

Going back. Engaging Parents in the Labour Market

Corresponding author details full name: **Nina Hrdinova**

Email address: info@novagalerie.cz

Affiliation: Univerzity Peuni, Prague, Czech Republic

Abstract

The quest for achieving a harmonious equilibrium encompassing family, professional, and personal spheres of life is a prevalent challenge not confined solely to families with preschool-aged children; rather, it constitutes a pivotal subject within the realm of public policy. The establishment of a robust network equipped with adequate capacity for orchestrating childcare services for the youngest members of society stands as a foremost priority for European nations. Presently, the Czech Republic is confronted with the imperative of finalizing this network, ensuring it possesses sufficient capacity, quality, and affordability. The primary objective of this study is to delineate the economic ramifications resulting from state investments, and consequently, those of employers, in the construction and sustenance of childcare facilities, while also examining the repercussions of facilitating parents' reintegration into the labour market in a more expeditious manner. Through the analysis of available statistical data and a questionnaire survey, it has been determined that the establishment of a high-quality and accessible network comprising organizations offering early childhood care yields favorable outcomes on the fiscal standing of the state, families, and employers. The investments in expanding childcare capacity are recouped within approximately 5 to 4 months, with parents of children utilizing these services expressing subjective satisfaction regarding the availability of childcare in such facilities. This service not only augments family income but also enhances the time-management capabilities of caring parents, provided that preschool education and care meet adequate quality standards to be perceived as a viable alternative to personal care.

Key Words

Parental leave in the Czech Republic, Maternity and Family Leave Policy, Female labor supply - Maternal labor supply - Parental leave - Parental leave benefit - Child-rearing benefit

Parental Leave, Policy Evaluation, Female Labour Force Participation

JEL codes

J49 Particular Labour Markets: Other

J21 Labor Force and Employment, Size, and Structure

Table of Contents

1 Home	1859
2 Introduction to the problem	1862
3 Literary research	1864
4 Data and methods	1867
4.1 Data	1867
4.2 Methods	1867
5 Results	1871
6 Discussion of results	1874
7 Conclusion	1875
List of resources	1876
Attachments	1880

1 Home

The search for a harmonious balance between family, work and personal life is a phenomenon faced by families not only with preschool children (Sirovátka, 2006).

The labour market, the family and the state represent three interacting significant elements (Esping-Andersen, 1999). According to Bartáková (2009), the relationship between family and employment is influenced not only by the situation on the labour market, the values of society, the meaning of the concept of family and other social and economic parameters. State policies have an impact on the earlier reintegration of parents into the labour market (Low & Sánchez-marcos, 2015). Paid maternity leave has a positive effect on child and maternal health (Heymann et al., 2017), positively affects women's motivation to return to work within one year after childbirth (Choi, 2003), while support longer than one year has negative effects on return to work (Rossin-Slater, 2017). The availability of childcare facilities for children under three also has a positive effect on fertility (Sleeboš, 2003).

In the European Union, according to the European Pillar of Social Rights, all children should have the right to accessible and quality early education and care, which is in line with the Charter of Fundamental Rights of the European Union and the UN Convention on the Rights of the Child (European Parliament, 2017). Pre-school education is beneficial for children (Sella, 2023, OECD, 2009), especially for disadvantaged children. Investment in early childhood education is beneficial for society as a whole and has the highest returns across all phases of education (Heckman & Mosso, 2014). However, according to research on the effects of early childhood education and care on children's development, emphasis should be placed on the quality, accessibility, affordability and inclusiveness of the services offered (Melhuish et al., 2015). Childcare systems include the labour market, parental leave and policies. The early childhood education and care (ECEC) system has two main functions, namely, supporting children's development and helping parents re-enter the labour market. A high quality and accessible early education and care system helps to reconcile work and family life, and helps to promote parental participation in the labour market (Melhuish et al., 2015).

The Barcelona Summit in 2002 set out conclusions and targets for the provision of services. There, the European Council agreed that Member States should remove barriers to women's participation in the labour market. Furthermore, the Barcelona European Council (Commission, 2013) decided to set a target of providing quality and sufficient pre-school childcare for at least 33% of children up to 3 years of age and at least 90% for children over 3 years of age, thereby

gradually removing barriers to women's re-entry into the labour force after childbirth. At the same time, the results of the Summit highlight the need to work continuously towards equal employment opportunities for men and women, which will be achieved precisely by creating a sufficiently high-quality network of childcare options.

In the Czech Republic, according to the RILSA research (Paloncyová, 2023), which mapped the functioning of children's groups and services of maternity and family centres, it was found that in the EU countries it is more common to enter non-family care at a younger age compared to the Czech Republic. The employment rate of women in the Czech Republic is one of the highest in Europe, but this is not the case mothers with a child under three years of age (SocioFactor, 2016). In the Czech Republic, only 4% of children under the age of three are still enrolled in pre-school, which is a very low percentage compared to OECD statistics, compared to countries such as Denmark (54%), Norway (59%), Korea (64%). This may also be due to the relatively long parental leave, which is one of the longest in the Czech Republic after Estonia (8 years), i.e. up to four years (Neyer, 2006).

Institutional childcare policy in the Czech Republic belongs to the so-called pro-family policies, which are characterised by limited access to childcare in state-supported institutions and long parental leave, which makes it challenging for parents who want to join the labour market, even though they have children under the age of three. The Czech Republic is likely to face not only the creation of a network of high quality and sufficient capacity childcare provision, but also a very likely transformation of cultural practices and norms related to childcare and women's position in the labour market (Válková & Sgem, 2016). According to the analysis (MoLSA, 2019a), it appears that respondents see the optimal age of entry of a child into pre-school as ranging from 2.9 to 3.5 years. For a childcare system to be effective, the care provided needs to be accessible, affordable and of good quality (Pinnelli et al., 2002).

The current situation can be helped by the State's initiative in supporting the establishment of new children's groups, e.g. under the Operational Programme Employment Plus (CR, 2023), which aims, in addition to the future of work, to implement the objectives of the European Pillar of Social Rights, promoting gender-balanced participation in the labour market, equal working conditions and improving the work-life balance, including through access to affordable childcare and care for dependants. A survey (MoLSA, 2019a) shows that up to 39% of people find it difficult and unaffordable to place a child in a childcare centre, thus increasing the capacity of pre-school childcare would be one way to increase the employment of Czech women (Grossmann & Munich, 2024). So far, childcare groups are seen as an expensive service, but on the contrary, they are

preferred mainly due to the individual approach to the child (42%), the smaller collective of children (28%), the age composition (19%), the time flexibility and thus easier connection to working hours or other parental duties (17%), the family environment and thus easier adaptation of the child in the collective (9%). Interestingly, 94 % of mothers and 96 % of fathers were gainfully employed before the birth of their child. For mothers, before the birth of the child, this was work in 87% of cases; after the birth of the child, the proportion of mothers employed full-time decreased to less than half (46%) (Sirovátka, 2016).

The aim of this thesis is to define the economic effects of the state investment in building and supporting the operation of a children's group, hence a kindergarten, and enabling parents to reintegrate into the labour market. Based on the set objective, the following research questions are established.

RQ1: The state's investment in the construction of one capacity-building post will be recovered once mothers (or fathers) join the labour market. The question is - how long will it take for the state's investment in building a capacity place to be recouped and how will the already built capacity place in the children's group return the money invested by the state to support the operation of this capacity place.

RQ2: Earlier return of mothers to the labour market brings benefits to the state's economy.

RQ3: Mothers enter the labour market earlier if they have available institutional care for their pre-school child. Is this care available in the Czech Republic for parents of children under three and six years of age?

RQ4: It is worthwhile for employers to set up a playgroup at their workplace to encourage their employees to return to work earlier. What are the benefits of building and running a playgroup for employers?

2 Introduction to the problem

Parental support, its duration and the generosity of its benefits, together with the consequences of such support, vary from country to country. There is a relationship between the form of parental support, the motivation to re-enter the labour market and parents' own behaviour when caring for pre-school children. Some studies point to the benefits of generous and longer maternity leave, while others reach the opposite conclusion. Studies looking at the length of parental leave (Rossin-Slater & Stearns, 2020), the availability of paid leave, which may itself increase the employment rate of parents, and hence mothers (Sterling & Allan, 2022). On the other hand, there are studies that consider a longer period of time as a debilitating element of early reentry (Bergemann & Riphahn, 2023) a kind of edge is the support of three months (Bates et al., 2023), where the benefits of this shorter support positively affect women's subsequent propensity to reenter the labour market early, while leaves lasting longer than three months have negative effects. The question is whether to seek an extension, which brings positive health effects for both child and mother (Bister et al., 2023), or whether too long a leave makes it more difficult to return and enter the labour market. The career break caused by motherhood affects career development, the lack of flexible working hours, and the need to find harmony between aspects such as work, family and private life (Bates et al., 2023), all of which still need to be seen from a gender perspective of labour market status (Balsler, 2020) and the perception of the institution of the family within the cultural environment (Hamplova et al, 2021), in which the situation takes place, all within at least two supportive instruments - paid maternity leave and affordable quality pre-school childcare (Girsberger et al., 2021). The issue of availability of day care for preschool children has been addressed by countries at both the international and state level (Pinnelli et al., 2002; SocioFactor, 2016), and the Synthesis Report (Melhuish, 2016) provides stimulating data. Outputs from surveys conducted in children's group settings are valuable (Paloncyová, 2023), on the topic of families (Křečková et al, 2023), on the analysis of access to care (Zykanová & Janhubová, 2022), on the mapping of conditions and availability of pre-school care (Kuchařová et al., 2007), on the perspectives on children's groups among providers and users (MoLSA, 2019b), on the impact on employment in the region (MoLSA, 2020). Availability of childcare is one factor, other important aspects are the quality of this care and its impact on child and family development (Akabayashi et al., 2023), collaboration with families (Soe et al., 2023). The issue of development (Kejikova, 2017), equal opportunities (Greger, 2015). In the Czech Republic setting, the topic was addressed in the book *The Way Back* (Bartáková, 2009), interesting results were also reached by

Bártová (Bártová, 2017) , who focused on the area of parental support in the fresh motherhood period in European countries.

3 Literary research

There is a relatively large number of studies that look at the effects of family support policies women's labour market participation, fertility and propensity to have more children. Many of these studies deal with the issue of extending maternity support, its generosity or, conversely, the issue of shortening maternity support. These topics are addressed by the Swiss study *"Mothers at Work: How Mandating Paid Maternity Leave Affects Employment, Earnings and Fertility"* (Girsberger et al., 2021), as well as the study *"(Un)intended effects of parental leave policies: Evidence from the Czech Republic"* (Bičáková & Kalíšková, 2019), which focuses on gender differences in the labour market. There are studies mapping the situation where the father is the caregiver (Pizarro & Gartzia, 2024), a study in which the authors aimed to do a systematic literature search in this area. Gender differences in the timing of early parenthood are addressed in a study by Zhou & Kan(2023), who examined data from a longitudinal study of British households. A similar approach was used by the authors of the study *"The Effects of Paid Family Leave in California on Labor Market Outcomes"* (Baum & Ruhm, 2016), who compared, in the form of *multivariate difference-in-differences regression* models, the situation before and after the enactment of state maternity benefits. Linear probability models are used in the study *"Income and child maltreatment in unmarried families: evidence from the earned income tax credit"* (Berger et al., 2017). With the *"discrete hazard model"* method (Burgess et al., 2008) can be encountered in the study of maternal maternity leave behaviour, and the theoretical model of maternal behaviour has also been used by the authors (Del Rey et al., 2021), who examine the direct and indirect effects of maternity leave settings on labour market re-entry in the short and long run. Rossin- Slater and colleagues have looked at the effects of maternity leave in the US (Rossin-Slater & Stearns, 2020), mentioning that they conclude that paid maternity leave has a number of benefits, particularly for disadvantaged parents. Often studies compare objective data, but it is also worth noting the subjective perceptions of women (mothers) (Sterling & Allan, 2022). Similarly, not only the benefits directly economic, but also the impact of government investment in quality early childhood education on child and family health needs to be considered (Donoghue, 2017), where they talk about the so-called public financial value of children, which values the investment in pre-school education by the positive long-term fiscal health of the state (Warner, 2009). Using a *regression discontinuity framework*, Chuard(2023), who analysed the differential impacts of two lengths of maternity leave, concluded that longer maternity leave has a negative effect on maternal health, while children benefit from longer financial support (Heymann et al, 2017). In the USA, Maureen Sayres, Van Niel and collective (2020) based on a study of implemented research

concluded that paid maternity leave of at least 12 weeks has demonstrable positive effects on the mental and physical health of mothers and children, reduces postpartum mortality, increases immunity, and is supportive of breastfeeding development, Whitney et al. (2023) concluded through meta-analyses of selected studies that the minimum optimal length of parental leave is even 12 months. Bergemann & Riphahn (2023) studied the effects of a change in parental leave support in Germany, which introduced a choice of support length. The authors used an analysis combining the "*discontinuity approach*" and "*difference-in-differences*" methods to trace the changes. Parental support benefits are predominantly used by mothers with higher incomes and better quality jobs, who return to their jobs earlier after shorter maternity leave (Kluve & Schmitz, 2018). Muller (2017) studies the changes in the maternity leave system in the Czech Republic, where it has been possible since 1995 to choose the length of maternity benefits from one year to four years of age of the child. Olivetti & Petrongolo (2017) looked at the effects of parental support in "*High-income countries*". Based on an analysis of existing work and their own analyses of the length and generosity of parental leave, they conclude that there is negligible or very little positive impact, compared to the much more positive outcomes of investments in pre-school institutional care and early childcare. The quality of pre-school care and have been addressed, for example, by Akabayashi et al. (2023) in the Japanese setting. Stearns (2015) analysed British Household Panel Survey data using the difference-in-differences method and concluded that job protection for women mothers on parental leave tends to have a short-term effect, with the effect disappearing for parental leave longer than 3 years, and disappearing completely for work breaks longer than 5 years. The topic of the fiscal and employment effects of investment in pre-school education in the UK setting has been addressed by De Henau (2022), as well as Yamaguchi (2019), who traces the behaviour of mothers as a function of parental leave length and job protection using a discrete choice dynamic structural model.

The challenge for the state social infrastructure is to achieve a state of care, health care and education such that the economy is sustainable and the system avoids underinvestment in these areas (De Henau & Himmelweit, 2021), as lessons could be learned about the importance of this state support during the disinvestment following the "covid" closures (Hidalgo-Padilla et al., 2023). The fiscal impact of increased employment and improved working conditions, is subsequently discussed using a tax-benefit microsimulation tool and follow-up policy measures (De Henau, 2022). A study of the evolution of the form of parenting support in correlation with pre-school care in Austria shows that even small reforms can significantly affect the gender gap but on the contrary, sometimes even large investments in the field achieve only small positive shifts (Kleven et al., 2019).

Kim et al (2019) *Input-output-analysis* method to examine overall employment effects and statistical *microsimulation* to evaluate employment effects at the macro level and to assess how these effects are distributed at the micro level across different segments of the population or sectors of the economy. Investments in working conditions of early *childhood* care and pre-school workers are the subject of a report prepared in the framework of the "*Early childhood care: working conditions, training and quality of services - A systematic review*" (Eurofound, 2015), whose authors worked by analysing qualitative and quantitative studies produced in different European countries.

On the basis of the above, the following workflow seems appropriate.

To answer questions RQ1 and RQ4, the simulation method used in the Henau study will be used (2022).

RQ2: To answer this research question, the method used by Sterling & Allan (Sterling & Allan, 2022), built on a search of the available interdisciplinary literature, and the Bergemann & Riphahn (2023) *difference-in-differences*" method would be applied to trace changes in parenting status.

RQ3: Data analysis method, i.e. similar to the approach used by Girsberger et al. in their study (Girsberger et al., 2021) or Analysis of the impact of (un)availability of places in kindergartens on women's labour market participation (Kalíšková, 2023 #219).

4 Data and methods

4.1 Data

RQ1: The data for determining the amount of real investments in the construction and operation of a children's group will be taken from the current call of the MLSA OPZ+ (MLSA, 2023b) and NPO (MLSA, 2023c), which are subsidy instruments through which the state actively supports the creation of new children's groups. Another source of data will be the general budget for the operation of a children's group, which is available prepared by the Association of Children's Groups (Groups, 2023).

RQ2: Data on economic benefits would be obtained by a model example based on a comparison of current parental support (MLSA, 2023a) and the average wage in the Czech Republic (CSO, 2023), for indirect economic benefits a questionnaire seems to be the appropriate method.

RQ3: To answer this question, data from the Czech Statistical Office would be used, which refers to the current capacity numbers of schools and educational facilities (CSO, 2022/2023) and the current population (CSO, 2022).

RQ4: The data for determining the amount of real investment in the construction and operation of the children's group will be taken similarly to question RQ1 from the current call of the MoLSA OPZ+ and NPO and the general budget for the operation of the children's group is available prepared by the Association of Children's Groups.

4.2 Methods

RQ1: To answer the first question, the simulation method seems to be suitable, where the investment in its construction and operation will be quantified on the modelled general case of a children's group for 12 children. This calculation will then be compared with the economic income of the state when the caring parent ceases to be on parental support and enters the labour market.

RQ2: The benefits of parents returning to the labour market can be seen from two perspectives. The first view, will be the economic view, which will be the focus of this paper, where by analysing and comparing the economic status of the parent on parental leave, with the status of the parent engaged in the labour market, similar to the method carried out by Bergemann & Riphahn (2023) to trace changes in parental status. The second benefits are subjective, indirectly economically

quantifiable benefits, which are only marginally addressed in this paper, in the form of a questionnaire with a smaller sample of respondents.

RQ3: A relatively simple analysis of the available data, specifically by comparing them, should be able to answer this question.

RQ4: A simulation method, using the case of a model of a playgroup for 12 children, will be used to quantify the investment in setting up and running the playgroup compared to the employer's income when the caring employee stops being on parental support and starts working again.

RQ1: It is assumed that capacity building has economic benefits for the state. An interesting question mentioned above is to quantify the cost of building and operating a single capacity playgroup site versus the return on that investment. How long does it take to recoup the state's investment in building a capacity site and how does an already built capacity child group site return the money invested by the state to support the operation of that capacity site. Thus, the first stage is to look at quantifying the investment in the case of the 12-child playgroup model is required to build and operate it. Subsequently, in the second phase, these calculations would be compared with the economic income of the state at the moment when the caring parent ceases to be on parental support, or unemployment support for longer-term maternity leave, and re-enters the labour market. Comparing these two outcomes will help to answer the question of the return on investment over a specific time horizon. The data on the amount of real investments in the construction and operation of a children's group are taken from the current call of the MoLSA OPZ+ (MoLSA, 2023b) and NPO (MoLSA, 2023c), which are now instruments through which the state actively supports the creation of new children's groups. A general budget for the operation of a children's group is available prepared by the Association of Children's Groups (Groups, 2023)

RQ2: The amount of the parental allowance is CZK 350,000 (or CZK 300,000 for children born or taken over by 31 December 2023), in the case of multiple children it is CZK 525,000 (or CZK 450,000) and parents can draw this amount until the child is 3 years old or until the child is 4 years old in the case of multiple children. According to the Ministry of Labour and Social Affairs, a parent who previously did not qualify for maternity assistance or had a low income (typically entrepreneurs, students or unemployed) can draw a maximum of CZK 13,000 per month. Others can choose the monthly amount of the allowance as they wish, up to a maximum of CZK 47 700, and the amount can be changed every three months. In the case of multiple children, the total amount increases from CZK 300,000 to CZK 450,000 (CZK 525,000 from 1 January 2024). It seems interesting to compare the income of a parent on parental leave for children until they

receive parental allowance and then in a situation where they no longer receive parental allowance, based on the average wage in the Czech Republic as monitored by the Czech Statistical Office (CSO, 2023).

The second area is non-economic benefits, an area addressed by Dillaway (2008), in which he compares the roles within the cultural framework of 'stay-at-home mother' and 'working mother', which follows the method of searching articles to find comparisons. Thus, to answer this part of the research question, dealing with the subjective benefits of pre-school care, the method used by Sterling & Allan (Sterling & Allan, 2022), exhibited on a search of the available interdisciplinary literature, would be applied. Furthermore, the non-economic, more subjective benefits of being able to partially use childcare services can be specified based on data obtained from a questionnaire survey that will be conducted in the Angel Children's Group Centre, which has about 150 actively involved families. Alternatively, it seems possible to proceed in a second step by analysing the data that would be obtained through a questionnaire survey or interviews with a selected sample of mothers (parents). This will provide data that will make it possible to examine the benefits of this measure, and not only from an economic perspective. As Henau mentions (2022), it is necessary to follow a multi-level reflection in which the social sphere (neoliberalism, cultural values of childcare, the state system of parenting support policies), the labour sphere (work organisation, culture and employer support) must be taken into account, the type and nature of work performed), the quality of maternity support (length, flexibility, co-worker support, discrimination), the individual domain (personal preferences, race/ethnicity, educational level, ability, health, income, married/unmarried family, social status, personal expectations, and the reality of motherhood), and from these input parameters, subsequently influence future outcomes in the areas of well-being and positive perceptions of the situation associated with motherhood when confronted with their labor market participation, which is mirrored by psychological and physical health, mental well-being and satisfaction with one's status and role; from an employment perspective, these are subsequently issues of career progression, flexible organisation, pay sanctions, gender balance of rewards (Penner et al., 2023), low or, on the contrary, higher growth prospects, job content matching qualifications.

RQ3: To answer this question, a method of analysing data from the Czech Statistical Office on schools and school facilities (CSO, 2022/2023) and population (CSO, 2022) would be used, i.e. a similar approach to that used by Girsberger et al. in their study (2021). There would be a comparison of the current number of capacity places in ECEC institutions with the number of potential pre-school children whose families might be interested in this service. The research and

data on these issues is carried out and provided by Rilsa (Research Institute of Labour and Social Affairs), the survey was commissioned by the Ministry of Labour and Social Affairs, interesting in comparison with data from the European Commission, and data from the Czech Statistical Office.

RQ4: Here, the appropriate method seems to be to simulate a situation in which an employer invests in building and operating a playgroup for the children of its employees and to calculate the costs and expenses. In essence, this will be a similar consideration to research question RQ1, but the setting up entity will be a private employer instead of the government. Children's groups that operate on the principle of a so-called corporate children's group are identically entitled to the same state subsidy for running a children's group as groups that are set up by municipalities, associations, registered institutes, etc. In order to answer this question, it will be necessary to summarise the benefits to employers of setting up and running a children's group and the associated costs.

5 Results

There are two main sources of funding for the operation of children's groups - the first and main source is the contribution from the Ministry of Labour and Social Affairs, the second source is the contribution from parents in the form of school fees. Funding for the construction of a new children's group is currently available under the investment calls of the National Recovery Plan or under the planned non-investment call No. 49 under the OP Employment+. While according to the annotation of this call, the NPO can provide up to CZK 20 million for the purchase and reconstruction of a building or for new buildings, the OP Employment+ provides for amounts in the order of hundreds of thousands, but the conditions for obtaining and administering the project are much simpler. In this analysis, we will focus on the funds of the current subsidy call OPZ+ from 2023, where the sustainability of the implemented project is one year. For one built capacity place there is a possibility of subsidy of up to 47 561 CZK, i.e. for a group of 12 children the total subsidy for building is 570 752 CZK. According to Table 1 (*Budget for a children's group for 12 children*), it can be seen that the monthly investment of the state in the operation of one children's group is CZK 127 867. If we take into account that such a children's group creates jobs in the range of about 3 full-time jobs in pay grades 6 - 9, i.e. depending on the length of experience, it is a gross salary of CZK 19 700 to 24 100, which means about CZK 12 000 per one full-time nanny in a children's group for state contributions. Suppose, if the parents use the childcare services in the children's group, they can take up employment. The average gross wage is 42 658 CZK (CSO, 2023), the state levies 21 799 CZK, here it might be good to take into account the variants of rather part-time (4 and 6 hours), i.e. the state levies would be in the average value of 14 439 CZK, if we take into account the discount for at least one child in the family (Table 2). Summing up the state's income from employee levies, which is generated by the sum of employment of one parent and carers in the children's group, we arrive at an income of CZK 233 340 per month, compared to the state's cost of running the children's group of CZK 127 867. Thus, the above calculation ($\text{CZK } 570\,752 / \text{CZK } 105\,473 = 5.4$) shows that in 5.4 months of operation, the State recovers its investment in setting up one children's group.

The calculation ($\text{CZK } 570,752 / \text{CZK } 105,473 = 5.4$) shows that in 5.4 months of operation, the state recovers its investment in setting up one children's group.

Table 2 (*Balance sheet of income and expenses of a parent on parental allowance*) shows that from the very birth of the child, or from the age of six months, when the child can be taken into care in a children's group, it is worthwhile for parents on parental leave to use this care. The child

usually spends four to six hours a day in the playgroup, with the parent managing to work at least half-time or six hours, where the parental allowance covers the playgroup fees until the child reaches the age of three, and the parents' salary for this time adds to their budget. Thus, from the perspective of family economics it is clearly advantageous to use the services of a childcare group to care for the child, given the possibility of the other parent joining the labour market. The possible extension of parental leave up to four years played a negative role in women's earlier return to the labour market, and this reform caused 38% of additional mothers to stay at home with their children until the age of four (Bičáková et al., 2021).

Furthermore, Annex 5 (*Questionnaire survey*) shows that almost 65% of mothers state that they have gained more time for work with the entry of their child into the playgroup, and 38.5% rate this entry as gaining time for themselves personally, almost 80% of women perceive the childcare group service as very helpful for their family, 60% confirm a significant increase in family income, and almost 70% of respondents would recommend the service to other parents of children under three, similar to the conclusions reached by (Rossin-Slater & Stearns, 2020) and (Del Rey et al., 2021). On the other hand, almost 70% of the respondents perceived difficulties in finding a free capacity place for their child, according to the Czech Statistical Office, in 2021 there were 670,000 children under the age of 6 years in the Czech Republic, if we subtract the number of children under the age of 6 months 55,000, we get the number of children whose parents would potentially be interested in placing their child in a playgroup or kindergarten. Kindergartens offer a capacity of 369 200 places, which brings us to 245 800 children for whom there is insufficient capacity in kindergartens. According to the Register of Children's Groups, the current capacity of children's groups is 22 517 places. The above shows that there is not a sufficient network of institutions providing care for pre-school children in the Czech Republic. Interestingly, the number of newly established public kindergartens has increased only slightly over the last 10 years (by 3%; 140 schools). Increasing capacity requirements in public kindergartens have thus been reflected mainly in the establishment of new classes, the number of which has increased by 14.5% over this period (1 976 classes).

The European Council at the Barcelona Summit (Commission, 2013) decided to set a target of providing quality and adequate pre-school care for children under 3 years of age for at least 33% of children and for children over 3 years of age for at least 90%. The above shows that for children over 3 years of age, a rough estimate shows that the Czech Republic meets the supply coverage of at least 90% of places, however, for children under 3 years of age, or children up to 2 years of age,

only children's groups can currently benefit from state subsidies and here we are at about 10% of supply capacity against the ideal of at least 33% set by the Barcelona Summit.

Playgroups can be an effective tool to build up this insufficient number of places for children up to the age of 2, 3 or 6. Thus, similarly to e.g. Hungary (Lovász & Szabó-Morvai, 2019), in the Czech Republic we are also around 10% of the supply of capacity places providing care for children up to 3 years of age. According to Kalíšková (2023), missing places in kindergarten deprive the state budget of 1.2 - 1.7 billion per year, where her calculation is based on an estimate of about 100,000 missing places for children over 3 years of age. If in the environment of children under 3 years of age about one third of mothers would be interested in an earlier return to the labour market, this brings the state's income to about 0.5 billion crowns per year.

What role can employers play in this? The very principle of running a children's group is set up so that it operates as a non-profit, i.e., also from the position of the employer, who should not have any other costs associated with the operation besides the initial investment to build it, which is around CZK 570 000 for a group of up to 12 children. According to Annex 1 "*Children's group budget*", it can be seen that the employer can choose between different forms of setting up the principles of the children's group - the employees will pay the fees or not and the care in the children's group will be free of charge or partially subsidised by the employer. Above all, it is necessary to consider subjective benefits, such as motivation of women to return to their position earlier if there is a possibility to place a child in the company's children's group, loyalty to the employer, building mutual quality relationships in the roles of employer-employee, lower turnover of employees who are tied to the children's group, subjective good feeling of employees from the usual proximity to their children, setting the values of the children's group individually and close to the company's direction and values.

Usually the employees' contribution to the school fees varies from 0 CZK to 5059 CZK per month. If the "benefit" of free nursery for employees is reflected in the wage adjustment, the employer reduces the cost of compulsory contributions by up to CZK 10,000 in each case, i.e. around CZK 60,000 / month reduction in costs for a group of 12 children, i.e. the return on investment appears to be in the order of the first 10 months.

6 Discussion of results

In conclusion, therefore, it follows from the above that the *investment made by the state in building one capacity post pays back after the mothers (or fathers) are involved in the labour market* after the fifth month of operation and from the sixth month onwards this service is profitable for the state. If we talk about the segment of children under three years of age, it would be a budget revenue of around 0.5 billion per year if sufficient capacity is built for these pupils, i.e. *the earlier return of mothers to the labour market brings benefits to the state's economy*. Parents who find a place for their child in a playgroup show *subjective satisfaction*, perceive an increase in family income, but also more time for themselves and their work, and in most cases would recommend the childcare service to other parents. *Mothers join the labour market earlier if they have available institutional care for their pre-school child*, however, in the Czech Republic this care is not sufficiently available for parents of children under three and six years of age, it is around 10% compared to the minimum 33% set by the Brussels Congress. In addition to the role of the state as the main investor in the creation of a network of childcare organisations with sufficient capacity, private *employers* can also play a role, *which, according to the above-mentioned, find it worthwhile to build a childcare group run directly at their workplace for the children of their employees*

From the above it follows that the return on investment in the construction of one children's group is 5.4 months, after this period the children's group becomes a benefit for the state budget, i.e. it brings almost one million crowns per year, and the calculations did not take into account the entire fiscal effects, which are mentioned in the graph in Annex 3

7 Conclusion

The aim of this work was to define the economic effects of the state investment in building and supporting the operation of a children's group, and thus a kindergarten, and enabling parents to reintegrate into the labour market. It was found that the creation of a quality and accessible network of early childhood care organizations has a positive effect on the income of the state, families and employers. The investment in building up the capacity of places pays off after about 5 or 4 months and parents of children using these services are subjectively satisfied with the possibility of using in a playgroup, and this service reflects positively not only on family income but also on the time possibilities of caring parents, provided of course that the pre-school education and care is of adequate quality to be perceived as a full-fledged alternative to personal care

It has been confirmed that there is a shortage of capacity for pre-school places in institutional childcare organisations in the Czech Republic; this shortage is being addressed by the state through subsidy and investment programmes that fund the creation of new places, as well as the important role that private employers can play as providers of these groups, which would also help to address the longer-term underemployment of Czech women (Grossmann & Munich, 2024).

The limitation of this conclusion is that the study worked with the average wage in the Czech Republic, the question is whether parents (mostly mothers) with young children can reach this average wage. Another limitation of this reasoning is that the survey works with 100% participation of children in attendance, but in the real life of young children and their adjustment to the collective, the relatively early sickness of children enters into the calculations, which was not considered in this work. According to the study (Grossmann & Munich, 2024), it would be interesting to analyse the extent of so-called non-market forms of work of Czech women in relation to parenthood, such as household chores, neighbourhood or intergenerational childcare, but the necessary *time use* data are not available for this purpose, because the Czech Republic has not yet joined the pan-European HETUS project (Hetus, 2024).

List of resources

- Akabayashi, H., Ruberg, T., Shikishima, C., & Yamashita, J. (2023). Education-oriented and care-oriented preschools: Implications on child development*. *Labour Economics*, 84, Article 102410. <https://doi.org/10.1016/j.labeco.2023.102410>.
- Balsler, C. (2020). The effects of paid maternity leave on the gender gap: Reconciling short and long run impacts. Available at SSRN 3536677.
- Bartáková, H. (2009). *The road back: women's return to the labour market after parental leave in the Czech Republic*. Brno: Masaryk University, International Institute of Political Science.
- Bártová, A. (2017). 'Genderising' aspects of birth-related leave policies and fertility behaviour in Europe: understanding policy from an individual's perspective.
- Bates, L., Hall, O., & Jakiela, P. (2023). Understanding the Impacts of Paid Maternity Leave on Women's Labor Market Outcomes.
- Baum, C. L., & Ruhm, C. J. (2016). The effects of paid family leave in California on labor market outcomes. *Journal of Policy Analysis and Management*, 35(2), 333-356.
- Bergemann, A., & Riphahn, R. T. (2023). Maternal employment effects of paid parental leave. *Journal of Population Economics*, 36(1), 139-178.
- Berger, L. M., Font, S. A., Slack, K. S., & Waldfogel, J. (2017). Income and child maltreatment in unmarried families: evidence from the earned income tax credit. *Review of Economics of the Household*, 15(4), 1345-1372.
- Bičáková, A., & Kalíšková, K. (2019). (Un)intended effects of parental leave policies: Evidence from the Czech Republic. *Labour Economics*, 61, 101747.
- Bičáková, A., Kalíšková, K., & Zapletalová, L. (2021). *Mom or preschool? How an extension to paid parental leave affects children's future education and employment*. Institute of National Economy of the CAS, vvi.
- Bister, L., Eibich, P., Rutigliano, R., Kühn, M., & van Hedel, K. (2023). Selection into maternity leave length and long-run maternal health in Germany. *Journal of Social Policy*. <https://doi.org/10.1017/S0047253123000000>.
- Burgess, S., Gregg, P., Propper, C., & Washbrook, E. (2008). Maternity rights and mothers' return to work. *Labour Economics*, 15(2), 168-201.
- Commission, E. (2013). Barcelona objectives - The development of childcare facilities for young children in Europe with a view to sustainable and inclusive growth. *European Commission, Directorate-General for Justice*. <https://doi.org/10.1017/S0047253123000000>.
- CR, E. F. (2023). *Operational Programme Employment Plus*. <https://www.esfcr.cz/vyzva-049-opz-plus>
- CZSO. (2022). *Population by age*. https://vdb.czso.cz/vdbvo2/faces/index.jsf?page=vystup-objekt&z=T&f=TABULKA&katalog=33156&pvo=DEMD001&str=v4&c=v3~2_RP2022MP12DP31
- CZECHOSLOVAKIA. (2022/2023). *Schools and school facilities - school year 2022/2023*. <https://www.czso.cz/csu/czso/skoly-a-skolska-zarizeni-hqtm9ep237>
- CSU. (2023). *Average wages - Q3 2023*. <https://www.czso.cz/csu/czso/cr/prumerne-mzdy-3-ctvrtleti-2023>
- De Henau, J. (2022). Simulating employment and fiscal effects of public investment in high-quality universal childcare in the UK. *International Journal of Child Care and Education Policy*, 16 (1), Article 3. <https://doi.org/10.1017/S0047253123000000>.

- De Henau, J., & Himmelweit, S. (2021). A care-led recovery from Covid-19: investing in high-quality care to stimulate and rebalance the economy. *Feminist Economics*, 27(1-2), 453-469.
- Del Rey, E., Kyriacou, A., & Silva, J. I. (2021). Maternity leave and female labor force participation: evidence from 159 countries. *Journal of Population Economics*, 34, 803-824.
- Dillaway, H., & Paré, E. (2008). Locating mothers -: How cultural debates about stay-at-home versus working mothers define women and home. *Journal of Family Issues*, 29(4), 437-464.
- Donoghue, E. A. (2017). Quality Early Education and Child Care From Birth to Kindergarten. *Pediatrics*, . 140
- Esping-Andersen, G. (1999). *Social foundations of postindustrial economies*. OUP Oxford.
- Eurofound. (2015). Working conditions, training of early childhood care workers and quality of services-A systematic review. In: Publications Office of the European Union Luxembourg.
- European Parliament, R. a. K. (2017). *European Pillar of Social Rights*. <https://www.vlada.cz/assets/media-centrum/aktualne/Evropsky-pilir-socialnich-prav.pdf>
- Girsberger, E. M., Hassani Nezhad, L., Karunanethy, K., & Lalive, R. (2021). Mothers at Work: How Mandating Paid Maternity Leave Affects Employment, Earnings and Fertility.
- Greger, D. S., Jaroslava
- Straková, Jana. (2015). *A fair start? Unequal opportunities in pre-school education and transition to primary school*. Charles University in Prague, Faculty of Education.
- Grossmann, J., & München, D. (2024). *Czech Women's Heads and Hands Remain Unused*.
- Groups, A. o. C. s. (2023). *Will the state meet the needs and expectations of the operators in the valorisation of the state contribution to the operation of children's groups?* <https://mojedetskaskupina.cz/naplni-stat-potreby-provozovatelu-normativy-2024/>
- Hamplová, D., Hozová, L., Jochová, J., Kahoun, M., Kříž, J., & Kuchařová, V. (2021). Society for St. Wenceslas Studies.
- Heckman, J. J., & Mosso, S. (2014). The economics of human development and social mobility. *Annu. Rev. Econ*, 6(1), 689-733.
- Hetus. (2024). *Harmonised European Time Use Surveys*. Eurostat. <https://ec.europa.eu/eurostat/web/time-use-surveys>
- Heymann, J., Sprague, A. R., Nandi, A., Earle, A., Batra, P., Schickedanz, A., Chung, P. J., & Raub, A. (2017). Paid parental leave and family wellbeing in the sustainable development era. *Public Health Reviews*, 38(1), 21.
- Hidalgo-Padilla, L., Toyama, M., Zafra-Tanaka, J. H., Vives, A., & Diez-Canseco, F. (2023). Association between maternity leave policies and postpartum depression: a systematic review [Review]. *Archives of Womens Mental Health*, 26(5), 571-580.
- Choi, H. (2003). The Effects of Maternity Leave Benefits on Labor Market Outcomes. *Seoul Journal of Economics*, 16(4), 461-489.
- Chuard, C. (2023). Negative effects of long parental leave on maternal health: Evidence from a substantial policy change in Austria. *Journal of Health Economics*, 88 , Article 102726. <https://doi.>
- Kalíšková, K., & München, D. (2023). The impact of childcare availability on maternal employment: Evidence from Czech municipalities. *PloS one*, 18 (7), e0288987.
- Kejřková, M. (2017). *Development opportunities for preschool children in playgroup*. Tomas Bata University in Zlín]. Zlín. <http://hdl.handle.net/10563/39587>
- Kim, K., Ilkkaracan, I., & Kaya, T. (2019). Public investment in care services in Turkey: Promoting employment & gender inclusive growth. *Journal of Policy Modeling*, 41(6), 1210-1229.
- Kleven, H., Landais, C., Posch, J., Steinhauer, A., & Zweimüller, J. (2019). Child penalties across countries: Evidence and explanations. AEA Papers and Proceedings,

- Kluge, J., & Schmitz, S. (2018). Back to work: parental benefits and mothers' labor market outcomes in the medium run. *ILR Review*, 71(1), 143-173.
- Křečková, N., Tůmová, N., Nešporová, O., & Svobodová, K. (2023). *Families with children in 2018-2022*
- Kuchařová, V., Bareš, P., Höhne, S., Nešporová, O., Svobodová, K., Št'astná, A., Plasová, B., & Žáčková, L. (2007). *Mapping the availability and conditions of children in nurseries, kindergartens, school clubs and similar institutions and other non-institutional forms of childcare in the Czech Republic, including identification of barriers their use with suggestions for possible measures to develop them*. Research Institute of Labour and Social Affairs, v.v.i.
- Lovász, A., & Szabó-Morvai, Á. (2019). Childcare availability and maternal labor supply in a setting of high potential impact. *Empirical economics*, 56, 2127-2165.
- Low, H., & Sánchez-marcos, V. (2015). Female labour market outcomes and the impact of maternity leave policies. *IZA Journal of Labor Economics*, 4(1), 1-22.
- Melhuish, E. (2016). *Delivering quality early childhood services. Synthesis report*. Publications Office of the European Union. <https://doi>.
- Melhuish, E., Ereky-Stevens, K., Petrogiannis, K., Ariescu, Penderi, E., Rentzou, K., Tawell, A., Slot, Broekhuizen, M., & Leseman, P. (2015). A review of research on the effects of Early Childhood Education and Care (ECEC) upon child development. CARE project. *Curriculum Quality Analysis and Impact Review of European Early Childhood Education and Care (ECEC)*.
- MoLSA (2019a). *Analytical report of the research Inquiry into children's groups, their setting and perceptions of providers and parents*. Ministry of Labour and Social Affairs.
- MoLSA (2019b). *Analytical research report. An investigation into children's groups, their settings and perceptions of providers and parents*. Ministry of Labour and Social Affairs.
- MPSV. (2020). *Analytical research report - Analysis of employment impacts in the region. Supporting the implementation of children's groups*
- MoLSA. (2023a). *Parental allowance*. <https://portal.gov.cz/sluzby-vs/rodicovsky-prispevek-S482>
- MPSV. (2023b). *Building 049+ children's groups*. <https://www.esfcr.cz/vyzva-049-opz-plus>
- MPSV. (2023c). *Call No. 31_22_046 Capacity Building of Children's Groups according to Act No. 247/2014 Coll., on the Provision of Child Care Services in Children's Groups and on Amendments to Related Acts - Civil Sector*. https://www.mpsv.cz/web/cz/vyzva-c.-31_22_046-budovani-kapacit-detskych-skupin-dle-zakona-c.-247/2014-sb.-o-poskytovani-sluzby-pece-o-dite-v-detske-skupine-a-o-zmene-souvisejicich-zakonu-obcansky-sektor
- Mullerova, A. (2017). Family policy and maternal employment in the Czech transition: a natural experiment. *Journal of Population Economics*, 30(4), 1185-1210.
- Neyer, G. *Family policies and fertility in Europe: Fertility policies at the intersection of gender policies, employment policies and care policies*.
- Olivetti, C., & Petrongolo, B. (2017). The economic consequences of family policies: lessons from a century of legislation in high-income countries. *Journal of Economic Perspectives*, 31(1), 205-230.
- Paloncy, J. H., S. (2023). *Children's groups and family centres - their functioning and access to services for children with special needs*. RILSA. https://katalog.vupsv.cz/fulltext/vz_531.pdf
- Penner, A. M., Petersen, T., Hermansen, A. S., Rainey, A., Boza, I., Elvira, M. M., Godechot, O., Hällsten, M., Henriksen, L. F., & Hou, F. (2023). Within-job gender pay inequality in 15 countries. *Nature Human Behaviour*, 7(2), 184-189.

- Pinnelli, A., Buccellati, T., & Mancini, P. (2002). Feasibility study on the availability of comparable child care statistics in the European Union. In (2002 ed.). Luxembourg: Publications Office.
- Pizarro, J., & Gartzia, L. (2024). Paternity leave: A systematic review and directions for research [Article]. *Human Resource Management Review*, 34 (1), Article 101001. <https://doi.org/10.1016/j.hrmr.2024.101001>.
- Rossin-Slater, M. (2017). Maternity and Family Leave Policy. In (pp. 23069-n/a). Cambridge: National Bureau of Economic Research, Inc.
- Rossin-Slater, M., & Stearns, J. (2020). Time On with Baby and Time Off from Work. *Future of Children*, 30(2), 35-51. <Go to ISI>://WOS:000511111100001
- Sirovátka, T. (2006). *Family, employment and social policy*. Albert (Institute for Research on Reproduction and Integration of Society), Masaryk University in Brno.). <https://is.muni.cz/handle/123456789/12345>.
- Sirovátka, T. (2016). Czech social policy in the perspective of "social investment". *Social Policy Forum*(5), 7-14.
- Sleebos, J. (2003). Low fertility rates in OECD countries: facts and policy responses. SocioFactor. (2016). *Public opinion research on reconciliation of work and family life and gender equality in family policy and labour market*
- Soe, M. A., Schad, E., & Psouni, E. (2023). Transition to Preschool: Paving the Way for Preschool Teacher and Family Relationship-Building. *Child & Youth Care Forum*, 52(6), 1249-1271.
- Stearns, J. (2015). The effects of paid maternity leave: Evidence from Temporary Disability Insurance. *Journal of Health Economics*, 43, 85-102.
- Sterling, H. M., & Allan, B. A. (2022). Predictors and Outcomes of US Quality Maternity Leave: A Review and Conceptual Framework [Review]. *Journal of Career Development*, 49 (6), 1435-1453, Article 08948453211037398. <https://doi.org/10.1037/cd0000398>.
- Válková, J., & Sgem. (2016, Apr 06-09). CHILDCARE POLICY IN THE CZECH REPUBLIC: CHANGING PATHWAY? *International Multidisciplinary Scientific Conferences on Social Sciences and Arts* [Sgem 2016, bk 2: Political sciences, law, finance, economics and tourism conference proceedings, vol i]. 3rd International Multidisciplinary Scientific Conference on Social Sciences and Arts, SGEM 2016, Vienna, AUSTRIA.
- Van Niel, M. S., Bhatia, R., Riano, N. S., de Faria, L., Catapano-Friedman, L., Ravven, S., Weissman, B., Nzodom, C., Alexander, A., Budde, K., & Mangurian, C. (2020). The Impact of Paid Maternity Leave on the Mental and Physical Health of Mothers and Children: A Review of the Literature and Policy Implications [Review]. *Harvard Review of Psychiatry*, 28(2), 113-126.
- Warner, M. E. (2009).(Not) Valuing Care: A Review of Recent Popular Economic Reports on Preschool in the US. *Feminist Economics*, 15, 73 - 95.
- Whitney, M. D., Holbrook, C., Alvarado, L., & Boyd, S. (2023). Length of Maternity Leave Impact on Mental and Physical Health of Mothers and Infants, a Systematic Review and Meta-analysis [Review]. *Maternal and Child Health Journal*, 27(8), 1308-1323.
- Yamaguchi, S. (2019). Effects of parental leave policies on female career and fertility choices. *Quantitative Economics*, 10(3), 1195-1232.
- Zhou, M., & Kan, M. Y. (2023). The Gendered Impacts of Partnership and Parenthood on Paid Work and Unpaid Work Time in Great Britain, 1992-2019 [Article]. *Population and Development Review*, 49(4), 829-857.
- Zykanová, T., & Janhubová, K. (2022). Analysis of the availability of pre-school childcare facilities. In O. e. MPSV (Ed.): MPSV.

Attachments

Annex 1: Children's group budget

Table 1: Children's group budget CZK

Cost of running a children's group					
wages	nannies	Director	farm		
	100 500	22 780	16 750		140 030
building	rent	energy	repairs	cleaning	
	30 000	8000	4000	1500	43 500
care	insurance	training	didactic	office	
	1000	2000	2000	5000	10 000
					193 530
Income from the operation of the children's group					
norm					127 867
school fees					60 718
					188 585

Source: 2023 Model Budget of the Association of Children's Groups

Annex 2: Employee state contributions - tax, social security and health insurance.

Table 2: Overview of payroll taxes CZK

Overview of state levies					
	8 hours time	6 hours time	Nanny	DS (2 full-time jobs)	Parents (12 parents)
Social insurance	13 609	10 207	6 285		
Healthy. Insurance	5 759	4 320	2660		
Tax	6 405	4 800	2 955		
Tax rebates	3 837	3 837	0		
Taxpayer discount	2 570	2 570	2 570		
State deduction	21 936	15 490	9 330	18 660	185 880

Source: <https://www.keloc-software.cz/mzdova-kalkulacka/>