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Article

Mandatory day care for preschool children would not be an effective solution in targeting particular children

DIW Weekly Report

Provided in Cooperation with:

German Institute for Economic Research (DIW Berlin)

Suggested Citation: Schmitz, Sophia; Spieß, C. Katharina (2018) : Mandatory day care for preschool children would not be an effective solution in targeting particular children, DIW Weekly Report, ISSN 2568-7697, Deutsches Institut für Wirtschaftsforschung (DIW), Berlin, Vol. 8, Iss. 19, pp. 159-166

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AT A GLANCE

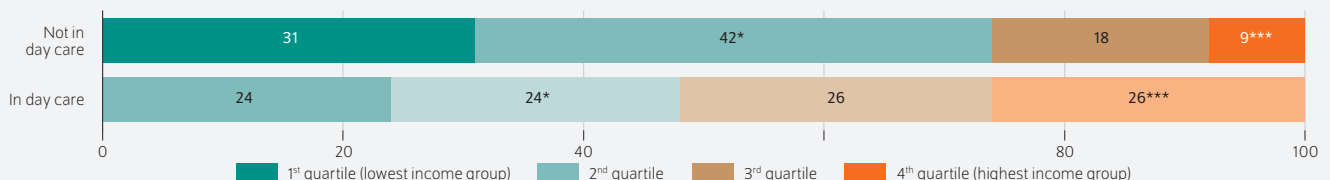
Mandatory day care for preschool children would not be an effective solution in targeting particular children

By Sophia Schmitz and C. Katharina Spieß

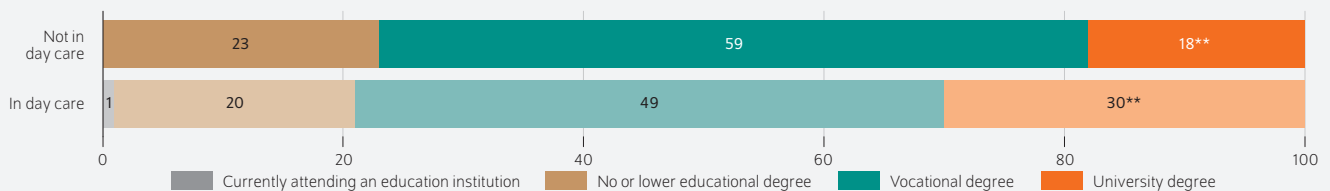
- Six percent of children between the ages of three and six do not attend day care
- This study, one of the few for Germany, shows that children not attending day care do not only come from lower income households
- Higher-income parents and parents with higher levels of education also take care of their children at home or use other education and care programs
- Mandatory day care for children three years and older would not be an effective way to target children from socio-economically disadvantaged households
- Instead, parents should be better informed about the benefits and costs of their child attending day care and targeted measures to help children should be further expanded

Children aged three and older who do not attend day care centers also come from high-income households and households with high educational attainment

Day care center attendance of children aged three and older by household net income (percentage shares)



Day care center attendance of children aged three and older by mother's educational attainment (percentage shares)



Source: Authors' own calculations based on SOEP data.

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FROM THE AUTHORS

"Our study does not suggest that mandatory day care would effectively target children from socio-economically disadvantaged households. This is because the group of children not attending day care are very heterogeneous. It would make more sense to have, for example, mandatory language courses for children with language difficulties, as is already the case in some places." — C. Katharina Spieß, study author —

MEDIATHEK



Audio Interview with C. Katharina Spieß
www.diw.de/mediathek

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By Sophia Schmitz and C. Katharina Spieß

ABSTRACT

In Germany, around 94 percent of children between the ages of three and six attend a day care center. Regarding the remaining six percent, many experts have speculated that children, primarily those from socio-economically disadvantaged households, do not use day care. Based on data from the Socio-Economic Panel (SOEP) and the Families in Germany survey (FiD), the present study is one of the first representative studies to look at preschool children three and older who do not attend a day care center. The findings show that they are not necessarily from socio-economically disadvantaged homes. Some parents with high incomes and high levels of educational attainment also keep their children home or take advantage of other programs such as parent-child groups. For this reason, mandatory day care would not effectively target children from socio-economically disadvantaged households. Instead, parents who do not send their children to day care should be specifically informed of the advantages of day care attendance for their children, its costs, and possible exemptions from payment.

In Germany, almost all children three and older go to a day care center: in 2016, the figure was 94 percent of children between the ages of three and six. Day care supervision for preschool children (age three until starting school) has become a matter of course. Almost all of Germany's rural and urban districts have high day care usage rates. Bremerhaven had a rate of "only" 78 percent, which is the nation's lowest rate by far.¹

There are slight differences among age groups. Eighty-nine percent of three-year-olds and just under 97 percent of five-year-olds were enrolled in day care in 2016. Hence, only a few children did not use day care until the year before enrolling in school. Further, the discussion among the expert public often points out the differences in use between children with and without a migration background. For example, 88 percent of children with a migration background went to day care starting at age three in 2016, and the proportion was 96 percent for those without a migration background.²

Many assume that in general, children from households with a low socio-economic status (in which parents have lower levels of education or lower household incomes, for example) attend day care less frequently than other children. Since high quality education and supervision in day care centers is highly significant for children's development and social integration,³ policy makers often envisage legislating mandatory day care for children as of age three. This is motivated by the assumption that kindergartens and similar institutions have a compensatory effect and are able to balance out possible

¹ See German Federal Statistical Office, "Statistik der Tageseinrichtungen für Kinder," 2017.

² See German Federal Statistical Office, "Kinder und tätige Personen in Tageseinrichtungen und in öffentlich geförderter Kindertagespflege," 2017. Here, rates of use for day care supervision that cover day care centers and childminders are reported. However, childminders are no longer significant for children in this age group.

³ See economic analyses as summarized by C. Katharina Spieß, "Early Childhood Education and Care Services and Child Development: Economic perspectives for universal approaches." *Emerging Trends*, 2017 (forthcoming).

socio-economic differences.⁴ The discussion is not new. Mandatory kindergarten was debated as early as the 19th century, an age when far fewer children used day care centers.⁵ The current discussion is also motivated by France's decision to begin sending children to school at age three in order to reach the three percent of children who do not yet attend *école maternelle*, the French version of preschool.⁶ However, France is not a one-to-one comparison with Germany because preschool in France is an integrated component of the school system, which is not the case in Germany.

German discussion around mandatory day care not based on sufficient information about unenrolled children

Until now, the discussion about mandatory day care has been conducted without detailed, systematic knowledge based on a nationwide survey that would determine precisely which children are not in day care. We do not know whether a migration background is the sole factor associated with late day care use or if perhaps other factors play a role. Thus, the present study examined how the socio-economic and demographic characteristics between enrolled and non-enrolled children ages three and older differ. Further, we looked at parents' attitudes toward supervision in a day care center and whether or not parents who do not send their children to day care use other education and care programs.

The database used is the Socio-Economic Panel (SOEP), a nationwide survey of households and persons, and the similarly structured Families in Germany (FiD) survey.⁷ Preschool children age three and older who went to a day care center are compared to children of the same age who did not go to a day care center in 2016.⁸

No clear relationship between household income and day care use

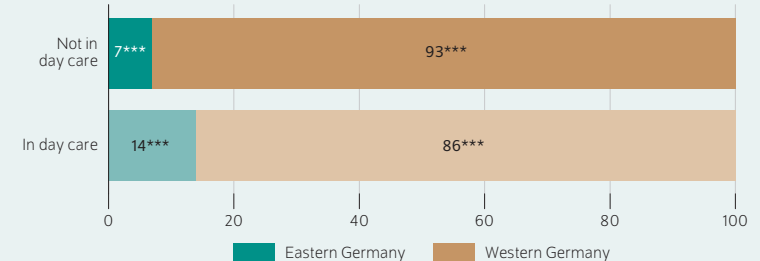
The analyses show that preschool children age three and older who do not attend day care are more likely to come from western Germany than those who do attend day care

Figure 1

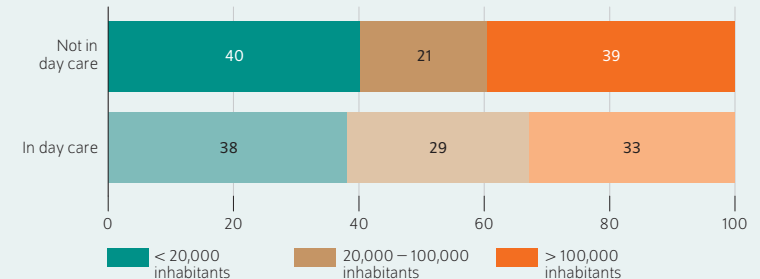
Regional characteristics of children enrolled in day care centers and those who are not enrolled

Percentage shares

Eastern and western Germany



Size of municipality



Note: The fraction of each characteristic is depicted for the group of children who attend and those who do not attend a day care center. All results are weighted. Standard errors are clustered on the household level.

***, **, and * show the significance at the 1-, 5-, and 10-percent level of the differences between the two groups of children.

Source: Authors' own calculations based on the SOEP v.33, wave 2016.

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In eastern Germany, children aged three and older go to day care more frequently than in western Germany. The size of the municipality does not play a role.

(Figure 1). We do not find significant differences between rural and urban regions. Children who are not in day care come almost as frequently from small, medium-sized, and larger municipalities as those who are.

Differentiation by household-related characteristics shows that children who are not in day care are significantly more likely to live in households whose net income⁹ is in the second quartile and therefore, rather low (Figure 2). The relevant proportions are just under 42 percent and 24 percent respectively. Looking at the 25 percent of households with the lowest income (first quartile), there is no statistically significant difference. However, children who are not in day care come much less frequently from high-income households with net incomes in the top (fourth) quartile. A finer graduation

⁴ Dieter Lenzen, the chairman of "Aktionsrat Bildung", a panel of experts on education, supports mandatory day care for four-year-olds, for example. See Dorothea Siems, "Das ist ein bildungspolitischer Achttausender," *Die Welt* (available online) (Accessed: April 17, 2018). This applies to all other online sources in this report unless stated otherwise.) Also see Dorothea Siems, "Bildungsexperten fordern Kita-Pflicht für Vierjährige," *Die Welt* (available online). Educational economist Ludger Wößmann expresses a similar view: "I would not have any problem with making day care enrollment mandatory for three- or four-year-olds. This is the only way to reach the five percent, approximately, who don't attend but would need the benefits the most. See Jan-Martin Wiarda and Achim Meyer auf der Heyde, "So geht Bildung," *Magazin des Deutschen Studentenwerks* no. 2 (2017): 14.

⁵ See for example Hans-Günther Roßbach, "Frühe Bildung: Soll der Kindergartenbesuch verpflichtend und gebührenfrei werden – und wenn ja, wie?" Lecture at the 4th Education Policy Forum of LERN-Forschungsverbund, Berlin, Germany, October 1, 2015.

⁶ See Georg Blume, "Frankreich führt Schulpflicht für Dreijährige ein," *Spiegel Online*, 2018 (available online) and Anne-Aël Durand, "Les questions que pose l'abaissement de l'instruction obligatoire de 6 à 3 ans," *Le Monde*, 2018 (available online).

⁷ See Gert G. Wagner, Joachim R. Frick, and Jürgen Schupp, "The German Socio-Economic Panel Study – Scope, evolution, and enhancements," *SOEPpapers* no. 1, 2007 (available online) and Mathis Schröder, Rainer Siegers, and C. Katharina Spieß, "Families in Germany – FiD," *Schmollers Jahrbuch* 133 (2013): 595–606.

⁸ All results are weighted.

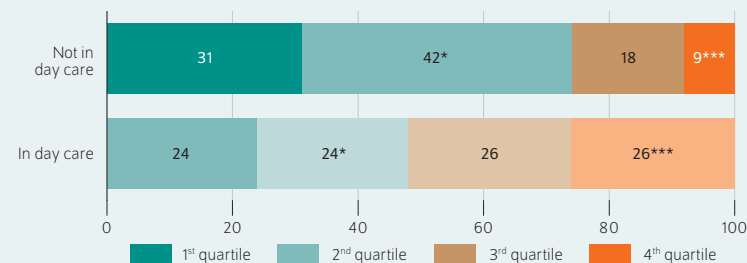
⁹ For all analyses in this study, the equivalence weighted monthly net household income was used. For information on the concept of needs-adjusted or equivalence weighted income, see the term *Äquivalenzeinkommen* in the DIW Berlin glossary (in German only) (available online).

Figure 2

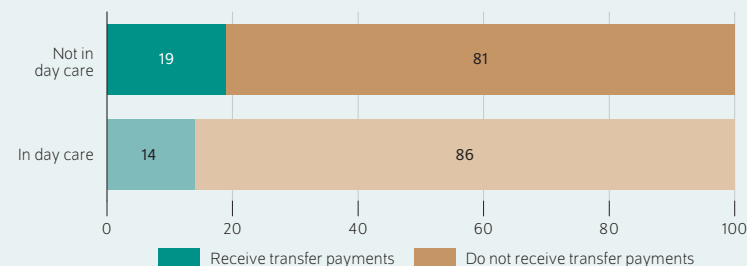
Household characteristics of children enrolled in day care centers and those who are not enrolled

Percentage shares

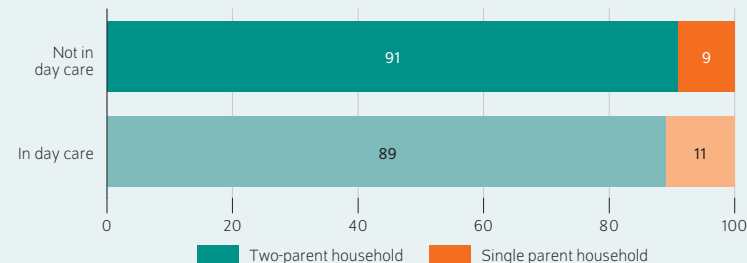
Household net income¹ (equivalence-weighted)



Transfer payments



Type of household



¹ Thresholds of the equivalence-weighted monthly net household income are: 1st quartile ≤ 1042 euro, 2nd quartile 1043 to 1521 euro, 3rd quartile 1522 to 2000 euro, 4th quartile > 2000 euro.

Note: The fraction of each characteristic is depicted for the group of children who attend and those who do not attend a day care center. All results are weighted. Standard errors are clustered on the household level.

***, **, and * show the significance at the 1-, 5-, and 10-percent level of the differences between the two groups of children.

Source: Authors' own calculations based on the SOEP v.33, wave 2016.

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Children of high-income parents are also sometimes not enrolled in a day care center.

of 20 income quantiles¹⁰ confirms that there is no clear relationship between net household income and the likelihood of day care use (Figure 3). All income groups contain a similar share of children who do not go to a day care center.

The finding that the lowest income households are not the only ones that do not have their children supervised in a day care center is also reflected in transfers. On average, children who are not in day care come as frequently from households that receive government transfer payment as those who are. Further, children who are not in day care are just as likely to live with a single parent.

Children who are not in day care more likely to have a non-employed mother or a migration background

We see conclusive differences when looking at the employment status of the mother. While more than two-thirds of children who do not attend day care have a mother who is not participating in the labor market (69 percent), almost 34 percent of children who are in day care do (Table 1). Children who are not in day care are also less likely to have a mother with a university degree. However, comparing groups with lower levels of educational attainment to each other reveals no significant differences.

Overall, fewer children with migration backgrounds go to a day care center. The proportion of children who are not in day care with this characteristic is 57 percent. Among children who are, 37 percent have a migration background. But examining whether only one parent has a migration background or both do¹¹ showed that the difference is only a result of the latter group. While 15 percent of both groups of children have only one parent with a migration background, children who have two parents with a migration background are significantly overrepresented in the group of children who are not in day care (44 percent vs. 29 percent).¹²

And just under two-thirds of children who are not in day care are between three and four years old; only one-third are five and older. Hence, the proportion of children who are not in day care decreases as age increases.

Children who are not in day care participate in parent-child groups more frequently

The question is whether parents who do not send their children to a day care center instead use other educational and

¹⁰ This also prevented the relatively rough differentiation of the needs-based net household income into four quantiles (quartiles) selected in Figure 2 from simplifying the relationship between income and the likelihood of not sending children to a day care center.

¹¹ Children who have a single parent with a migration background were assigned to the group of children who have two parents with a migration background. Assigning these children to the group with only one parent with a migration background or excluding them from the analysis entirely does not change the findings.

¹² This finding is also reflected in the families' language habits. Two-thirds of the parents who take advantage of day care supervision for their children use media exclusively or primarily in the German language, but this applies to only half of those who do not use day care.

care programs in which their children come into contact with other children and parents meet other parents. This appears to be the case: almost every sixth child who does not go to a day care center participates in a parent-child group (Figure 4). Among children who do attend day care, this is the case for only two percent. On the other hand, these children are more likely to participate in athletic, artistic, or musical activities.

It is striking that the mothers and fathers of children who are not in day care are not more dissatisfied with the available options for child supervision than other parents. This indicates that parents' decision to forgo sending their children to a day care center is often made consciously.

Regression analyses confirm most of the findings

The analyses described so far depict simple relationships. They do not factor in several characteristics at the same time. To learn why children from certain households are less likely to be enrolled in day care, we had to do that. For example, the differences in the use of day care centers may not be the result of a migration background alone. They are instead more strongly related to other socio-economic characteristics, such as the mother's level of education or employment status. In order to isolate the influence of a migration background or other characteristics more effectively, additional potential influencing factors must be taken into account as well.

To a great extent, our regression analyses confirms the diverse demographic and socio-economic differences between both groups of children. However, some of them became smaller and are no longer statistically significant (Table 2).

Children's migration background also increases the probability that a child will not attend day care when other characteristics are considered. On average, children with a migration background are more than four percent more likely to not be enrolled in a day care center. The regression analysis also confirmed that children who are not in day care participate in parent-child groups with their parents more frequently.

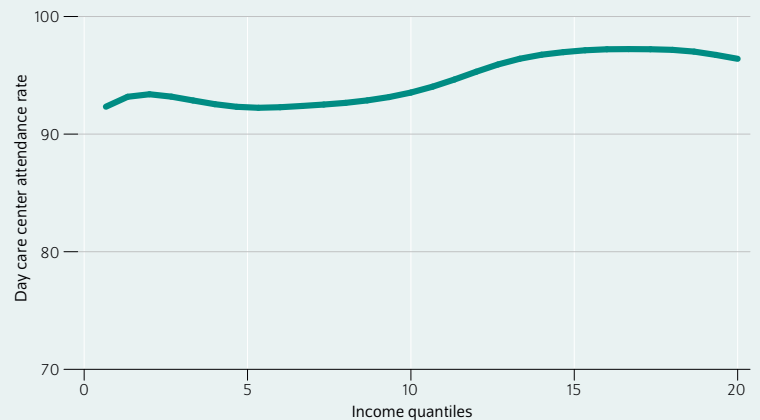
Concerning household income, we find that the probability of non-enrollment is around six percent higher for children from the second income quartile than it is for children from the lowest income quartile. For children from the highest income households, on the other hand, there is no significant difference to the other income groups. One possible explanation is that there are many two-earner households in the top quartile. The observation that children who are not in day care are less likely to live in households with high incomes appears to have less to do with income level and more to do with both parents being employed.¹³

Examining other characteristics, the differences between western and eastern Germany disappear. In western

Figure 3

Day care center attendance rate by income quantiles

In percent



Note: In order to depict the day care center attendance rate by household income, all households were ordered by their income and divided into 20 groups (quantiles).

Source: Authors' own calculations based on the SOEP v.33, wave 2016.

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In addition, a finer segregation of income in the 20 groups shows that across all income groups there are children who do not attend a day care center.

Table 1

Children enrolled in day care centers and those not enrolled: characteristics of mothers and children

Percentage shares

	In day care	Not in day care	Difference
Characteristics of mothers			
<i>Employment</i>			
Not employed	34	69	-35***
Part-time employed	51	23	28***
Full-time employed	15	8	7
<i>Highest educational attainment</i>			
Currently attending an educational institution	1	0	1
No or lower educational degree	20	23	-3
Vocational degree	49	59	-10
University degree	30	18	12**
Characteristics of children			
<i>Age</i>			
Three to four years	59	73	-14**
Five years and older	41	27	14**
<i>Migration background (1)</i>			
Direct or indirect migration background	37	57	-20**
No migration background	63	43	20**
<i>Migration background (2)</i>			
Both parents with migration background	29	44	-15**
One parent with migration background	15	15	0
No parent with migration background	56	41	15*
<i>Language of parents' media</i>			
Only/mostly German	66	53	13***
Other language	34	47	-13***

Note: The fraction of each characteristic is depicted for the group of children who attend and those who do not attend a day care center. All results are weighted. Standard errors are clustered on the household level.

***, **, and * show the significance at the 1-, 5-, and 10-percent level of the differences between the two groups of children.

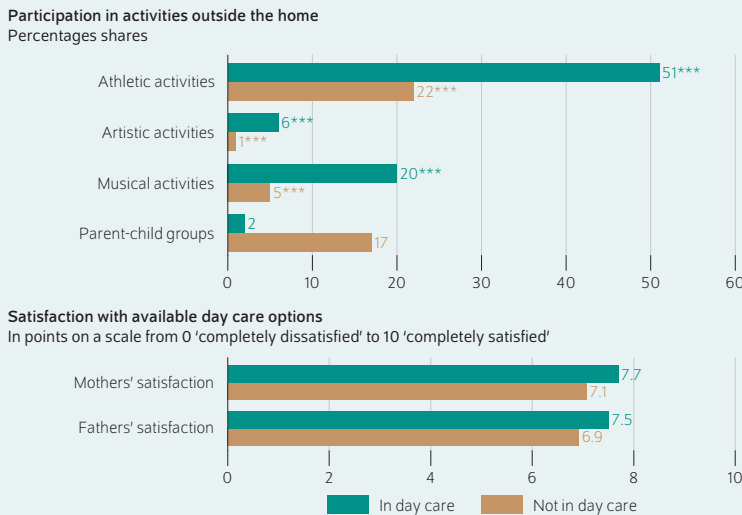
Source: Authors' own calculations based on the SOEP v.33, wave 2016.

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¹³ Among households in the lowest income quantile, more than two-thirds of mothers are unemployed; while in the top quantile this applies to less than one in five households.

Figure 4

Other activities of children who are enrolled in a day care center and those who are not enrolled and satisfaction of parents with available day care options



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Almost every sixth child who is not enrolled in a day care center participates in parent-child groups.

Germany, the probability that a child will not go to a day care center is not significantly higher than in the eastern part of the country. One reason could be that mothers in western Germany are more frequently not employed than mothers in eastern Germany. And indeed, the mother's employment status does play a major role – even when considering other characteristics as well. The children of mothers who are employed full-time or part-time are significantly more likely to go to a day care center than those of non-employed mothers. At seven percent for the former and nine for the latter, this difference is statistically significant.

A variety of reasons for not using day care

The mothers of preschool children¹⁴ list three main reasons for not enrolling them in a day care center (Figure 5).¹⁵ First, they are at home anyway and can supervise their children

¹⁴ The primary childcarers were asked to name their reasons for not sending their children to day care. In a few cases, this was the father.

¹⁵ The database for this evaluation was the FiD dataset from the 2012 and 2013 waves. More current data are not available. However, the rates of use among preschool children remained virtually the same over the past five years, and we can assume that the reasons for not taking advantage of day care have not changed much during this period either.

Table 2

Results of regression analyses: Day care center non-attendance by different characteristics

	Model (1)	Model (2)
West	Reference	Reference
East	-0.025 (0.018)	-0.017 (0.017)
Income in 1st quartile	Reference	Reference
Income in 2nd quartile	0.060* (0.035)	0.059** (0.029)
Income in 3rd quartile	0.020 (0.027)	0.027 (0.026)
Income in 4th quartile	0.001 (0.028)	0.003 (0.029)
Not employed	Reference	Reference
Part-time employed	-0.086*** (0.032)	-0.060*** (0.023)
Full-time employed	-0.066* (0.036)	-0.047 (0.032)
No or lower degree	Reference	Reference
Currently attending an educational institution	-0.000 (0.038)	0.002 (0.031)
Vocational degree	0.064** (0.027)	0.064*** (0.024)
University degree	0.019 (0.025)	0.023 (0.027)
Three to four years	Reference	Reference
Five years and older	-0.040** (0.016)	-0.020 (0.015)
Child without migration background	Reference	Reference
Child with migration background	0.042* (0.022)	0.042** (0.019)
Athletic activities		0.004 (0.023)
Artistic activities		-0.009 (0.017)
Musical activities		0.005 (0.015)
Parent-child groups		0.186** (0.077)
Constant	0.001 (0.052)	0.088 (0.096)
N	2784	2784
Adjusted R ²	0.06	0.16

Legend: The probability of non-enrollment in a day care center for children in the second income quartile is approximately six percentage points higher than for children from the lowest quartile (reference quartile). For children from higher income households (third and fourth quartile), there is no significant difference.

Note: Coefficients of a linear probability model. Additional variables in model (1): size of municipality in three categories, transfer payment, household type, and siblings in four different age groups. In addition in model (2): Other care arrangements with individuals outside the household, proximity to grandparents, hours of care provided by parents, paternal leave, satisfaction with available child care options, and the importance of having children. Standard errors clustered on the household level in parenthesis.

***, **, and * show the significance at the 1-, 5-, and 10 percent level.

Source: Authors' own calculations based on the SOEP v.33, wave 2016.

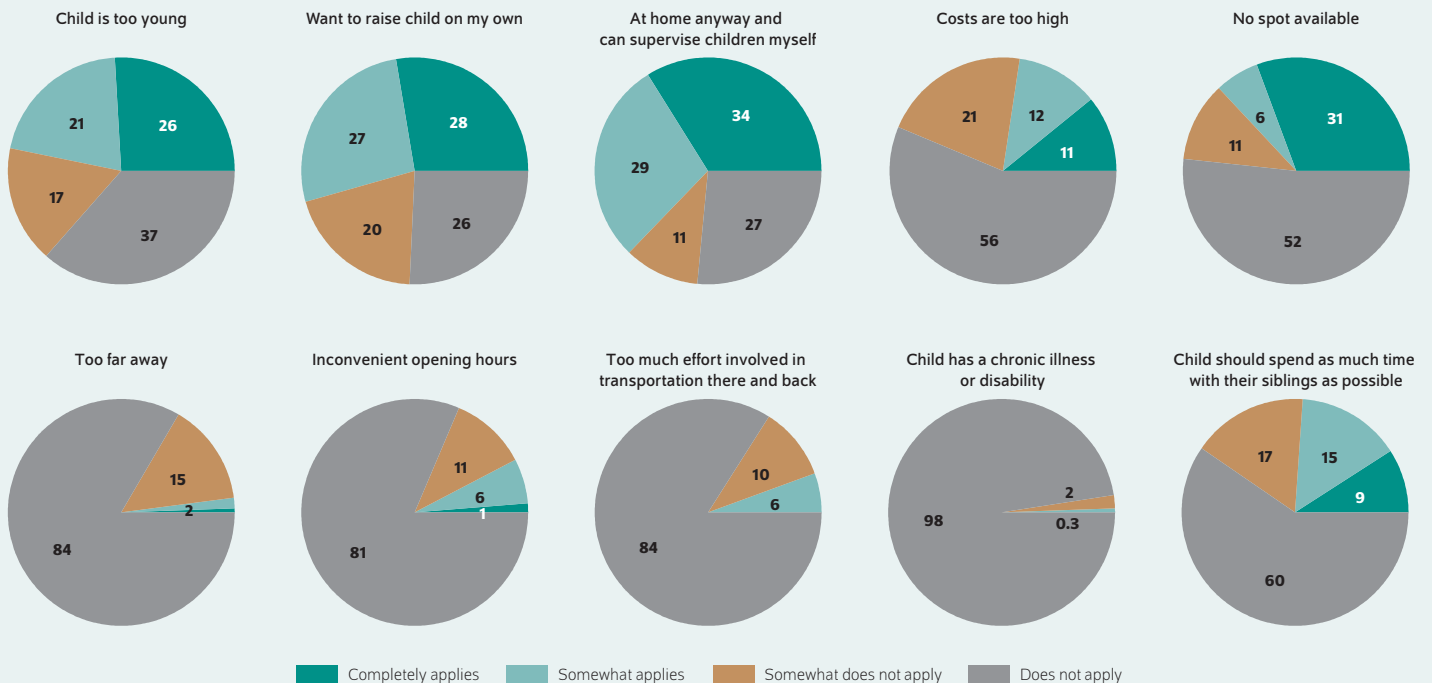
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themselves. Second, they prefer to raise their children themselves and third, they think the child is too young to go to a day care center. More than one quarter of parents who do not send their children to day care find that each of these reasons apply in full. Another approximately 25 percent tends to agree. Just under one-fourth of parents tend to agree or completely agree that their children should spend as much time with their siblings as possible or that day care centers were too expensive. Reasons for deciding against formal education and supervision in a day care center that tend not to apply or do not apply at all were: distance to the day care center, the effort involved in transportation there and back, inconvenient opening hours, and the fact that their children have a chronic illness or disability.

Figure 5

Reasons for parents not enrolling their children aged three and older in day care

Percentage shares



Source: Authors' own calculations based on the FiD v.4, wave 2012 and wave 2013.

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Mothers who do not enroll their children in day care very often state that they are at home anyway and can supervise their children themselves or that no suitable spot is available.

It is astounding that 30 percent of parents who do not send their children to day care still indicate that a slot was not available, despite the legal right in effect since 1996 to a slot in a day care center for children who are three and older. This could be due to a lack of information on this legal entitlement or other restrictions to day care access. It is also possible that those parents were unable to find suitable day care centers. However, in effect this group is very small.

Conclusion and policy recommendation

Preschool children who do not go to a day care center between the age of three and the time they start school are not only from socio-economically disadvantaged households. Our analyses have shown instead that across all income groups and educational backgrounds there are families that do not send their children to day care centers.

From the perspective of educational and family economics, mandatory day care would thus not be an effective solution and would not be beneficial per se. This applies above all when bearing in mind the costs of mandatory day care and its legal complications (Box). The extent to which the solution of mandatory day care enrollment is suitable for the age group is questionable from a pedagogical

perspective.¹⁶ Alternatively, mandatory day care for specific groups only—those with a migration background, for example—would be stigmatizing.

Mandating that children with language difficulties attend language lessons, as is already the case in some places, would appear to make more sense. Such measures should be implemented rigorously and optimized to produce the greatest effect possible.¹⁷ This would be justified in the sense that language is a key ability for both childhood development and social integration in Germany.

There should also be incentives to have children from disadvantaged households already supervised in a day care center of excellent pedagogical quality when they are younger than three. Detailed information on the right to a day care slot, the importance of going to day care regularly, costs, and possible fee exemptions would also be helpful. The goal would

¹⁶ See Roßbach, "Frühe Bildung."

¹⁷ And we must remember that current programs are used infrequently and are not particularly effective. See for Berlin, for example Susanne Vieth-Entus, "Kitapflicht wird in Berlin weitgehend ignoriert," *Tagesspiegel*, 2018 (available online).

Box

Mandatory day care would require constitutional amendment

Mandatory day care enrollment for children when they turn three could fall under the Child and Youth Services Act (*Kinder- und Jugendhilfegesetz*, KJHG), which regulates the support of children in day care centers. However, the state mandate has been subordinate to the rights and privileges of parental responsibility until now. If regulated under the KJHG, mandatory day care would significantly restrict parents' right of choice, which is anchored in the German constitution. Mandatory day care would therefore not be possible without a constitutional amendment. The state educational mandate and the obligation to attend school is not subordinate to parental responsibility, but is rather on an equal level. However, this right cannot be automatically transferred to the extracurricular context.

For this reason, one option would be to prioritize school attendance and assign day care centers to the school sector—with all the consequences that entails.¹ If this were the case, parents would no longer be obliged to pay day care fees. The early education and care sector would no longer receive this funding.² Day care centers supervise children in different age groups. Equating day care with school would divide them into "school children" and others. Some families might still prefer not to send their children to day care, grafting the problem of unexcused absence onto an earlier age group. And mandatory day care alone would not be an adequate means of sustainably helping children from disadvantaged households. Programs targeted to providing such children with special assistance would be much more important.³

¹ See, for example, Wissenschaftlichen Dienste des Deutschen Bundestags, "Fragen zu einem Kindergartenpflichtjahr," *WF III G* – 296/05, 2005.

² Also see Sophia Schmitz, C. Katharina Spieß, and Juliane Stahl, "Day Care Centers: Family Expenditures Increased Significantly at Some Points between 1996 and 2015," *DIW Wochenbericht* no. 42 (2017): 411–423 (available online).

³ See Wissenschaftlichen Dienste des Deutschen Bundestags, "Fragen zu einem Kindergartenpflichtjahr."

be to make it easier for families to recognize and select day care centers of excellent educational quality.¹⁸

There are several arguments against mandatory day care. However, it would ultimately have one benefit: on several accounts, day care centers would receive more attention in the same way that schools do today. In terms of political economy, this would certainly be desirable when mobilizing even more funding for this area, recognizing preschool teachers as professionals, and granting them pay raises. From an educational and family economics perspective, however, this goal should be achieved via other policy measures.

¹⁸ See for example C. Katharina Spieß and Wolfgang Tietze, "Qualitätssicherung in Kindertageseinrichtungen – Gründe, Anforderungen und Umsetzungsüberlegungen für ein Gütesiegel," *Zeitschrift für Erziehungswissenschaften* 1 (2002): 139–162.

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JEL: I 24, I 28, J 13, I 22

Keywords: child care, non-attendance, early education, socio-economic differences

LEGAL AND EDITORIAL DETAILS



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Mohrenstraße 58, 10117 Berlin

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Volume 8

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Layout

Roman Wilhelm, DIW Berlin

Cover design

© imageBROKER / Steffen Diemer

Composition

Satz-Rechen-Zentrum Hartmann + Heenemann GmbH & Co. KG, Berlin

ISSN 2568-7697

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