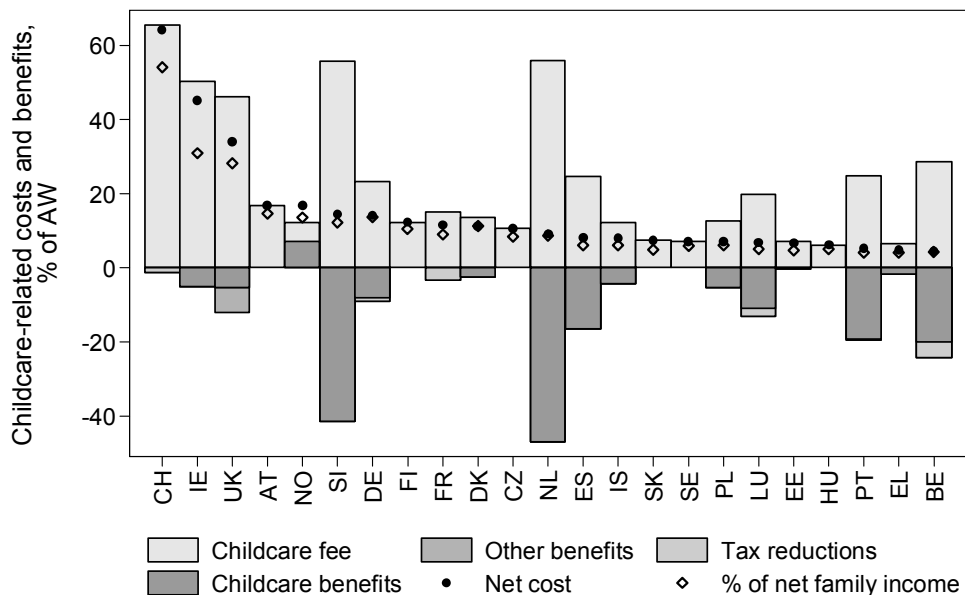
Table 4 (in Appendix B) shows the percentage of women's reported reasons for not working or working part-time in relation to childcare availability and affordability by age of the youngest child. The table suggests that across the EU-27, about a quarter of women with a young child (26 per cent and 25 per cent for women with a child under three and a child between three and mandatory school age, respectively) who are not working or working part-time report that suitable care services for children are not available or affordable.

A closer look at Table 4 reveals substantial cross-national variation in the share of mothers who attribute their not working full-time to care-related reasons: In Romania, Germany, and Latvia, between 41 per cent to 56 per cent of mothers with children under three who do not work or are employed part-time attribute this to lack of affordability and availability of child-care. In countries such as Finland, Slovakia, or the Netherlands this share ranges between only 6 per cent and 7 per cent. For mothers with children in the three to mandatory school age bracket, there is similar variation, from 6 per cent in the Netherlands to 47 per cent in Germany. When comparing these figures to those displayed in Figures 1 and 2 showing the use of formal childcare arrangements, we can observe that there is hardly any relationship across countries between formal childcare usage rates and the share of mothers not working full-time due to childcare reasons. While it is true that some countries – for instance the aforementioned Romania, Germany and Latvia – low formal childcare usage and high rates of mothers not working full-time coincide, this is not the case for most other countries. Therefore, increasing formal childcare usage might boost female labour supply in some countries, but the impact might be more limited in others. It is important to note that due to sometimes small sample sizes and the subjective nature of the information elicited, definitive conclusions regarding this point remain elusive.

Turning from self-reported perceptions about childcare to more objective target information, Figure 10 suggests that in most Member States across the European Union, childcare costs are high, but are offset by similarly high childcare benefits. This is not true, however, for the United Kingdom and Ireland. As the EU-SILC data in Figures 1 and 2 illustrated, a relatively low percentage of households in these two

countries use full-time formal childcare arrangements. Thus, Figure 10 suggests that the underlying reason may be attributed to affordability.

Figure 10: Components of net childcare costs in 2008 for dual-earner couple family*

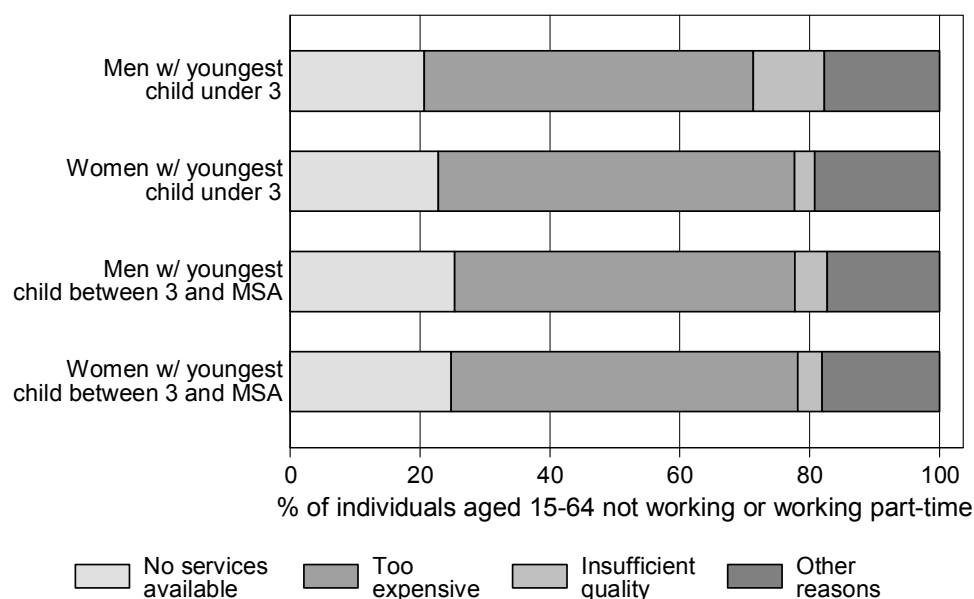


SOURCE: OECD (2011), *Doing Better for Families*, Figure 4.A2.1 B – doi: 10.1787/888932393426
 NOTE: *Where the partner earns the average wage (AW) and the female partner earns 50 per cent of the average wage.

Figure 11 corroborates the view that Member States may not necessarily be making slow progress towards achievement of the Barcelona targets due to a failure to create formal childcare arrangements. Table 1 shows the main reason linked to childcare reported by men and women for not working or only working part-time, according to their perception of childcare services.

Figure 11 illustrates the different reasons for not working or working part-time related to childcare. It shows that there are few differences across the sexes and between the age groups of the youngest child. The main reason reported in all groups is that childcare is too expensive, followed by a lack of services, followed by other reasons linked to childcare. The least popular reason among the four options appears to be concerns about the quality of childcare. When interpreting Figure 11, it has to be kept in mind that the group of men not working or working part-time due to reasons of childcare is very small in absolute terms.

Figure 11: Reasons linked with childcare/elderly care for which men and women 15–64 are not working or working part-time (EU-27 without DK and SE)



SOURCE: EU-LFS 2010 AHM, own calculations.

NOTE: Figure refers to EU-27 (without DK and SE) and men and women 15–64 not working or working part-time for reasons linked with childcare/elderly care, by age of children. MSA: mandatory school age

The following Table 1 thus focuses on women only and does not distinguish between different age groups of the children. It shows that across the EU-27 as a whole, 25 per cent of women who do not work or work part-time claim that it is due to a lack of availability of childcare services; 53 per cent because childcare is too expensive and only 4 per cent due to childcare being of insufficient quality. There is some variation across countries: In some countries, namely Belgium, the Czech Republic, Hungary, Austria, and Croatia, the lack of childcare services is the most frequently reported reason for not working or working part-time. Concern over the quality of childcare as a reason for not working or working part-time is rare, except in Bulgaria (13 per cent) and Hungary (20 per cent).

Table 1: Women’s (aged 15–64 and with children up to mandatory school age) main reason for not working or working part-time by perceived shortcomings of childcare*

Member States	No childcare services available	Too expensive	Insufficient quality
EU-27	25	53	4
BE	62	32	(0)
BG	30	35	13
CZ	47	(10)	(3)
DK	:	:	:
DE	25	31	:
EE	:	(63)	:
IE	8	85	3
EL	21	67	(6)
ES	18	60	(2)
FR	33	57	:
IT	37	57	5
CY	:	57	:
LV	(27)	35	:
LT	:	:	:
LU	(34)	(28)	:
HU	32	25	20
MT	:	:	:
NL	(13)	71	:
AT	57	22	:
PL	35	57	(4)
PT	:	60	:
RO	13	80	(6)
SI	:	(46)	:
SK	(29)	(36)	:
FI	(27)	:	:
SE	:	:	:
UK	10	73	4
HR	48	(34)	:
MK	(22)	(59)	:

SOURCE: EU-LFS data 2010, ad hoc module 'Reconciliation between work and family life'.

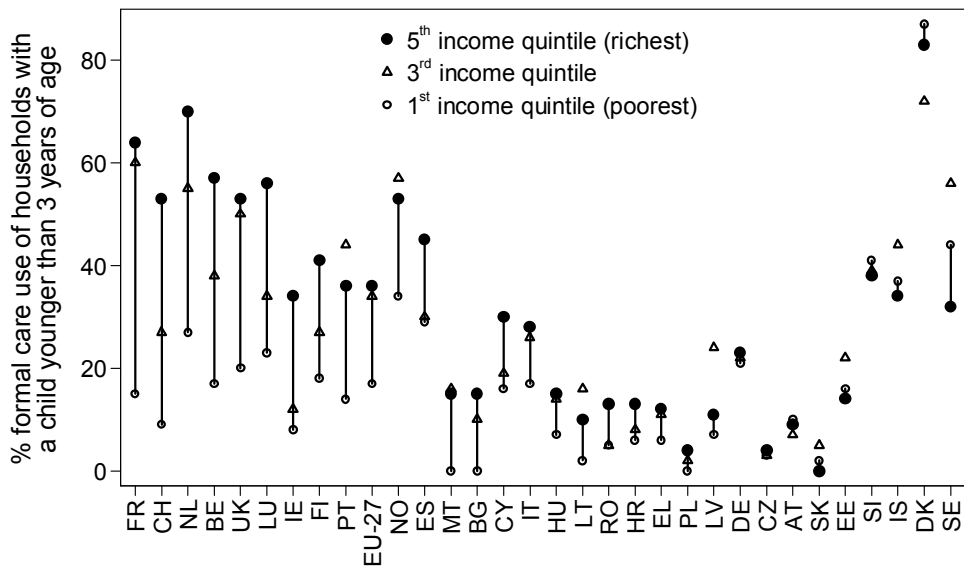
NOTES: *Who are not working due to reasons linked to childcare/elderly care (In % of those not working due to childcare/elderly care reasons); EU-27 without SE and DK. Numbers in parentheses: unreliable; ':' = not available (missing countries, a flags, c flags, missing values on certain columns)

Table 1 suggests that the main problem in meeting the Barcelona targets is not that individuals perceive that services are of insufficient quality, but rather that they are either too expensive or not available. It is important to note that due to small sample sizes and the subjective nature of the data, it is not possible to make definitive conclusions regarding this point.

In the European debate about public childcare, households with children are often displayed as a homogeneous group. An important stratifying feature in the context of the use of public childcare

however, is economic resources that parents have. Recent research has demonstrated that access to formal childcare of children under the age of three is socially stratified in the sense that parents with a higher socio-economic level are more likely to send their children to formal childcare (Ghysels & Van Lancker 2011; Wirth & Lichtenberger 2012). This is problematic since additional research has shown that children from lower socioeconomic strata are actually the ones most likely to benefit from formal childcare (Almond & Currie 2011; Datta Gupta & Simonsen 2010; Havnes & Mogstad 2011).

Figure 12: Formal care use by income quintiles, households with a child <3 years, 2010



SOURCE: EU-SILC 2010

NOTE: Countries sorted by the size of the difference between the fifth and first quintile

The 2010 figures from EU-SILC as reported in Figure 12 confirm this finding to some extent. In many Member States, households in richest income group have the highest childcare usage, with the notable exception of Denmark, which ensures a high childcare usage amount the poorest, and Sweden, Slovenia and Germany, which ensure a fairly equal usage in childcare across income groups.

Finally, Table 2 reports several indicators of the quality of childcare for children below school age in Europe. Despite the fact that cross-nationally standardised data about childcare quality are still lacking, researchers have started assembling information about some important aspects of childcare quality. With respect to the quality of childcare, many factors such as the involvement of parents, hygiene and safety, and activities offered come into play. Given the complexity of the subject matter, comparative data are hardly available. Child-to-staff ratio, maximum group size, and qualification of staff are three crucial dimensions of the structural quality of childcare. There are, of course, additional factors that come into play when considering the quality of childcare such as the involvement of parents, which are factors we are unable to examine within the auspices of this report. In order to understand how countries differ with respect to childcare quality, we undertook a general synthesis of the information provided by Plantenga and Remery (2009, 43–46) and the OECD Family Indicators database. We report information about child-to-staff ratio, maximum group size, and qualification of staff in Table 2.

Table 2 shows that there is vast variation with respect to maximum group sizes. The smallest maximum group size mentioned is reported for France, where some groups of children may contain four children at the most. However, even within France, there is considerable variation, as the maximum of four children only applies to childminders, whereas nursery schools contain groups of up to 30 children (Plantenga and Remery 2009). This is close to the largest maximum group size which is reported for the United Kingdom (35 children). Plantenga and Remery (2009) conclude from these data for maximum group size that throughout Europe, group sizes range from 10 to 14 children for those below three years of age and from 20 to 25 children for those from age three to mandatory school age. Regarding the child-to-staff ratio, there is also some variation from 1:3 in some countries such as Malta, Denmark, or the United Kingdom to 1:25 in Portugal. In general, regulations concerning the child-to-staff ration range in the youngest age class from 1:3 to 1:6 and in the older age class from 1:6 to 1:14. With respect to the required qualification of staff, there is less variance. A few countries clearly require staff with tertiary education (Iceland, Cyprus, Slovak Republic, Portugal). Most countries, however, have less strict rules with respect to the minimum educational requirements. But it is important to note that these figures refer to legal regulations, and it is difficult to ascertain how far they depart from actual practice.

Table 2: Indicators of childcare quality

MS	Maximum group size	Child-to-staff ratio	Qualification of staff
MT	6	1:3 to 1:6	:
IS	:	1:4	Tertiary
CY	16	1:6	Tertiary
SK	17 to 20.9	1:10.6	Tertiary
IE	24	1:3 to 1:8	:
PT	4 to 25	1:6 to 1:25	Tertiary
DK	:	1:3 to 1:6	Secondary to tertiary
FI	:	1:4 to 1:7	Secondary to tertiary
EE	14 to 20	1:7 to 1:10	Secondary to tertiary
ES	14.1 to 21	1:10	Secondary to tertiary
IT	:	1:5 to 1:10	Secondary to tertiary
SI	12 to 22	1:9.6	Secondary to tertiary
LI	10 to 20	1:5 to 1:14	Secondary to tertiary
LV	12 to 24	.	Secondary to tertiary
CZ	23.1	1:12.5	Secondary to tertiary
SE	16.7 to 31.7	1:5.1 to 1:18.9	Secondary to tertiary
BE	8	1:4	Secondary

Use of childcare services in the EU Member States and progress towards the Barcelona targets

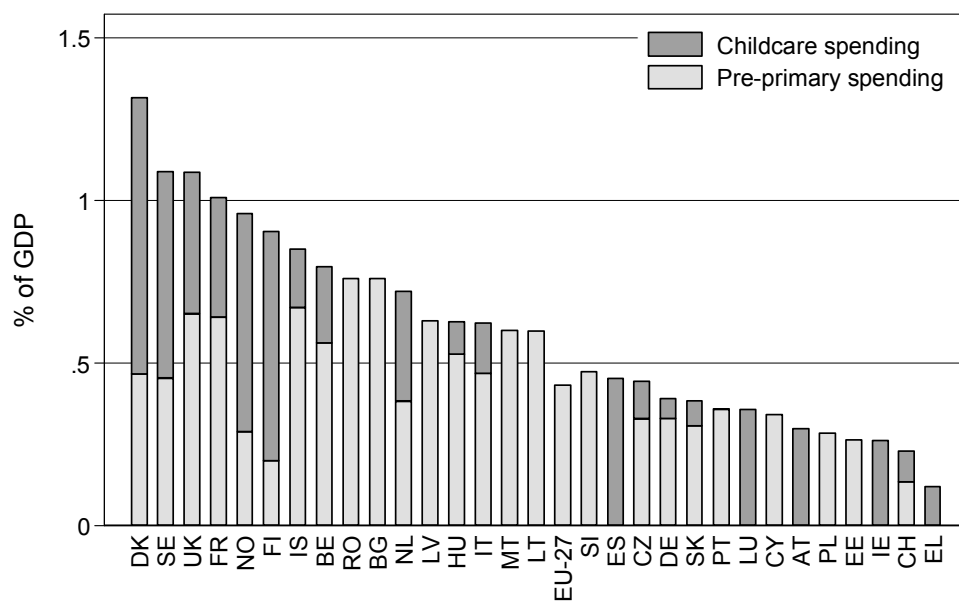
MS	Maximum group size	Child-to-staff ratio	Qualification of staff
EL	12 to 25	1:18.5	Secondary to tertiary
PL	:	1:15	Post-secondary
LT	10	1:10	Secondary
NL	12 to 20	1:4 to 1:8	Secondary
FR	4 to 30	1:7 to 1:19	Secondary to tertiary
HU	12 to 25	1:6 to 1:11	Secondary vocational
AT	5 to 20	1:5 to 1:14	Secondary vocational
UK	30 to 35	1:3 to 1:8	Secondary
DE	:	1:6.4 to 1:10.5	Secondary vocational
NO	:	1:8 to 1:16	Secondary
BG	:	1:5.9	:
LU	:	:	:
RO	:	:	:

5. Public spending on childcare

Figure 13 graphs the public spending on childcare and early-education services as a percentage of the national GDP. It is immediately apparent that the total spending as a percentage of GDP is particularly high in Denmark and Sweden, which are also the countries where the impact of parenthood on employment was particularly low (see Figure 6). It is also noteworthy that the link between parenthood and employment shown in Figure 6 is quite high for some countries such as the United Kingdom even though their spending on childcare is relatively high.³ This might suggest that some countries are able to translate spending into suitable and affordable services more efficiently than others, a point to which we return to in our conclusions and policy recommendations. It is not simply the case that additional spending is sufficient to improve the availability and affordability of services. It may also be that different approaches to provision of services results in greater impact. Some countries may provide parents with benefits related to childcare, but the actual childcare itself is primarily provided through the private sector, whereas other countries provide services through the public sector.

³ In the UK, a substantial share of children are living in very low work-intensity households, requiring therefore no childcare. This can be attributed to the design of benefits, which disincentivise employment take-up (European Commission Directorate-General for Employment, Social Affairs and Inclusion 2012, 75)

Figure 13: Public expenditure on childcare and early education services as percentage of GDP, 2007



SOURCE: OECD Family database, Indicator PF3.1 (2009).

NOTE 1: CY refers to Southern Cyprus only.

NOTE 2: Figures for Austria, Ireland and Spain cannot be disaggregated by educational level.

NOTE 3: Pre-primary spending as a % of GDP not available for Greece and Luxembourg.

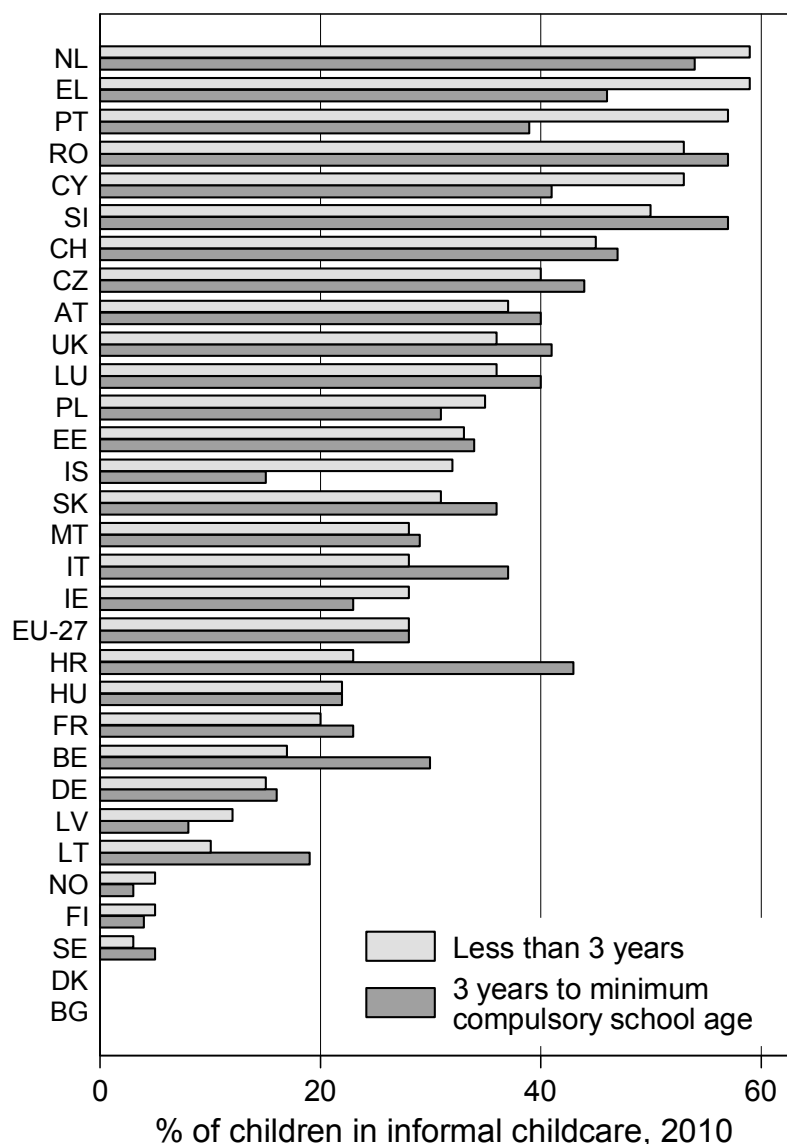
Public expenditure on childcare and early educational services includes all public financial support (in cash, in-kind or through the tax system) for families with children participating in formal daycare services (e.g. crèches, day care centres and family day care for children under three) and pre-school institutions (including kindergartens and day-care centres which usually provide an educational content as well as traditional care for children aged from three to five, inclusive).

6. Informal childcare

6.1. Overview of informal childcare in Europe

The Barcelona targets is primarily concerned with formal types of childcare, i.e. education at pre-school or compulsory school, childcare at centre-based services before or after school hours (before/after), and childcare at day-care centres. However, informal types of childcare play a crucial role in many countries. Childminders or grandparents, household members (who are not parents), friends, neighbours, and relatives sometimes care informally for children. Countries show distinct patterns with respect to the types of childcare (e.g. Wirth & Lichtenberger 2012) used by parents. Figure 11 illustrates the variation across countries.

Figure 14: Percentage of children in informal childcare by age group and country, 2010



SOURCE: Eurostat, ilc_caindothet, date of extraction: 28 November 2012.

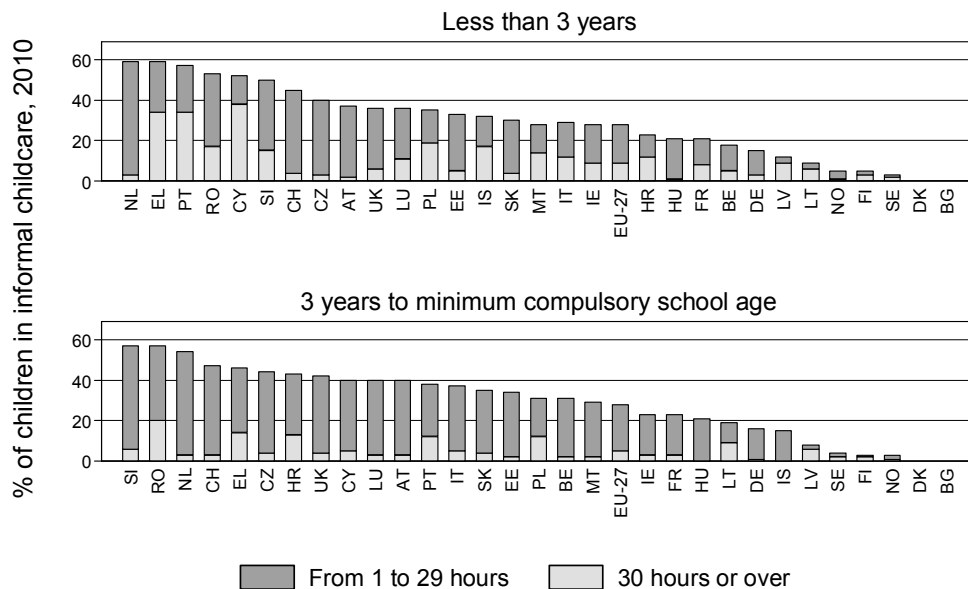
In the Netherlands, Greece, Portugal, Romania and Cyprus, more than half of the children under three years of age are being cared for informally. Conversely, in countries such as Norway, Finland and Sweden, only a small minority of young children are in informal childcare. With respect to the children in the age bracket from three years of age to minimum compulsory school age in informal childcare, the figures are rather similar: only a few exceptions, such as Portugal, Croatia, Belgium and Lithuania, show a great discrepancy between the age groups. In Croatia, Belgium and Lithuania, the share of older children in informal childcare is substantially larger than the share of under-three year olds, whereas in Portugal the opposite pattern emerges. To put things in context, in general the percentage of children under three years of age who are in informal care is rather high when compared with the Barcelona target of 33 per cent, with about half of the countries under study surpassing this benchmark.

What these figures, however, do not convey is whether parents use these informal types of childcare because they prefer them or because formal childcare is not available or affordable. Another caveat is that

this category can overlap with the formal childcare category. Children who are looked after using a combination of informal and formal childcare are counted in both categories.

To obtain a more detailed picture of informal childcare, we breakdown the data by number of hours of informal care per week (Figure 15):

Figure 15: Percentage of children in informal childcare by age group, number of hours, and country, 2010



SOURCE: Eurostat, *ilc_caindothet*, date of extraction: 28 November 2012.

In Figure 15 it becomes apparent that although many children are being cared for informally, this usually takes place on a part-time basis (one to 29 hours per usual week). In virtually all countries the share of young children participating in informal childcare for less than 30 hours is higher than the share of young children being cared for informally for 30 hours and more. Greece, Portugal and Cyprus are remarkable exceptions to this rule.

When looking at the over-three year olds, informal childcare for 30 hours or more occurs rarely: the only countries in which there is a significant share are Romania, Croatia, Greece, Portugal and Poland.

Given the generally low number of hours spent in informal childcare, it is questionable whether informal childcare can support women's full-time labour force participation.

It is unclear whether this has always been the case or any trends can be detected across countries. The EU-SILC data on which these analyses are based go back to 2006, thus allowing us to get a brief glimpse of changes over time.

Figures D1 and D2 in the Appendix give an impression of what has happened over time. The main finding is that there are hardly any discernible trends over the five-year period, neither overall nor for most of the countries, regardless which age group we look at. In the Czech Republic, part-time (one to 29 hours per usual week) informal childcare seems to be on the rise, whereas full-time (30 hours or more) informal childcare remained stable. A similar picture arises for the older age group. In Hungary, the informal childcare rate for less than thirty hours was essentially cut by half between 2006 and 2010 for

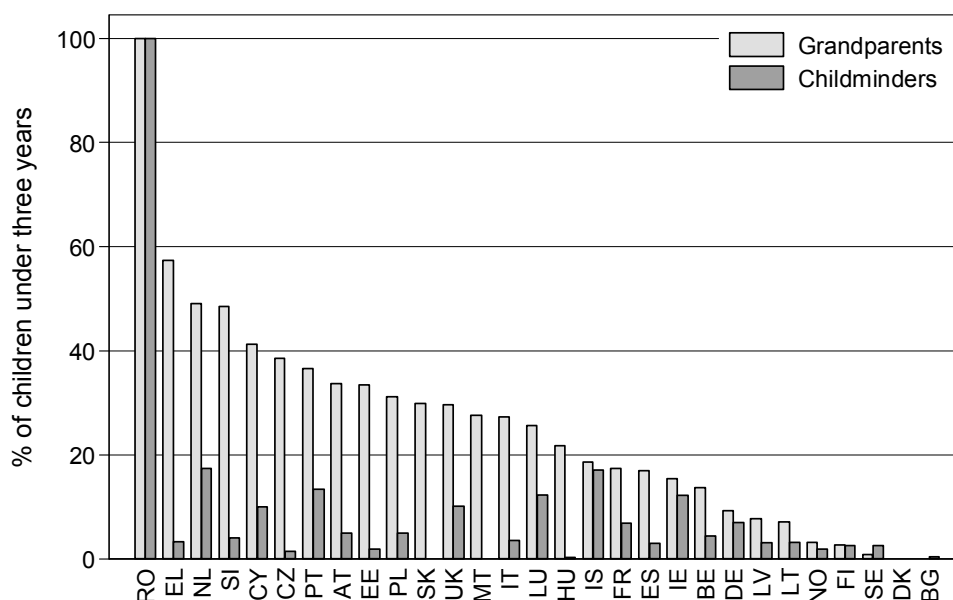
both age groups. But here again, full-time childcare was unchanged over the same period. For Bulgaria, there seems to be a downward slope for both part- and full-time informal childcare in the older age group. In the other countries, little systematic change has occurred during the five-year period under study.

6.2. Disentangling different types of informal childcare

The analyses look into the different types of informal childcare. In principle, the EU-SILC allows us to disentangle two different types of childcare, namely childcare by childminders on the one hand and childcare by grandparents, friends, neighbours, and other household members (who are not the parents) on the other. A guiding principle that distinguishes the two categories is that the latter may not be paid (in cash; exchange for other services is acceptable) for the childcare, otherwise they will be counted as childminders.⁴

Since the variation in the use of informal childcare across countries is substantial, the following analyses will distinguish between childminders and others to shed some additional light on the differences that exist. It is essential to note that these two categories are not mutually exclusive: over the course of a week a child can be cared for by a childminder part of the time and by another person, e.g. a neighbor part of the time. By the same token, being cared for informally is not mutually exclusive with being cared for formally. Furthermore, a main caveat is that the groups of children presented here are relatively small, thus doubts about the reliability of small percentages are warranted.

Figure 15a: Prevalence rates of informal childcare of children under the age of three by country and provider group



SOURCE: EU-SILC UDB 2010 (version 2 of August 2012), own analyses.

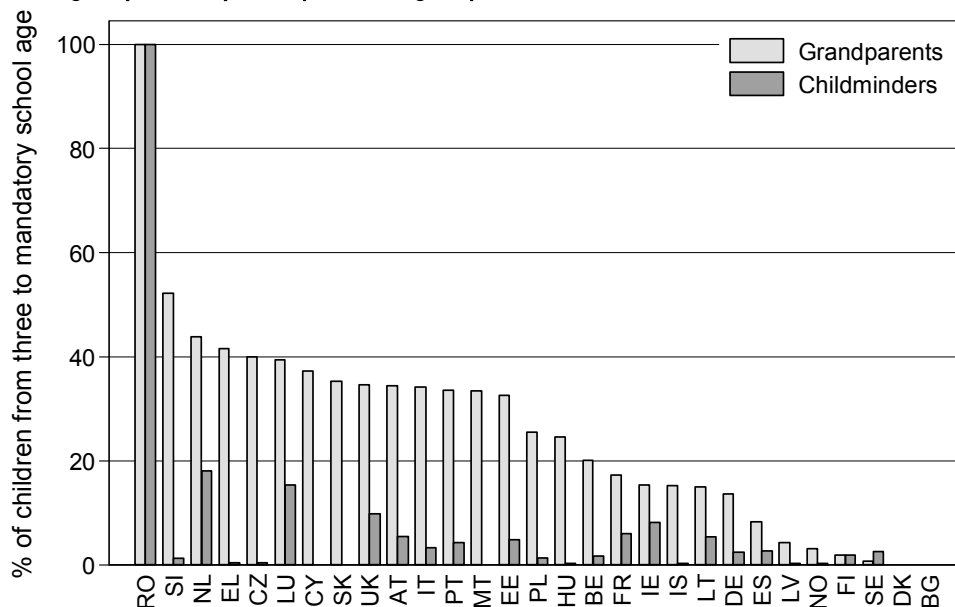
NOTE: 'Grandparents' refers to the group also comprising friends, neighbors, and other household members (who are not the parents).

⁴ An exception is France with its system of 'assistantes maternelles.' Since 2008, they are counted as formal childcare in the EU-SILC data.

Figure 15a shows the findings for the age group of children under three years of age. A clear message is that the grandparent group is mainly active in childcare for a limited number of hours per week. Even then the variation is wide: whereas in Romania all children were being cared for by grandparents, friends, and neighbors, in the Nordic countries this type of childcare hardly plays a role. When looking at childcare by grandparents and others for more than thirty hours per week (Figure 16), this does not seem to be happening in most countries. Only in Romania and Greece are more than 10 per cent of children under three being cared for by grandparents. When looking at the Mediterranean countries, where welfare state provisions are often lower than in other countries and need to be supplemented with relatively large support from kin networks (Kovacheva et al. 2011), it is surprising that prevalence rates of childcare by grandparents and other kin is not more prominent. Portugal, Greece and Italy all have prevalence rates over 20 per cent for childcare by grandparents for less than thirty hours per week, but they still are markedly lower than for instance in the United Kingdom and the Netherlands.

A further finding revealed by Figure 15a is that childminders hardly play a significant role in the childcare of under-three year olds. Only in Romania do they play a prominent role; in the Netherlands, Portugal, and Iceland a minority of children (slightly above 10 per cent) are being cared for by childminders. In all remaining countries under analysis, childminders do not play a significant role in childcare of under-three year olds.

Figure 15b: Prevalence rates of informal childcare of children aged between three and mandatory school age by country and provider group



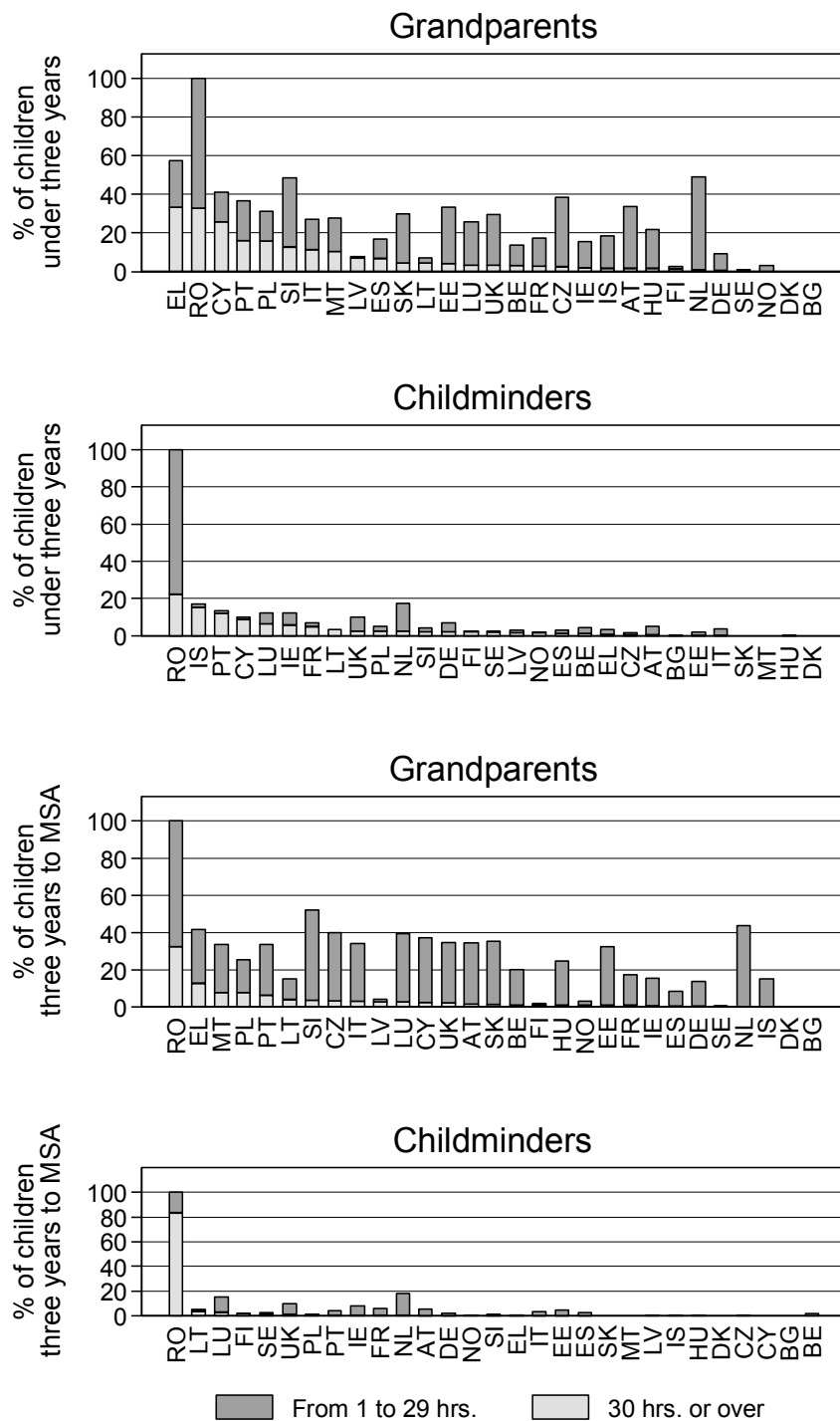
SOURCE: EU-SILC UDB 2010 (version 2 of August 2012), own analyses

NOTE: ‘Grandparents’ refers to the group also comprising friends, neighbors, and other household members (who are not the parents).

Figure 15b repeats the analysis for the age group between three and mandatory school age. Again, childcare by grandparents and relatives is prominent in a number of countries, but there is a relatively large variation across countries – from 100 per cent in Romania to virtually nothing in the Nordic countries – can be found as well. Childcare from grandparents and relatives for thirty hours or more per

week is very uncommon, only Romania and Greece achieve substantial significant full-time rates for children aged three to mandatory school age. Apart from Romania, the Netherlands, and Luxemburg, childminders are rather uncommon in childcare for children between three and minimum compulsory school age. In Romania, childminders are also an important staple in providing full-time childcare (30 hours and more per week), whereas in the Netherlands and Luxemburg they are mostly being used in part-time childcare (one to 29 hours per week) (Figure 16).

Figure 16: Prevalence rates of informal childcare of children by age group, country, provider group, and by number of hours



SOURCE: EU-SILC UDB 2010 (version 2 of August 2012), own analyses

7. Conclusion and policy recommendations

7.1. Summary of main findings

The goal of this report was to examine if the Barcelona targets for childcare provision established in 2002 were met. In this section we not only summarise the findings, but also provide an analytical framework to interpret the results and position different nations along the dimensions of childcare.⁵

Summarising the central results from this study, we can draw several conclusions:

- Figure 17 provides a typology that divides countries according to their position towards the Barcelona childcare targets, giving a snapshot in 2010 for both age groups of children.⁶ The figure distinguishes between the **'Leaders'** that met both targets, the **'Progressive'** nations that met at least one of the targets and those who are **'Getting close'**, by either meeting around 25 per cent coverage of under threes or around 80 per cent coverage of childcare age three to mandatory school age. Finally, it also shows the countries that are clearly **'Falling behind'**, by the failure to meet either target.
- A group of **'Leaders'** emerged of nations that **met both targets**, which as shown in Figure 17, is represented by Belgium, Denmark, France, the Netherlands, Slovenia, Spain, Sweden, United Kingdom and candidate country Iceland.⁷
- There was also a distinct category of five **'Progressive'** nations that **met at least one of the targets**, shown in Figure 19, consisting of Germany, Estonia, Ireland, Portugal and country Norway.
- An additional six countries are what we term **'Getting close'** by almost meeting one of the targets, including Austria, Italy, Cyprus, Luxembourg, Finland and Switzerland.

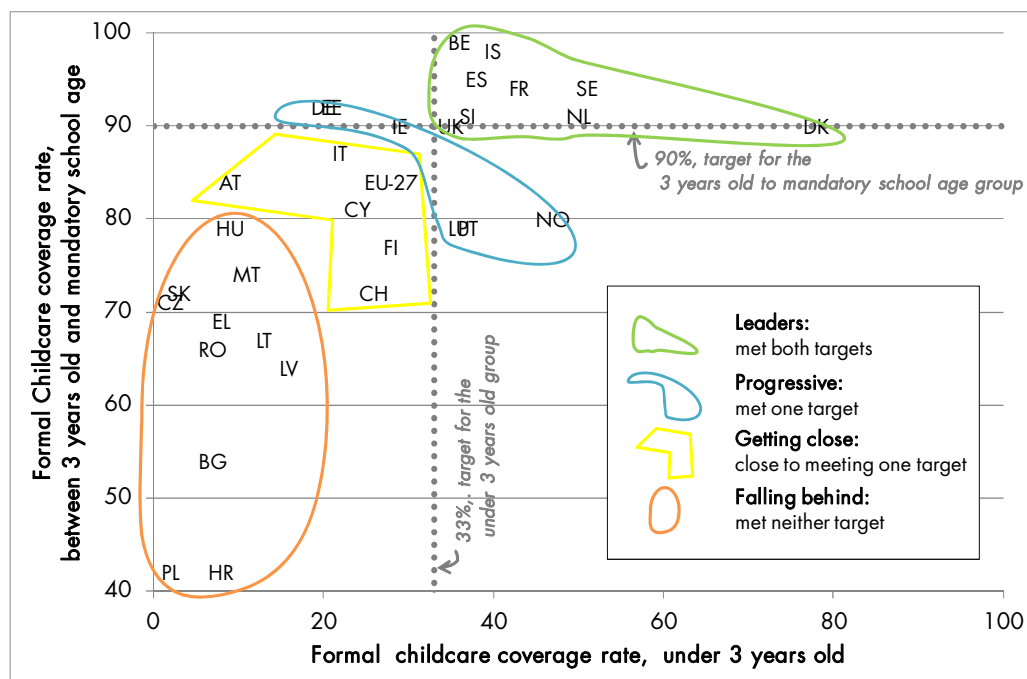
⁵ It is important to note that the nature of the data presented in this report impacts the results, but also the interpretations that we can draw from these estimates. The majority of data used in this report is taken from surveys, which are subject to natural, but also systematic variability. It would have been ideal to have been able to produce accurate confidence intervals for the estimates presented in this report, but this goes beyond the auspices of a general report. Due to the sample size differences in the EU-SILC data, it should be perceived as having larger confidence limits and thus producing less accurate estimates compared to the LFS.

⁶ Conversely the typology provided in Figures 3 and 4 divide countries according to their progression towards the Barcelona objectives between 2006 and 2010 for each age category separately.

⁷ It is important to note that it remains difficult to make clear cut categorisations since countries such as Spain straddle the border between no change (under three years) and moving ahead (age three to mandatory school age) (see above Figures 3 and 4).

- **Eleven** states were unable to meet either target, representing those who were clearly ‘**Falling behind**’ by neither meeting nor coming close to meeting either of the targets. This group is shown in the bottom left panel of Figure 19, consisting of Hungary, Malta, Slovakia, the Czech Republic, Romania, Lithuania, Latvia, Greece, Bulgaria, Poland and Croatia.
- Although targets appeared to be met, **in many instances, childcare arrangements are provided for less than 30 hours a week – missing the underlying goal of the Barcelona targets.** To assist parents, and especially women to acquire and sustain full-time and part-time employment, a minimum provision of childcare is essential.
- There has been **limited progress between 2006 and 2010** in reaching targets.
- Although the employment rate of women has grown over the past decade in the EU-27, **motherhood remains negatively correlated with employment across most EU Member States,** suggesting that the underlying goal of the Barcelona targets to increase the employment participation of parents remains unmet in many countries. For the EU-27 as a whole, the difference between the employment rate for women with and without children under twelve is greater than 10 percentage points.
- Across the EU-27, **women who have children under the mandatory school age and state that they do not work or work only part-time for reasons linked to childcare,** do so because: childcare is too expensive (53 per cent), not available (25 per cent), of insufficient quality (4 per cent) or for other reasons (18 per cent). The composition within these groups, however, varies widely across countries. It is likewise essential to note that women may have additional reasons to not work or work reduced hours such as care of other family members (e.g. parents), sickness or education.
- **Total public spending on childcare and early-education services as a percentage of the national GDP is particularly high in countries where the correlation between parenthood and employment is low,** such as Denmark and Sweden. The relationship between public investment in formal childcare and usage is not straightforward since some countries have relatively low returns for their investments (e.g. the United Kingdom), while others have relatively recent high investments, which may not have had sufficient time to influence enrolment.

Figure 17: A typology of the progression towards the Barcelona targets



7.2. Policy recommendations

This section first provides some recommendations towards the Barcelona targets followed by orientations related to the indicators to measure these targets and policy suggestions that go beyond the target.

7.2.1. Recommendation on stepping up efforts in order to meet the Barcelona target

The primary goal of the Barcelona targets was to remove the barriers of female labour market participation. The underlying expectation was that if nations could enhance the affordability, availability and quality of childcare, mothers with young children would no longer face barriers to entering and remaining in the labour market. Based on the results of this report, the central conclusion is that it remains useful to still pursue the goals of the Barcelona target, but that it is essential to engage in a critical reflection of the original formulation of these goals and the means to achieve them.

Follow the leaders: moving towards best practices of combining parenthood and employment

The results in this report demonstrated that certain countries emerged as ‘leaders’ that were able to meet both targets of having a formal childcare coverage rate for under-three year olds of 33 per cent and 90 per cent coverage of formal childcare for children between the age of three and mandatory school age. For future strengthening of the goal of the Barcelona targets it would be essential to examine the forerunners (such as Denmark, Sweden, Iceland, the Netherlands and France) to **determine the best practices that can be deemed from these nations and whether certain principles can be applied in other cross-national contexts**. It would likewise be essential to look at those that clearly ‘fall behind’ to isolate what can be achieved on the short term to focus on these countries. Although it goes beyond the confines of this report to include an analysis of all best practices, certain aspects could be taken into account such as

the ability or right for women and men to work part-time or reduced hours to combine employment with parenthood or determining how the gaps were virtually closed between the employment rate of parents with and without children in some countries. The results of this report show that the countries that had the smaller difference between the employment rate of adults with and without children met the targets, with those having the largest difference (particularly for women) being the most likely to fall behind in meeting the targets. Although the labour force participation of women has grown in the last decade, **continued attention needs to be placed on closing the gap between parenthood and employment – particularly for women.**

Continue to acknowledge the key variation of enrolment in care by age of children

The initial decision within the Barcelona targets to divide the initiative by the age of children is given clear support within this report, leading us to conclude that **the variation of enrolment in care by the age of children should remain as core aspect within future policy initiatives.** The results of this report demonstrate that there are substantial variations in the enrolment of children in childcare for those under age three versus those aged three to mandatory school ages. Whereas there are considerable differences across countries in the level of care for children under the age of three across the EU, there is less variation from age three to mandatory school age. This suggests that there are different services, but likely also different constellations of care and norms regarding care for these different age groups.

Stepping up efforts to promote access to childcare for children under three

It appears that the use of formalised childcare for age three to mandatory school age is more acceptable and almost universal, whereas the care of very young infants under three varies broadly. It remains essential to continue to acknowledge the different levels of acceptability and types of care that are required for children under the age of three and those from age three to mandatory school age. Formalised childcare for older children is generally acceptable and almost universal. Considering the relative lack of variation in the older age groups, **future policy directives should specifically focus on stepping up enrolment in formal childcare for children aged three and under.** As discussed shortly, this can be related to different concerns about the quality of care, but also the greater use of informal care (e.g. grandparents) in this age group or cultural norms about the care of very young children.

Another related aspect to consider is that the **mandatory school age is also very different across Europe**, ranging between ages four and seven, which also needs to be taken into account in future initiatives. The Barcelona targets were fixed in relative terms in order to allow each country to focus on and develop their own strategies, with the perception – it appears – that once children were in school, many childcare issues would be solved. If it were possible to construct a measure or indicator that could measure the childcare/education for children under the age of seven, the weight of the formal childcare/education could be more visible across Europe. It is important to note, however, that in many countries, even entry into mandatory school covers under 30 hours a week and in some countries involves children coming home for lunch or afternoons. This can be a further impediment for parents and mothers to engage in full-time employment even when the children are in school if informal or formal care is not available.

Addressing inequalities in access to childcare

Although the division between individuals with and without children or between men and women remains useful, it is essential to **acknowledge in future policy directives that ‘women’ and ‘parents’ are not a homogeneous group**. The obstacles in access to childcare and the labour market are inherently linked with socioeconomic gradients such as differences in educational level and across income groups. Some countries, such as Sweden and Denmark, have been more successful in ensuring equal access to childcare across all income levels. Another essential point to consider is the eligibility criteria for childcare, where priority of access may be given to employed parents over those who are inactive or not employed, which further intensifies inequalities. There may also be financial disincentives or ‘inactivity traps’ that are linked to the affordability of childcare where parents calculate whether they can afford to work (Immervoll & Barber 2005). The decision for parents to work or not is a calculation of financial trade-offs between whether it would be more advantageous to be employed and pay for childcare or stay at home. This is particularly the case for those groups that have been shown to be more responsive to financial work incentives such as single parents or second earners (often women) with young children (Immervoll & Barber 2011). A suggestion would therefore be to provide more focused financial incentives or targets to certain groups that are more likely to respond to these incentives to work.

7.2.2. Recommendations on indicators to measure the realisation of targets

When engaging in this evaluation of the ability of countries to meet the Barcelona targets, we also encountered several issues that would be important to consider and measure in future initiatives.

Move from aggregate childcare enrolment to number of hours in childcare

Although the previous summary concluded that 10 (under age 3) and 9 (age 3 to mandatory school age) Member States already meet the Barcelona targets, a considerable number only do so because of childcare in very limited hours. As Figure 2 illustrates, for instance, although countries such as the Netherlands, Ireland, the United Kingdom, Austria and Switzerland either meet or almost reach the targets of one-third of children under three in formal care, the majority of this care remains under 30 hours a week. In future policy recommendations, it is therefore **essential to not only include targets of the overall percentage of children enrolled in childcare, but to also provide care for a minimum number of hours**.

Beyond women’s employment participation to the type of employment

Previous scholars have criticised the narrow focus of the EU employment policy and work–family reconciliation measures on women’s employment participation (e.g. Lewis 2006). Recent empirical research has demonstrated that the level of job control, autonomy and flexibility can play an important role in women’s decisions to remain in the labour market and raise children (Begall and Mills 2011), as it is unrealistic to assume that women can enter the labour market without tensions arising in the workplace. This is why a more nuanced focus not only on entry into the labour market or full- versus part-time employment is essential, but also more attention to the types of employment that offer women more autonomy in the location and timing of their work, which in turn enhances employment and well-being (Drobnič, Beham & Präg 2010). Flexibility in terms of the scheduling of hours and days within certain occupations (e.g. teaching, healthcare), for instance has been shown allow women to reconcile

parenthood and employment (e.g. Begall & Mills 2013; Mills & Täht 2012). While this report focuses on aggregated national-level comparisons, it should be recognised that individual level differences, such as education or socioeconomic background and occupation, are likely also playing a vital role. A recommendation is therefore that **future policy directives should not only focus on the level of women's employment participation but also the type and quality of their employment.**

A stronger focus on the quality of care

This report has not been able to identify a correlation between the quality of care and usage of childcare services. This result is surprising, but likely to be a case of lack of data on quality and the use of an imperfect proxy. We were only able to draw upon some measures assembled by researchers such as child-to-staff ratio, maximum group size and qualification of staff and from this, created a weighted single measure to account for the different salience of each aspect. This inability to ascertain whether there is a correlation between the quality of childcare and usage of services points to the policy recommendation that it would be **essential to collect cross-nationally comparative data that can more accurately measure the quality of care which acknowledges the different weight given to each aspect.**

New requirements for data collection that captures more complex aspects and forms of childcare

In some instances, it was not possible to adequately capture particular aspects relating to childcare. It may be that children are in the care of formal and informal caregivers and that a higher number of children are in in some form of childcare in some countries, but are not empirically represented with the existing data. A recommendation is to **collect more focused data, with sufficient sample size, that captures informal childcare and the combination of different types of childcare.** Beyond including data on distinctions about informal care by grandparents, it would be interesting to understand how parents combine both informal (e.g. grandparents) care with formal care, which is likely, a very common choice. The reliance on grandparent care is influenced not only by the supply of formal childcare, but also normative values, with parents in the normatively conservative countries more likely to opt for grandparent care (Jaapens and Van Bavel 2012). The increasing retirement age in many European countries, may, however, make grandparent care an increasingly less viable option.

Although accurate data across the EU are lacking, the data from EU-SILC demonstrate that the care of children is often a more nuanced combination of both formal and informal childcare. Formal childcare is often supplemented by informal care by family members, such as grandparents and the social network. The geographic proximity of children's and parent's households is also key in understanding the 'social capital' that individuals have for family – and often grandparent – care (e.g. Kalmjin and Saraceno 2008; Reher 1998; Balbo and Mills 2011). This is why, for instance, although formal childcare services may be limited in some countries, parents may still be able to work full-time and rely on grandparent and other family support, often in combination with formal childcare support to remain in the labour force. In many countries, due to the ageing and relatively healthier older population, informal childcare, often provided by grandparents, may also play a role on mothers' employment as a means of work-family reconciliation. A recent analysis of seven countries across Europe found that only in some countries is mothers' employment positively and significantly associated with grandparents providing childcare

(Aassve, Arpino, Goisis, 2012). Differences and the lack of an association were related to considerable country differences and family preferences. This complements recent research, which has found that mothers living in European nations that hold more conservative family values are significantly more inclined to use informal childcare in the form of grandparents as the main source of childcare (Jappens and van Bavel, 2012).

A policy orientation is that in order to move closer to understanding, but also reaching the Barcelona targets, it is essential to: **(1) collect more accurate data across all countries that includes more detailed information on informal childcare use** (and use in combination with formal childcare); **(2) link data on informal childcare arrangements with the reason that these types of childcare are used** instead of or supplemental to formal childcare; and **(3) link information on informal childcare use to parents' and particularly women's employment**. It is likewise essential to note that this recommendation is not a call for full-time informal care as the most adequate solution. In many cases it may be a forced solution and such a mandate could have very negative consequences for low income families and children. Rather, it appears to be a viable option for some families to be combined with formal childcare.

Collect data with larger sample sizes to improve reliability of results

Another limitation of some of the results presented in this report (e.g. such as EU-SILC data) is that data is sometimes unreliable due to small sample sizes. In order to fully address these aspects, **larger sample sizes would result in more reliable results**.

7.2.3. Moving beyond the Barcelona targets: further recommendations

The focus of the Barcelona targets was almost exclusively on the introduction of childcare facilities to alleviate disincentives for female labour market participation, which may have also been too limited. Although it is true that childcare has been empirically shown to be one of the primary sources to alleviate work–life conflict (Rindfuss et al. 2007; Mills et al. 2011), other policy initiatives, and national-level and individual and household factors may also influence female labour market participation. A suggestion for future policy directions would therefore be to not only consider formal childcare but additional factors.

Acknowledgement of the complex public social care packages across the EU

Previous research has demonstrated that there are considerable differences in the very items that are considered within social care packages for preschool children across the EU (Del Boca and Wetzels 2007; Hantrais 2004; Crompton 2006). This includes the interrelated aspects of the length and compensation of maternity and paternity leave, but also coverage for children under age three and children aged three up to mandatory school age (Saraceno 2011). Another cross-national difference is the school-age of children discussed previously, since the mandatory age of attending schools differs across Member States (Saraceno and Keck 2008).

Affordability goes beyond childcare policies alone

This report showed that over 50 per cent of women state that they do not work or work part-time because childcare is too expensive. Immervoll and Barber (2011) demonstrated that the calculation of whether

parents can ‘afford to work’ goes beyond childcare policies alone. A policy recommendation is therefore that **the cost of childcare services needs to be considered in relation to other social and fiscal policies that also influence family incomes**. Although the cost of full-time childcare may be considered as very high in some countries, this does not have to result in lower employment if the tax-benefit system balances the payment of these services with employment. Conversely, if there are high tax burdens to be employed, parents may see little financial gain from being employed even in highly subsidised childcare markets (e.g. the United Kingdom).

The report also found that some of the countries with the highest full-time female labour force participation have the lowest spending on childcare for children under three. When we dig deeper, the results in this report present a considerable puzzle. Although research has shown a relationship between women’s full-time employment and full-time childcare usage, understanding the mechanisms that lead to this link are not fully understood. The majority of Eastern European countries where the level of childcare usage, enrolment and public investment is actually very low, have a relatively high level of female full-time employment, particularly after the age of 40 and childbearing years. This suggests that other forms of childcare may be more important in different national contexts, which we turn to in more detail shortly. It likewise touches upon the path-dependence or history of women’s labour market participation in certain countries (e.g. it has been historically high in post-socialist countries). Furthermore, the relationship between GDP spending on childcare and pre-primary care with childcare usage is not straightforward. It appears that although in some countries there is a considerable amount of money dedicated to childcare, this does not translate into more children in formalised care.

Acknowledgement of the unequal household division of household labour

The focus of the Barcelona targets on national level incentives misses the problem that many women in Europe engage in a significantly higher share of household labour. A very high amount of household labour and gender inequality is a further impediment to either part- or particularly full-time employment in the labour market.

Tackling cultural and normative values about parenthood and childcare

The focus on formal childcare within the Barcelona targets neglects differences in the cultural and normative values about parenthood and care. There is, in fact, a strong normative and cultural value attached to the care of children by at least one biological parent in many European countries. Cultural norms about parenthood, values regarding the institutionalised care of children and preferences of parents need to be taken into account in future policymaking endeavours. Beyond these formal constraints (i.e. availability, affordability and quality) examined in this report, women and parents may opt not to take their children to formal institutions for a variety of reasons. This is related to the culture of motherhood and preference for women and couples to provide primary care for their own children (Täht and Mills 2012). As touched upon previously, it may be that in some countries with conservative family values, aiding women to participate in the labour market may be more related to informal childcare via grandparents than mandates for formal childcare (Jappens and van Bavel 2012).

It is therefore **important not only to acknowledge these longstanding cultural and normative values about parenthood and childcare, but to also attempt to tackle these perceptions through more**

public awareness. A growing body of research has shown that such perceptions can have a detrimental effect on children's interests and school readiness.

7.3. Conclusion

In summary, the aim of this section was to summarise results and then engage in a deeper and more critical reflection regarding the progress of many EU nations towards the objectives of the Barcelona targets. By virtue of this aim, we highlighted the strengths and potential future directions that could be pursued if an attempt was made to in the future to forge similar objectives such as the Barcelona targets and isolated future suggestions to engage in a more accurate measurement to achieve these types of goals.

We first reflected upon the progress towards the Barcelona targets and how this initiative could be strengthened further. In this respect, several recommendations were made. First, we suggest to 'follow the leaders' and engage in a more in-depth analysis to ascertain the best practices that can be deemed from these nations and determine whether this knowledge can be transported to different national contexts. A second point was to reaffirm the wisdom of the initial choice of the Barcelona targets to divide the initiative across age groups. A related recommendation was to step up efforts related to 0–3 age group and get a better grasp of obstacles in access. In this respect we also call for a focus and consideration of the mandatory school age across countries in Europe. We also highlight the importance of addressing the large differences that exist across groups such as mothers and fathers. Obstacles towards childcare often exist due to socio-economic inequalities that can be intensified when childcare is not made available.

In a second stage, we then focused on recommendations related to indicators to measure the realisation of targets. These came from the obstacles that we encountered in trying to answer the questions in this report. A first recommendation would be to shift from providing recommendations about the aggregate level of childcare enrolment such as 33 per cent or 90 per cent, to a focus on the number of hours in childcare and specifically more than 30 hours a week or part-time employment that can enhance work-life compatibility. A second measurement-related recommendation is to move beyond the focus on women's employment participation, to examine job quality (such as level of job control and flexibility) which, in addition to formal childcare, can enhance women's labour market participation. A third suggestion would be collect cross-national comparative data that could more accurately measure the quality of care, which was lacking in this report. In a fourth recommendation, we also call for the collection of data that could more appropriately capture more complex aspects and forms of childcare, including the combination of both formal and informal childcare. In this respect, we emphasise that sufficient and larger sample sizes would be necessary to produce more reliable results.

In a final set of recommendations, we focus on moving the beyond the Barcelona targets to examine additional aspects that influence parent's decisions to work and enroll their children in childcare. First, we conclude that it is important to acknowledge the complex public social care packages across the EU. In this respect, a related recommendation is that when considering the examination of affordability, we need to go beyond childcare policies alone to also take into account other social and fiscal policies that might influence family incomes. A third point is that the unequal division of household labour continues to be ignored within such initiatives, yet has an important impact on the labour market participation choices of

women. Finally, we conclude that future initiatives need to not only acknowledge, but also tackle cultural and normative values about parenthood and childcare through more public awareness. Particularly for certain groups, childcare can have a positive effect on children's well-being and school readiness but remains underemphasised in the public debate.

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Appendix A. Mandatory school age

Mandatory school age is the age at which compulsory education starts. It typically begins between five and seven years of age, however, the exact mandatory school age differs from country to country. For easy reference, we provide a summary in Table 3.

Table 3: Mandatory school ages across countries

Countries	Mandatory school age
Luxembourg	4
Latvia, Malta, Netherlands, United Kingdom, Cyprus, Greece, Hungary	5
Austria, Belgium, Czech Republic, France, Germany, Ireland, Italy, Poland, Portugal, Slovakia, Slovenia, Spain, Norway, Denmark, Romania	6
Bulgaria, Estonia, Finland, Lithuania, Sweden	7

SOURCE: Eurostat (2011) Childcare arrangement. As of 3 April 2014:
http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/en/ilc_ca_esms.htm

Appendix B. Availability and affordability of care arrangements and mothers' labour force participation

Table 4: Impact of availability and affordability of care arrangements as reason for not working or working part-time, women with children under three years and three years to minimum compulsory school age

Member States	Women with children up to 3 years		Women with children from 3 years of age to mandatory school age	
	Absolute (in 1,000s): Suitable care services for children* are not available or affordable	Relative: % of those not working or working part-time	Absolute (in 1,000s): Suitable care services for children* are not available or affordable	Relative: % of those not working or working part-time
EU-27	2,201	26	1,681	25
BE	56	27	51	27
BG	21	26	29	32
CZ	45	13	16	14
DK	:	:	:	:
DE	380	45	404	47
EE	(5)	(12)	:	:
IE	29	28	24	29
EL	42	31	30	27
ES	298	32	264	30
FR	217	21	139	17
IT	178	17	173	15
CY	3	30	2	26
LV	21	56	:	:
LT	(7)	(19)	(7)	(16)
LU	1	13	(1)	(13)
HU	64	24	21	18
MT	0	0	:	:
NL	32	7	19	6
AT	34	21	37	21
PL	223	29	116	23
PT	10	14	10	13

Member States	Women with children up to 3 years		Women with children from 3 years of age to mandatory school age	
	Absolute (in 1,000s): Suitable care services for children* are not available or affordable	Relative: % of those not working or working part-time	Absolute (in 1,000s): Suitable care services for children* are not available or affordable	Relative: % of those not working or working part-time
RO	88	41	83	26
SI	(3)	(15)	(2)	(13)
SK	9	6	(4)	(6)
FI	6	6	(3)	(6)
SE	:	:	:	:
UK	430	30	242	29
HR	9	32	15	41
MK	(2)	(3)	(4)	(7)

SOURCE: EU-LFS data 2010, ad hoc module 'Reconciliation between work and family life'.

NOTES: EU-27 without DK and SE.

*or both for children and ill, disabled, and elderly

We report both absolute numbers and relative percentages as the denominator of the percentages. This is due to the fact that we find the denominator – women age 15–65 not working or working part-time due to child care or elderly care related reasons – are more challenging to interpret.

Data quality for this table is hampered by missing information. For EU overall 13 per cent, for DE around 45 per cent, IE around 24 per cent, LV around 22 per cent, MK around 10 per cent, PT around 10 per cent, UK around 21 per cent. We subtracted the number of cases with missing values from the total before calculating the percentages.

Numbers in parentheses: unreliable; sample size too small.

Appendix C. Formal child care use by income quintiles

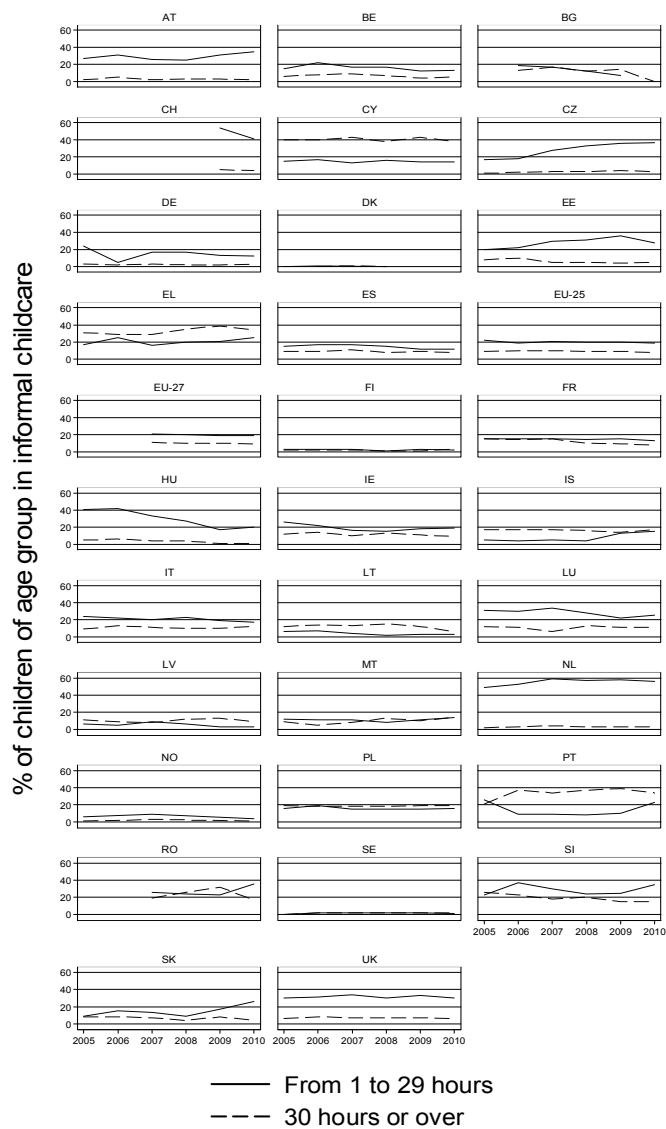
Table 5: Formal care use by income quintiles, households with a child <3 years, 2010

	Under 3 years old				
	Income quintile 1 (Poorest)	Income quintile 2	Income quintile 3	Income quintile 4	Income quintile 5 (Richest)
AT	10%	9%	7%	12%	9%
BE	17%	27%	38%	43%	57%
BG	0%	10%	10%	11%	15%
CH	9%	18%	27%	33%	53%
CY	16%	13%	19%	32%	30%
CZ	3%	1%	3%	2%	4%
DE	21%	17%	22%	17%	23%
DK	87%	73%	72%	76%	83%
EE	16%	29%	22%	31%	14%
EL	6%	3%	11%	9%	12%
ES	29%	33%	30%	50%	45%
FI	18%	23%	27%	27%	41%
FR	15%	34%	60%	53%	64%
HR	6%	5%	8%	6%	13%
HU	7%	10%	14%	11%	15%
IE	8%	8%	12%	21%	34%
IS	37%	46%	44%	29%	34%
IT	17%	19%	26%	27%	28%
LT	2%	20%	16%	14%	10%
LU	23%	22%	34%	57%	56%
LV	7%	13%	24%	20%	11%
MT	0%	5%	16%	20%	15%
NL	27%	35%	55%	59%	70%
NO	34%	51%	57%	53%	53%
PL	0%	1%	2%	2%	4%
PT	14%	30%	44%	32%	36%
RO	5%	6%	5%	10%	13%
SE	44%	56%	56%	53%	32%
SI	41%	33%	39%	43%	38%
SK	2%	6%	5%	2%	0%
UK	20%	26%	50%	43%	53%
EU27	17%	23%	34%	34%	36%

NOTE: darker shading indicates higher percentage

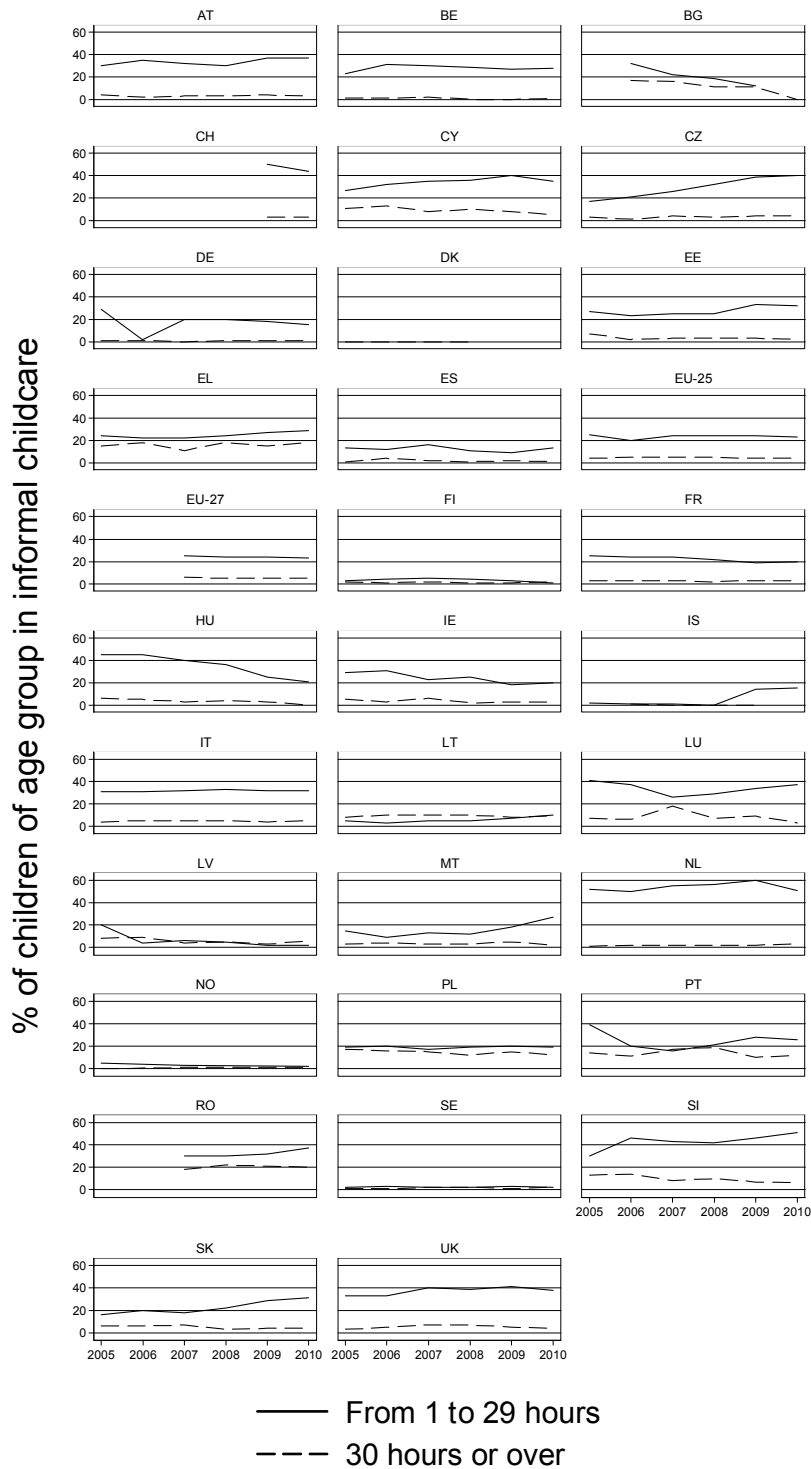
Appendix D. Development of informal childcare over time, 2005 to 2010

Figure D1: Development of informal childcare for children under three years of age by country and number of hours



SOURCE: Eurostat, ilc_caindoth, date of extraction: 28 August 2012.

Figure D2: Development of informal childcare for children between three years and mandatory school age by country and number of hours



SOURCE: Eurostat, ilc_caindothor, date of extraction: 28 August 2012.

