

CHARLES UNIVERSITY
FACULTY OF SOCIAL SCIENCES
Institute of Economic Studies

Bachelor thesis

2019

Veronika Martínková

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**Assessment of a Potential Reform of Parental
Allowance System in the Czech Republic**

Bachelor thesis

Prague 2019

Author: Veronika Martínková

Supervisor: Mgr. Barbara Pertold-Gebická M.A., Ph.D.

Academic Year: 2018/2019

Bibliographic note

Martínková, V. (2019). *Assessment of a potential reform of parental allowance system in the Czech Republic*. Bachelor thesis. Charles University, Faculty of Social Sciences, Institute of Economic Studies. Supervisor Mgr. Barbara Pertold-Gebická M.A., Ph.D.

Abstract

Parental allowance system in the Czech Republic offers a very long scheme of paid leave for parents of small children compared to other countries. Most parents choose to receive it up until sometime between their child's second and third birthday, the limit being the fourth birthday. Absolute majority of those receiving parental allowance in the Czech Republic are women. This thesis is assessing costs and benefits of reforming the parental leave system, as was recommended by the OECD. This reform would shorten the length of allowance collection and would reserve some of it to fathers. We found that such a reform could bring up to 5.98 billion CZK to the state budget in the most optimistic scenario compared to current situation. We have included direct expenditure on parental allowance, but also the increased revenues due to higher maternal employment, lost revenues from the time fathers would spend on leave and costs of childcare provision. Despite the possible financial gains and other benefits, such as overall improved situation of mothers in the labour market, we concluded that neither Czech politicians, nor Czech society would be prepared for such a radical change and only a milder reform would be viable.

Keywords

parental allowance, parental leave, parental leave reform, costs of parental allowance, benefits of parental allowance, family, maternal employment

Range of thesis: 79,467 symbols

Abstrakt

System rodičovského příspěvku v České republice nabízí rodičům malých dětí velmi dlouhý program placené dovolené v porovnání s jinými zeměmi. Většina rodičů si volí čerpání příspěvku až do doby mezi druhými a třetími narozeninami dítěte, limitem jsou čtvrté narozeniny. Naprostou většinou příjemců rodičovského příspěvku v České republice jsou ženy. Tato práce vyhodnocuje náklady a přínosy reformy systému rodičovského příspěvku, kterou doporučila OECD. Tato reforma by zkrátila délku pobírání rodičovského příspěvku a vyhradila by určitou jeho část otcům. Zjistili jsme, že taková reforma by v neoptimističtější scénáři mohla přinést až 5,98 miliardy Kč do státního rozpočtu v porovnání se současnou situací. Do výpočtů jsme zahrnuli přímé výdaje na rodičovský příspěvek, ale také zvýšené příjmy z vyšší zaměstnanosti matek, ušlé příjmy z doby, kterou by otcové strávili na dovolené a náklady na poskytnutí péče o děti. Navzdory všem možným finančním výnosům a dalším přínosům, jako například celkové zlepšení situace matek na trhu práce, jsme usoudili, že ani čeští politici, ani česká společnost není připravena na tak radikální změnu a proveditelná by byla pouze mírnější reforma.

Klíčová slova

rodičovský příspěvek, rodičovská dovolená, reforma rodičovského příspěvku, náklady rodičovského příspěvku, přínosy rodičovského příspěvku, rodina, zaměstnanost matek

Declaration of Authorship

1. The author hereby declares that she compiled this thesis independently, using only the listed resources and literature.
2. The author hereby declares that all the sources and literature used have been properly cited.
3. The author hereby declares that the thesis has not been used to obtain a different or the same degree.

Prague 30.07.2019

Veronika Martínková

Acknowledgments

I am grateful especially to my supervisor Mgr. Barbara Pertold-Gebická M.A., Ph.D for her help and many guidelines for my work. I would also like to thank my friends and family for their continuous support.

Institute of Economic Studies
Bachelor thesis proposal

Proposed topic:

Involvement of fathers in parental leave in the Czech Republic

Preliminary scope of work:

Research question and motivation

Years spent at home are a crucial factor in analysing the pay gap and gender inequality in general. We have seen successful attempts to encourage men to take part in parental leave by introducing weeks of parental leave reserved for fathers, or by offering extra benefits conditioned by fathers' involvement.

My research question would be an ex ante analysis of introducing such policies in the Czech Republic. I would like to analyse its possible effects on women unemployment, salaries. A study by Alena Bičáková and Klára Kalíšková called: "From maternity to unemployment: Position of women with small children in the labour market" suggests that at 3 years of age of the child, up to 60 % of women returning to the labour market are unemployed. This striking percentage is one of my motives for studying the possibilities of increasing fathers' involvement in parental leave. Fathers usually remain at work also because of their higher wage, assuming there is a general pay gap between men and women. This gap has got to further deepen after women spend months at home with children with no progress in work skills, often actually deterioration. Splitting the parental leave between both parents might improve the overall loss of a household's income.

Contribution

Many studies have dealt with the situation in the Czech Republic regarding the parental leave system or gender inequality. The role of fathers has been explored in detail, too. My thesis will seek to analyse one of the steps trying to improve the situation. Using studies from abroad where such policies have been implemented, I will compare the conditions before implementation and estimate the effects here taking into account specificities of the Czech Republic.

Methodology

Method of the analysis would comprise of combining different data sets and their summaries. I plan to use data from the Labour Force Survey conducted by the European Union and of course its Czech counterpart Výběrové šetření pracovních sil. I would also like to use the detailed data from Forsakringskassan, the Swedish social insurance agency to trace the changing shares of men taking parental leave and its various effects, and also the “Scientific Use Files” by The Research Data Centre of the German Federal Employment Agency. For the same purpose I would use the statistics of Ministry of Labour and Social Affairs in the Czech Republic. To analyse the situation on a broader scale I will use the OECD Family Database.

Outline

- Abstract
- Introduction
 - parental leave system in the Czech Republic
 - reforms of the parental system towards greater participation of fathers in the world
- Literature overview and summary of key findings
- Comparative ex ante analysis of policies encouraging fathers’ involvement
 - “Daddy months”
 - Financial reward for participation of both parents
- Summary
- List of references

List of academic literature:

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Introduction

The aim of this thesis is to examine a hypothetical reform of the Czech parental leave system. The Czech Republic offers a generous maternity and parental leave scheme, surpassing most of developed countries with its length. However, this brings about numerous problems, especially when combined with the extremely low take up rate of parental leave by men. The negative effects include loss of human capital of women on the leave, subsequent unemployment, lower wages and overall gender bias and inequality.

The Czech system has been broadly criticised, notably by the OECD (2014) which pointed out that the lengthy parental leave favours labour-force withdrawal, and that there is a gender bias as men take parental leave in less than 3% of cases. It was suggested to reduce the length of maternity and parental leave to 1 year and to render a share of the parental leave conditional on fathers spending some time on the leave, too, as it is the case in Germany and Austria.

In this thesis, we will analyse opportunities and threats that the recommendations of the OECD offer for the Czech Republic. To achieve this, we will consider a reform which took place in Germany in 2007, which, if applied in the Czech Republic now, would follow the above-mentioned suggestions. The German system prior to the reform was similar to the Czech one in many respects. The 2007 reform then changed it radically, introducing only 12 months of parental leave for one parent at maximum. Parents can take another 2 months of paid leave to take care of their child only if it is other parent to do so. For the purpose of this thesis, we will assume adoption of an analogous reform in the Czech Republic in order to analyse the recommendations of OECD. We will observe the take-up rates and various effects of the reform in Germany assuming that responses in the Czech Republic would correspond to the German ones. This will allow us to investigate the costs and benefits of such a change to the parental leave system in the Czech Republic.

The thesis will proceed in the following order: firstly, we will present the review of literature on effects of parental leave settings and on perceptions of this issue in the Czech Republic. After that, we will provide a comprehensive description of the layout of maternity and parental leave in the Czech Republic at present and in Germany prior to and following the reform. Then we will proceed to the cost-benefit analysis comprising

of the effects on public spending on parental allowance, the outcomes in the labour market for both mothers and fathers and consequences on the state budget, and finally effects of provision of childcare for children under 3 years, which is a necessary complement to the reform. Finally, we will discuss why it might be problematic to enforce such a reform and what amendments to the current system would be deemed acceptable in the Czech Republic.

1. Literature review

There is a lot of literature analysing the effects of parental leave systems on labour market position of mothers. The majority of this literature concentrates on the effects of the introduction of leave or extension of leave duration. There are just few studies analysing the effects of shortening parental leave. From the Central European perspective, lengths of maternity or parental leave considered and examined by authors are surprisingly short. An influential study by Ruhm (1998) distinguishes effects of short leave, i.e. of 3 months and effects of more extended entitlements, that is 9 and more months. Ruhm finds that short leaves increase employment-to-population ratios of women by 3-4% whilst having little effect on wages. Extended leaves, on the other hand, increase this ratio by 4%, but decrease women's wages by 3%. In the context of this thesis where we will examine shortening total leave from 3 or even 4 years (see below) to over 1 year. Therefore, Ruhm's differentiation is not very convenient.

Nandi et al. (2018) carried out a systematic review of literature on outcomes of parental leave policies. They recommend that optimal setting of parental leave should provide "balance between the competing demands of earning income and attending to personal and family well-being, including child-rearing. If leave policies are too restrictive, they might discourage labor force entry or sustained participation." (Nandi et al., 2018, p. 459) The authors draw several conclusions. Firstly, legislated, paid parental leave policies are well received by mothers, extensions of duration up to 12 or 18 months were accompanied by an increase in leave taking and longer durations. Secondly, there are positive effects on women's participation in the job market linked with provision of more generous leave. These effects, however, diminish after roughly 28 full-time equivalent weeks of paid leave. Also, there was little evidence that extension of parental leave has negative economic or employment outcomes. Next, benefits of paid leave and effects of unpaid leave cannot be conflated. The latter has very limited impact, in some cases even negative one on employment, labour force participation and wages of women. Finally, gender-neutral policies do not induce fathers to participate in leave-taking and childcare. Only paternal leaves or father-specific leaves of adequate length and generosity increase fathers' leave-taking.

Thevenon and Solaz (2013) studied how changes in the last 50 years made to parental leave layouts in OECD countries shaped gender differences in labour market outcomes. These authors compare their findings with those of Ruhm (1998) who,

according to them, focused predominantly on short periods of leave. Thevenon and Solaz find, like Ruhm, that short leaves reduce the gender employment gap, but as they consider also longer periods, they find that these have, in fact, opposite effect. It is specified that extending parental leave beyond two years has counterproductive effects on female employment and therefore on gender employment gap. This is relevant for us given that our intended reform would shift the length of Czech parental leave below this critical point.

Olivetti and Petrongolo (2017) also studied the effects of reforms of parental leave systems on female labour outcomes across various high-income countries. They conclude that the strongest positive effect is present in case of early childhood spending and in-work benefits (mostly tax credits). They claim that there is little evidence that extended parental leave has an overall positive impact on women's position in the labour market.

Schönberg and Ludsteck (2014) studied 5 particular reforms made in Germany from 1979 to 1993 which gradually extended both paid leave and job protection. These reforms saw the leave rise from 2 months of both paid leave and job protection to 2 years of the former and 3 years of the latter. The aim of these reforms was to induce mothers to spend more time with their children after their birth, for this time is crucial for child's development. This was achieved as maternal employment decreased in the short run. However, the authors claim that there is only small negative effect of the extensions on long-run employment of mothers. Positive effects are ruled out. The authors point out that the greatest negative impact followed one of the reforms which had the allowance period exceeding the job protection. This suggests that mothers are sensitive to financial incentives of the allowance, not only the job protection.

Similar results in the Czech context are shown in a study by Bičáková and Kalíšková (2019). They examined two reforms from 1995 and 2008. The former extended paid leave to 4 years, whilst protected period remained 3 years. The authors found that 36% of women extended their leave beyond the protected period. Nevertheless, this could be also related to low effectivity of the job protection or norm-setting function of family policies. This reform increased non-employment rate of mothers with children under 8 years in general. The other reform allowed mothers to draw the total amount of allowance in 3 or even 2 years. This, on the other hand, reduced the non-employment rate of mothers with children under 8. Therefore, it is evident that Czech women do respond to changes in family policies.

Regarding position of the Czech Republic in the typology of welfare states and division of labour, Ciccia and Verloo (2012) analysed parental leave regulations in European countries to assign them one of the four theoretical models of division of labour: male breadwinner, universal breadwinner, caregiver parity and universal caregiver (Fraser, 1994). Male breadwinner model is based on traditional gender division of labour, where men provide for the family financially, while women take care of the children, their status is based on their roles as wives and mothers. Universal breadwinner model promotes participation of both men and women in the labour market, liberating both from care at home. Caregiver parity model, on the other hand, maintains traditional gender roles, but assigns them the same financial value. Finally, universal caregiver model values work and care equally, just like the caregiver parity model, yet induces men to become part of the caregiving sphere, so that both spheres have equal shares of men and women. The authors find that while the universal caregiver model in its ideal form does not exist yet in Europe, the male breadwinner model is still present in a large number of European countries. Our point of interest is that the Czech Republic was assessed as a male-breadwinner-promoting system with, in fact, the highest match of all the examined countries. No other country had as strong an affiliation with a particular model as the Czech Republic had with the male breadwinner model. This implies that there is definitely enough space for policy changes in this regard.

A Czech author Tomešová Bartáková (2009), who analyses the return of women to the labour market after parental leave, addresses classification of the Czech Republic within the types of familialism, typology established by Leitner (2003) regarding state's perceptions about whether it is primarily the family who is responsible for welfare of its members. Leitner distinguishes de-familialism, optional familialism, implicit familialism and explicit familialism. The Czech Republic, according to Tomešová Bartáková, represents explicit familialism, which is, as she then observes, actually gendered, targeted at women.

In this study Tomešová Bartáková (2009) observes the decision-making process of mothers regarding ending parental leave. She finds that personal values and preferences related to family and work spheres are crucial. The stronger the attachment to professional life and self-fulfilment is, the faster the mother returns to employment. The author finds, however, that there is a certain boundary, of 2 years of age of the child, under which the mothers generally prefer to stay at home with the child. She also finds that some women

face obstacles to their earlier return, even if they would prefer to end the leave. These are mostly university-educated women who cannot find a place for their child in a kindergarten or they actually feel the pressure of social norms. This again presents potential for a reform in the Czech Republic, mainly in sense of relaxing the strict social standards related to this issue. The author then concludes that policies strongly form women's behaviour, but their significance in this respect is often differentiated by education.

Finally, an important part of the subject matter is provision of childcare by the state. This plays a crucial part in forming women's preferences. Saxonberg (2012) points out the concept of "threeness" in perception of ideal division of different stages of childcare, provision of childcare by the mother is deemed the best possible way of childcare for children under three. He attributes it to the, in fact random, historical division of childcare in times of Austria-Hungary. This magical age of 3, as the author describes it, shapes the whole discourse about childcare. After fall of the communist regime, a whole resistance movement against nursery schools emerged and as a result, we have seen a 98% drop in places for children in nurseries over these years. Saxonberg claims that a myth of nurseries presented as a communist invention was created in the 1990s. The Czech governments' resistance went as far as to refuse to adhere to the goals of the Barcelona Declaration from 2002, in which EU members pledged to promote provision of public places in childcare facilities in order to allow at least one third of children aged 3 to attend day care by 2010. We can therefore see that the childcare aspect of the reform is very problematic in the Czech Republic.

2. Parental leave system in the Czech Republic and Germany

The Czech Republic ranks among the countries with the longest paid leave for parents of small children in OECD. According to OECD (2017) the total length of paid leave available to mothers is 110 weeks. This figure assumes that “parents taking parental leave opt to receive the maximum monthly allowance and therefore take paid leave for the shortest possible time (until the child is 24 months old)” (OECD, 2017, p. 10). In reality, women take longer time off on average (see below). Only Estonia, Finland, Hungary and Slovakia have total paid leave for mothers longer than the Czech Republic with approximately 160 weeks. OECD average is then 55.2 weeks. As for public spending on maternity and parental leave, the Czech Republic comes the sixth highest after Luxembourg, Norway, Estonia, Sweden and Finland. The OECD report concludes that “spending is generally highest in Nordic and Eastern European OECD countries, reflecting in the former case the generosity of payment rates and high level take up of leave among both mothers and fathers, and in the latter case the length of paid parental leave available to mothers” (OECD, 2017, p. 10). Germany, on the other hand, falls into the average of OECD with total paid leave of 58 weeks. The same is true for public spending on the leaves, Germany’s expenditure is just below the OECD average. Thus, the German system conforms to the OECD’s proposition to the Czech Republic.

Concerning paternity leave or father-specific parental leave, most OECD countries provide some, the average length in weeks being 8.2. The Czech Republic had previously been one of the eight OECD countries with zero paid leave reserved for fathers¹. This changed in 2018 when the Czech Republic introduced 1 week of paid paternity leave.

2.1 Czech Republic

Regarding the Czech system, one parent of a new-born child can receive maternity leave allowance and subsequently parental leave allowance, although it does not have to be the same parent in each case. The maternity allowance (“Peněžitá pomoc v mateřství”) can be claimed by a parent under two conditions – being part of the sickness insurance

¹ These are Canada, Ireland, Israel, New Zealand, Slovakia, Switzerland, United States and previously Czech Republic. Apart from Slovakia and Canada, these countries have rather short paid leaves even for mothers, none at all in case of the United States.

scheme or being in the protected period after ending contribution in the scheme. Along with this, it is necessary to have contributed in the sickness insurance scheme for at least 270 days in the last 2 years preceding the start of the maternity leave. The length of the maternity leave is 28 weeks (or 37 if the woman gives birth to twins or more children). The mother can start the maternity leave from 8 to 6 weeks before the expected date of birth. However, it can be the father or the husband of the mother who receives the allowance if he takes care of the child (except for the first 6 weeks following the birth). The allowance is calculated as 70% of the daily assessment base per calendar day. The daily assessment base is the average daily gross income (excluding the days when the parent was not contributing to the sickness insurance) subject to 3 reduction limits². The average payment rate of maternity leave allowance is then 62.6% according to OECD.³

After maternity leave parents can enter parental leave and claim the parental allowance. The key condition for receiving the allowance is providing care for the child, however the parent may work at the same time. If the child younger than 2 years is taken care of in a nursery school, the hours spent there must not exceed 46 hours per month. The recipient can be either the mother or the father. Regarding the different options of receiving the allowance, if neither of the parents contributed to the sickness insurance scheme, there are two options. Either the parent will be receiving the allowance until 4 years of age of the child, at first, until 9 months of age, the amount is 7,600 CZK per month, after that 3,800 CZK per month. Or they can choose to shorten the period to up to 3 years by receiving maximum of 7 600 CZK each month. This second option was offered for the first time in 2018. On the other hand, provided that at least one of the parents contributed to sickness insurance scheme, the length and amount can be chosen individually depending on the daily assessment base and parental preferences. The total maximum amount of the parental allowance is 220,000 CZK for everyone. The monthly amount must not exceed 70% of the daily assessment base multiplied by 30, at minimum 50 CZK per month. There used to exist a top limit of 11,500 CZK per month which could not be exceeded, this was lifted in 2018 in order to make the period of receiving the allowance shorter for higher-income families. The rules for maximum monthly allowance

² See further detailed description by the Ministry of Labour and Social Affairs <https://www.mpsv.cz/cs/7>.

³ “The “average payment rate” refers the proportion of previous earnings replaced by the benefit over the length of the paid leave entitlement for a person earning 100% of average national (2015) earnings” (OECD, 2017)

are now the same as for maternity allowance depending on the daily assessment base subject to the 3 reduction limits. A press release of the Ministry of Labour and Social Affairs from December 2017 states 32,640 CZK as the then maximum monthly amount. The maximum length is 4 years. The parent can change the arrangements every 3 months. However, job protection lasts only for 3 years.

The subject of parental allowance has been widely discussed lately as the Ministry of Labour and Social Affairs proposed an increase of the total sum from 220,000 CZK to 300,000 CZK. The proposal was approved by the government in May 2019, the amendment should come into force in January 2020. The calculations of drawing upon the allowance will, however, remain unchanged. But the condition regarding provision of day care for children under the age of 2 years in nursery schools will be moderated, the threshold will rise from 46 hours per month to 92 hours, which corresponds to half-day attendance in each working day.

The Czech Republic recently introduced a paternity leave reserved for fathers within the first 6 weeks after the birth of the child. Fathers are entitled to 7 consecutive days of paid leave, the amount paid is calculated in the same way as maternity leave. However, the claimant must contribute to the sickness insurance scheme, the protected period does not apply.

Even though parents are free to decide who will go on the leave, it is in practice almost always the mother, in 99% of the cases it was the woman who took maternity leave (ČSÚ, 2018a), 98% for parental leave in 2017 (ČSÚ, 2018b). It is clear that in the Czech society fathers taking parental leave are rather singular. Therefore, all potential problems linked with maternity and parental leave affect women and thus we will mostly talk about them when discussing the parent on the leave.

The length is problematic in the Czech Republic. Taking long parental leaves distorts mothers' linkage with the labour market and causes losses of human capital. Even years after the end of the leave, mothers are still negatively affected. The average length of parental leave was 34 months in the period 2008-2012 (Pertold-Gebická, 2018). Höhne (2017) reports that over 80% of mothers were drawing the parental allowance after their child's second birthday in 2015. As for the newly-introduced paternity leave, the proportion of fathers who took it was approximately one half in 2018 (Šopfová, 2018, December 11), in the first quarter of 2019 it dropped to 42% (ČSSZ, 2019; ČSÚ, 2019a).

2.2 Germany

Firstly, we will describe the German parental leave system prior to the 2007 reform. At first mothers are, in fact, obliged to take maternity leave beginning 6 weeks before expected birth, ending 8 weeks after birth. This has remained unchanged. Mothers receive a flat rate corresponding to the average salary of women, the rest is to be topped by the employer to cover the full salary. As for the parental leave, parents are entitled to 3 years of leave with job protection (this has not changed with the reform), which is the same as in the Czech Republic now. The relationship with drawing upon the parental allowance was inverse, nevertheless, parents received the allowance only until 2 years of age of the child. The allowance was paid monthly at a flat rate of 600 DM (307 EUR) for at most 2 years or 900 DM (460 EUR) for at most 1 year. Therefore, choosing the 2-year option was more profitable for parents. However, the allowance was means-tested, some families were excluded from the scheme. Two income thresholds were applied: 100,000 DM (51,130 EUR) for annual income of married couples and 75,000 DM (38,350 EUR) (Merz, 2004). To give a more precise idea of the threshold, the average net annual income was circa 16,400 in 2004 in Germany (Eurostat, 2019a). It is apparent that the allowance was not extremely targeted, and that majority of families were able to reach it. As for the fathers' participation in childcare before the reform, "the number of fathers taking leave never exceeded 2%"⁴ (Gottschall and Bird 2003). In this respect the situation was very similar to that currently in the Czech Republic.

Germany reformed their system of parental leave radically in 2007 shifting it to that of the Nordic countries. Firstly, the length of the parental leave was reduced considerably, from 2 years to 14 months at maximum. The family can, however, use all 14 months of paid leave only if the parents share the parental leave, the maximum duration for each parent is 12 months, 14 months is shared. This is referred to as "daddy months" as effectively the 2 months are reserved for fathers. The condition for drawing upon the allowance is working less than 30 hours per week. Another big change is the calculation of the allowance. Instead of means-tested, flat-rate allowance, German parents now receive earnings-related allowance of 67% of net income, with minimum of 300 EUR per

⁴ Examined period being up to 2001.

month and maximum of 1,800 EUR⁵ (Spiess and Wrohlich 2006). This is comparable with the Czech system, minimum amount for low-income parents being almost the same. As for the proportion of previous earnings, the big difference is relating the allowance to net earnings in Germany, while in the Czech Republic gross earnings are used. To give a better idea of the difference, in the Czech Republic the average payment rate of maternity allowance (the same calculation is used for determining the threshold of monthly parental allowance, it can be therefore applied too) related to net earnings is 91% for women with average salary. The total maximum is higher in Germany however, in the Czech Republic it is below 35,000 CZK (see above).

⁵ In 2015, the so-called ElterngeldPlus (Parental Allowance Plus) was introduced in the German system, where families can draw half the benefit for twice as long. However, we will not be considering this case in the thesis.

3. Cost-benefit analysis

In this section we will consider costs and benefits of reforming the current Czech parental leave system. The motivation for this analysis is the recommendation of OECD according to which length of paid leave should be reduced to about 1 year and a share of the paid leave should be reserved to fathers. In general, the Czech system is rather exceptional and there are many problems linked with its setting. Furthermore, the German reform is overall evaluated as a success. Mothers often take only short breaks from employment following birth of their child, while many fathers reduce time spent in work in favour of childcare (Federal Ministry for Family Affairs, Senior Citizens, Women and Youth, 2017). Therefore, it is useful to assess what effects could follow if the Czech system was radically changed, especially given that the German reform was carried out a long time ago which allowed many authors to study its effects.

We will examine potential introduction of a similar reform that was carried out in Germany in 2007, in order to model a shift in parental leave policy as recommended by the OECD. Our assumptions for the analysis are that Czech parents would react in a similar way German parents did after the reform. This means similar take-up rates and behaviour in the labour market. These assumptions are justifiable given the similarity of attitudes to division of gender roles in the Czech Republic and Germany prior to the reform (please, refer to the previous chapter for the data on maternity and parental leave take-up rates of women and men). Another common feature is the gender pay gap in the two countries. Their rates of the gap have been very similar, oscillating around 22% in the past 15 years. In 2017 the Czech Republic and Germany were countries with the second and the third biggest pay gap among EU members following Estonia (Eurostat, 2019c). We can, therefore, see that the reform has not improved this particular aspect of gender equality in Germany. Furthermore, the initial parental leave systems are similar to some extent. The monthly allowance was rather low yet paid over a fairly long period of time in Germany. The Czech system offers the allowance for even longer, though. However, another common point is the period of job protection which has been 3 years long for a long time in both countries and would thus remain unchanged under the hypothetical reform. This also implies that we do not have to consider adverse effects on unemployment.

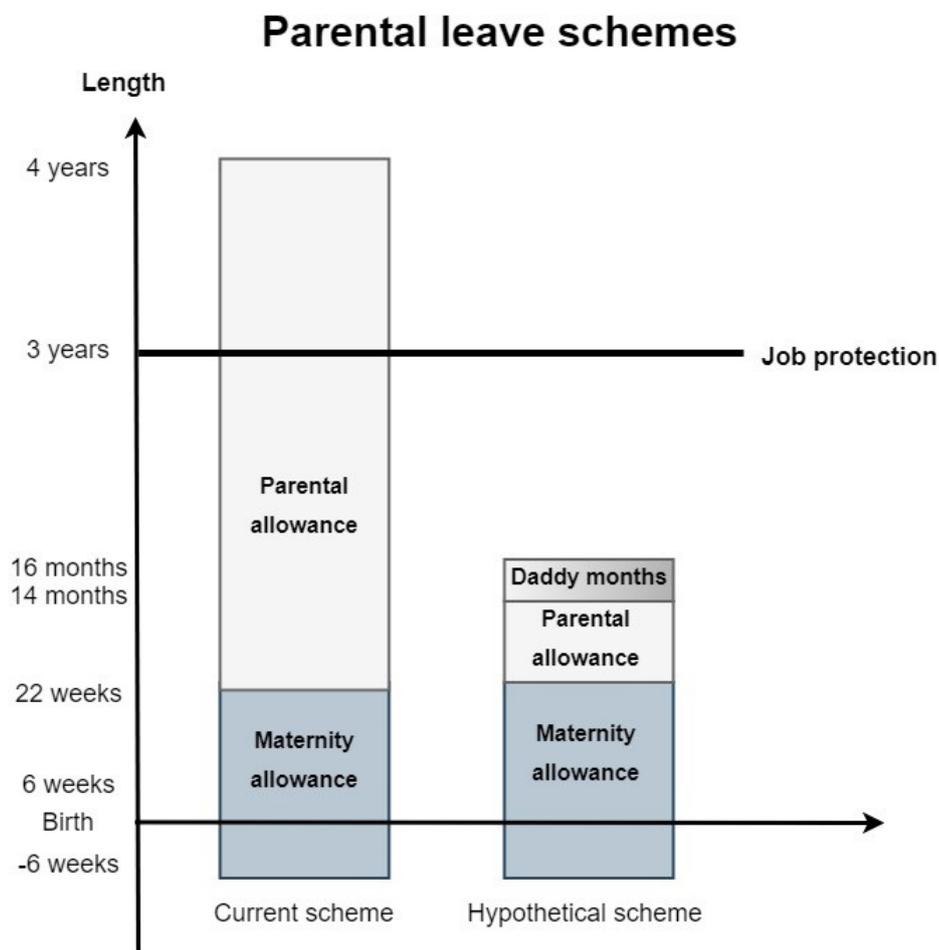
Our cost-benefit analysis will concentrate on financial outcomes from the point of view of the state budget. We will first calculate the direct costs of the reform regarding

the allowance paid. Then we will try to model the effects on labour market participation of both mothers and fathers. Finally, we will compare these financial outcomes with the necessary costs of childcare provision.

Now let us summarize the form of the hypothetical reform. While it is supposed to be similar to the 2007 German reform, we also assume several differences. Similarly as in Germany, the hypothetical reform would only affect parental allowance, the job-protected parental leave shall remain the same, i.e. until the child's third birthday. The three-year job protection is currently in place both in the Czech Republic and Germany. For simplicity, we will assume that the maternity leave and maternity allowance will remain unchanged, even though the maternity leave in the Czech Republic is twice as long as the German one. This will be compensated for by shortened parental leave of only nine months since the end of the maternity leave at maximum for one parent and additional two months if shared, in order to meet the requirements of the OECD for the reform of the system. In total parents would be able to receive the allowance up to 16 months after birth of the child if they both participate in childcare, mothers solely (or fathers, of course) would be entitled to allowance until the end of the 14th month after childbirth. This is presented in Figure 1. As for the amount of monthly allowance during parental leave, we will maintain the same system as in Germany, therefore 67% of net pre-birth earnings. For comparison with the current Czech system, the monthly limit on parental allowance is the same as for maternity allowance which for average wage replaces 91% of net wage (such allowance being 19,530 CZK). For all other levels of wage, the replacement rate to net wage is lower, 80% for the lowest income group, 63% for the highest income group (MPSV, 2017). However, this limit for monthly parental allowance, depending on that of maternity allowance, has been in place only since 2018. Before there was a limit of 11,500 CZK monthly, which meant that parents could draw the total allowance in 19 months at fastest, by their child's second birthday (including the 5 months of maternity allowance). If a woman with average wage decides to draw allowance until her child's second birthday, monthly 53.6% of her pre-birth net wage is replaced by parental allowance. However, most mothers choose total length of leave between 2 and 3 years. Therefore, monthly they currently get even lower replacement of pre-birth net wage (in case of average wage). Due to this, the new parental allowance scheme would mostly increase the monthly amount parents get. In case of the poorest, there would not be any change monthly, as the minimum allowance is set at 300 EUR,

which corresponds to the fixed amount of 7,600 CZK which the low-income parents can get for 3 years.

Figure 1



Source: Own elaboration

3.1 Direct costs of the reform

Concerning the calculation of total amount spent on the allowance, we are using data from the Czech Statistical Office from 2017 and from the Federal Statistical Office of Germany from 2009. The Federal Statistical Office provides data on the length of the parental leave in months as taken by men and women (Statistisches Bundesamt, 2019). We, therefore, calculate the costs of parental allowance as taken by both mothers and fathers at once. We have adjusted the data accordingly in order to use them for calculating the 9+2 months version of the leave in the Czech Republic while preserving the ratios of take up rates of different lengths, relating the numbers by number of births in both countries. By far the most popular was the model where women take the maximum possible leave, while men take the two extra months. As for the Czech side, we have used

data on the number of births by highest education attained of the parents combined with average wages for each education category, gender-differentiated. The gross wages were then converted to net wages using average ratios of net to gross earnings for each education level and gender. However, for fathers, we have used the education-differentiated proportions from a study of Bünning (2015), because, overall, there tends to be a higher proportion of fathers with higher education among those taking some months of parental leave. These data are shown in Table 1.

Table 1: Summary of inputs and outputs of calculation of direct costs of the reform

Educational level	Primary	Lower secondary	Upper secondary	Post-secondary and above	Unidentified
Number of children born in 2017	114,405				
Women					
Gross monthly wage	19,291 CZK	20,066 CZK	26,849 CZK	35,350 CZK	27,187 CZK
Ratio net earnings to gross earnings	83.8%	81.9%	81.9%	80.8%	-
Hypothetical monthly allowance (67% of net wage)	10,836	11,013	14,735	19,138	Mean of the others
Share in parent population	8.9%	14.6%	33.5%	28.7%	14.2%
Men					
Gross monthly wage	23,155 CZK	26,332 CZK	33,800 CZK	48,799 CZK	34,293 CZK
Ratio net earnings to gross earnings	83.8%	82.4%	82.4%	80.2%	-
Hypothetical monthly allowance (67% of net wage)	13,001 CZK	14,530 CZK	18,651 CZK	26,213 CZK	-
Share in parent population	11%	20.5%	20.5%	48%	0%

Source: Own elaboration using data from Czech Statistical Office, "Percentage of employees, time paid and gross monthly earnings by education and by sex",

“Households with working household head by type of household and education”, “Live births by educational attainment of mother and father” and data from Bünning (2015).

Using this approach and assuming that the Czech experience would not differ substantially from the German context, we have calculated that the costs of such an allowance to the state would be around 16,018,000,000 CZK yearly. This comprises of costs on allowance for all children born in 2017 calculated from data in Table 1 and German data on number of months of parental allowance as taken by men and women. The real costs of the parental leave allowance in 2017 in the Czech Republic were equal to 22,983,700,000 CZK (MPSV, 2018). These numbers are comparable given that in the 3 previous calendar years number of live births oscillated by maximum of 5,000 fewer births. If we were to take the effective expenditure on parental allowance a year later, in 2018, to include more information about the children born in 2017, this was higher, by almost 2 billion, because from January 2018 a much higher threshold on monthly parental allowance was introduced. This increase was, therefore, most likely only temporary, given that the total amount that can be drawn has been still the same, so far. The potential amount saved by the reform is thus reaching 7 billion CZK. These figures are summarised in Table 2.

Table 2: Comparison of parental allowance expenditure

Real costs of parental allowance (2017)	22,983,700,000 CZK
Potential costs of parental allowance	16,018,396,629 CZK
Amount potentially saved	6,965,303,371 CZK

3.2 Labour market effects

In this section we will estimate potential labour market effects of the hypothetical reform. We will first focus on the situation of mothers with small children in the labour market and we will analyse the potential increase in their labour supply in response to the reform. Then we will examine potential decrease in labour supply on the fathers’ side, due to their time spent on the leave but also because they are likely to reduce their working hours shortly after the leave.

3.2.1 Effects on mothers

Both Germany and the Czech Republic are slightly above the EU average of rate of women's activity in the labour market, the EU average in 2013 being 79.2% for women aged 25-54, Germany and the Czech Republic 82.4% and 81.9%, respectively (Pertold-Gebická, 2015). However, they differ greatly in activity rates during different stages of women's life. While Germany has a rather stable activity rate of about 80% from 25 to 39 years of age, increasing to 85% at 45 years, the Czech Republic has a sharp contrast between activity of women from 25 to 35 years, 70% and below, and later in their mid-forties, reaching as much as 95%. Even at the end of 2018 the same pattern was observed in both countries. Rates of activity for women from 25 to 54 years were almost the same (82.7% for the Czech Republic and 83.2% for Germany), while the greatest difference was in the category 30 to 34 years (65.1% in the Czech Republic, 80.5% in Germany) (Eurostat, 2019b). In fact, women's labour market participation in their early thirties in the Czech Republic is the lowest among all EU member states (Eurostat, 2019b). This would be very likely changed if the hypothetical reform was introduced, as the shortened length of parental allowance is expected to incite earlier labour returns of women, provided that their job is still protected (without job protection shorter paid leave might induce women to give up their participation in the labour market and depend fully on their spouse).

In Germany, we have seen a significant change in the employment rate of mothers following the reform of the parental leave. A Family Report of The Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (2018) declares a decrease in employment of mothers with the youngest child under 1 year of age, from 14% to 8%, especially pronounced among the part-time workers below 15 hours per week, from 6% to 2% over the period 2006-2015. This might be driven by more generous support from the state after the reform, and so women could fully devote themselves to childcare. Nevertheless, mothers with the youngest child over 1 year of age, i.e. women not entitled to parental allowance, have increased their labour market participation. Mothers with the youngest child aged 1 increased employment from 32% to 43% in total, the increase being split almost equally between minor part-time employment under 20 hour per week, part-time of 20-28 hours, near-full-time employment between 28-36 hours and full-time employment. Finally, the share of mothers with youngest child aged 2 who are employed increased from 41% to 58%, which was driven by an increase in mothers working above

20 hours weekly, minor part-time employment almost did not change. Introduction of this parental allowance in Germany was therefore a success story, the report concludes (Federal Ministry for Family Affairs, Senior Citizens, Women and Youth, 2018).

Bergemann and Riphahn (2010) studied differential employment effects of the reform in Germany. They found more significant effects in the subgroup of women with lower household income or lower personal pre-birth earnings. “For them, both the propensity and the speed of a return to the labor force are higher in the new than in the old regime.” (Bergemann and Riphahn, 2010, p. 6-7). On the other hand, the effect on women with relatively high household income or their own pre-birth earnings is less clear, not statistically significant. This might be also due to the fact, that the allowance was means-tested prior to the reform and therefore a group of the most well-off mothers could not claim the allowance. After the reform the highest income group of women received the parental allowance for the first time. Interestingly, in both regimes, prior to and following the reform, women with higher personal income tend to return faster to the labour market. But comparing the household incomes, it is the women from lower income environment who return faster. This is consistent as women who are provided for by their partners can afford to stay at home longer, even without any allowance.

Let us now focus on the real Czech situation regarding maternal employment. When examining not only women by their age, but specifically mothers by age of their youngest child, we see that the Czech Republic had the third lowest employment rate of mothers with the youngest child aged 0-2 (after Hungary and Slovakia) in 2014 of all OECD countries (OECD, 2016).

The same is true for children from 0 to 4 years. The absolute majority of women with children of up to 3 years of age were on the parental leave in 2013, 98% of mothers with children aged 0-1, 96% with children aged 1-2 and 90% with children aged 2-3. Mothers of 3 to 4-year-olds were on the leave in 64% of the cases (Pertold Gebická, 2015). Pertold-Gebická finds that, in fact, a non-negligible fraction of these women on leave already wish to work – 2.5% in the category 0-1, 6.8% in the category 1-2, 5.3% in the category 2-3 and 6.9% in the category 3-4. It is reported that these rates represented 21,000 women in 2013. Now assuming introduction of the reform, this number would be likely to rise as the general perceptions about the optimal time spent on the leave would necessarily change.

As for the most recent data on employment rates among mothers by the age of their youngest child, the Czech Labour Force Survey microdata from 2015 and 2016 tell us that only 6.5% of mothers with a child aged 1 to 2 were employed, while 92.5% were in the household. Mothers of children aged 2 to 3 were employed in 18.4% of cases, in the household in 79% of cases. We can see that although there has been an increasing trend, the employment rate among Czech mothers with small children is still significantly lower than in Germany prior to the reform. This on one hand signifies that Czech mothers are less accustomed to working while their child has not reached 3 years of age, but on the other hand, there is greater potential for change in this respect.

Regarding potential impact of the hypothetical reform in the Czech Republic, we follow the German case and assume the greatest effect on women with lower income, like Bergemann and Riphahn (2010) observed in Germany. Currently, these women must draw monthly payments the longest in order to draw upon the total 220,000 CZK of parental allowance, as the rules for monthly drawing depend on pre-birth income. Before 2018, low-income women had only one option of timing of the allowance – fixed amount of 7,600 CZK per month until the child's fourth birthday. Now they can finally choose a 3-year-long option. It has been shown in several previous studies (Bičáková and Kalíšková, 2019; Pertold-Gebická, 2019; Mullerová, 2017) that the leave-taking behaviour of Czech women is mostly driven by the period of parental allowance rather than by the duration of job-protected parental leave. Consequently, the low-income women have mostly stayed on parental leave until their child's fourth birthday.

Women with higher incomes have usually collected parental benefits over the period of two to three years, depending on their choice and on their pre-birth income. Only recently those with higher pre-birth earnings were given the opportunity to draw the total allowance faster than until their child's second birthday (this concerns even women with lower than average wage). Unfortunately, there is not enough data for us to assess whether Czech women with high income take advantage of fast collection of parental benefits and return to the labour market well before their child's second birthday. Höhne (2017) reports that in 2015 only 2.9% of Czech mothers stopped drawing allowance under 12 months of age of their child. The reform would therefore alter behaviour of the higher-income mothers too, given that extremely small share of mothers are used to such a short period of parental leave.

We anticipate only positive financial effects to the state budget regarding maternal employment, because the job-protection period would remain unchanged. In the case of the reform, parents could receive some sort of benefit up to 16 months after birth of their child, if both of them take the leave, otherwise 14 months. But parental leave with job protection can be taken for further 20 months, until the child's third birthday. Parents would not face the dilemma of going to work versus taking care of their child and resulting unemployment. When the allowance runs out, the parents can decide to return to work and earn money or they can decide to still stay on leave and rely on the other parent's earnings. Negative employment effects are, therefore, not expected.

Let us finally assess the financial outcomes of the increased employment rate of mothers. We will use the relative changes to employment rate in Germany which occurred after the introduction of the reform and apply them to the Czech employment rates retrieved from the Czech Labour Force Survey. The data from the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (2018) between 2006 and 2011 show that employment of German mothers with youngest child aged 1 rose from 32% to 41%, and that of mothers with youngest child aged 2 rose from 41% to 54% during this period. We will assume the same relative change to the employment rate in the Czech Republic. This would correspond to the increased employment rate of 8.3% in case of mothers with 1-year-old youngest child and rate of 24.2% for mothers with 2-year-old youngest child. We will consider only these two groups in our calculations, although it is likely that there would be positive spill-over effects on other groups, too⁶. This fact makes our calculations more conservative. We will calculate the revenues for the state in form of taxes and social and health insurance.

We will, however, calculate also a second scenario with increased share of employed mothers. The reasoning behind this is following: firstly, before the German reform no women were receiving parental allowance after their child's second birthday, therefore the effect in Germany must have been lower than it could potentially be in the

⁶Groups of mothers with 1 and 2-year-olds are the ones primarily affected as most Czech mothers currently draw parental allowance until their child's third birthday. The new system would allow them to get allowance for 14 months in total and therefore, after this point they might newly return to employment. As for mothers of older children, we also expect some positive changes, especially mothers with 3-year-olds because they are also entitled to allowance under the current setting. Also, in studies dealing with parental allowance reforms in the Czech Republic, Pertold-Gebická (2019) and Bičáková and Kalíšková (2019) find changes in employment rates of mothers with children whose age is higher than the age specified in the reforms.

Czech Republic, where mothers can collect benefits until their child's third or even fourth birthday. Secondly, as we already discussed, there was not a significant change in employment behaviour of high-income women in Germany (the reason for this is especially that they could not claim any allowance before the reform), while in the Czech Republic even women with high income draw the allowance for a very long time. We will therefore calculate financial impacts of a scenario in which the employment rate of mothers with youngest child aged 1 rises to 15% and rate of mothers with youngest child aged 2 rises to 30% (these rates are still much lower than the German pre-reform ones – 32% and 41% respectively).

We will only work with data on mothers as it is them who are anticipated to alter their employment behaviour in this direction and currently they are on the leave in 98% of cases, while fathers only in 2% of cases, as stated above.

We will use wages of the different educational groups of mothers and their share in the parent population as presented in Table 1 in order to calculate the taxes and insurance contributions. We will not differentiate between educational groups (and corresponding wages) in terms of the number of mothers newly returned to employment. We have already discussed that we anticipate this effect on all income groups. Even though Czech women mostly work full-time, in case of introduction of the reform which would dramatically reduce the paid leave we cannot expect their return to employment on full-time. We will, therefore, introduce three scenarios – either all the women returning to employment would work full-time or all of them would work part-time, or, finally, half would work full-time and half part-time until their child's birthday. We multiply the potential change in the employment rate by the revenues from salaries for each educational category, total number of children born and shares of each educational group in the total number of mothers.

In the first, more conservative scenario regarding employment rates, we get three different numbers depending on the time spent at work. Should all the newly employed mothers work full-time, the revenues would be 1,667,644,318 CZK. If all worked part-time, the revenues would be 727,969,755 CZK. Finally, if the ratio was 50:50, the revenues would be 1,197,807,037 CZK. In the second, more optimistic scenario, these figures would be 4,410,480,367 CZK, 1,925,288,432 CZK and 3,167,884,399 CZK respectively. These results are presented also in Table 3.

Table 3: Hypothetical revenues from increased employment of mothers

	100% employed mothers working full-time	100% employed mothers working part-time	50% employed mothers working full-time, 50% part-time
1st employment rate scenario	1,667,644,318 CZK	727,969,755 CZK	1,197,807,037 CZK
2nd employment rate scenario	4,410,480,367 CZK	1,925,288,432 CZK	3,167,884,399 CZK

The 1st employment scenario corresponds with increased employment rates of mothers with 1-year-olds of 8.3% and of mothers with 2-year-olds of 24.2%. The 2nd scenario corresponds with increased rate of 15% and 30% respectively.

Finally, the reform is expected not only to improve employment of mothers with children below 3 years of age, but also to reduce unemployment of mothers with older children. Bičáková and Kalíšková (2015) report that in case of women without upper secondary education with children aged 4-6, the share of unemployed in the population is almost 20%. The authors, furthermore, report that around 60% of mothers with children aged 3 or 4 (i.e. after the job-protection is over) who return from the parental leave to the labour market (59.3% in the former case and even 65.5% in the latter) are unemployed. Therefore, the reform might help tackle this problem given that, firstly, drawing the allowance for 4 years and thus exceeding the protected period would no longer be possible and most likely, the return to the labour market would happen during the protected period.

Also, Bičáková and Kalíšková (2015) state that some mothers, in fact, become unemployed only after having worked for some time. As many as 15% of unemployed mothers of 3-year-olds and almost quarter of mothers of 4-year-olds became unemployed after having worked. This could therefore be attributed to loss of human capital which may occur after such long time spent out of the labour market. Decreasing the length of the paid leave could thus overcome some of these problems. Furthermore, Pertold-Gebická (2019) found that a 2008 reform which allowed Czech mothers to shorten the allowance period below four years increased probability of being employed in a high-skilled occupation for mothers of 7 and 8-year-olds. Shorter periods of parental leave therefore contribute to improvement of mothers' position in the labour market once

returned. However, we will not try to quantify these positive effects as it is beyond the scope of this work.

3.2.2 Fathers' involvement

A crucial change for the Czech parental leave system and childcare in general would be made by the introduction of paid parental leave reserved for fathers which is part of our potential reform. Women are the primary caregivers in Czech families, while men are the breadwinners. We will try to quantify some of the costs linked with daddy months.

Firstly, we will calculate the direct costs linked with the loss of taxes and insurance contributions for the time spent on leave. We will restrict our calculations to the fathers who hypothetically spend 2 months on leave. We assume that if fathers spend more months on leave, then it is because the mother is working. This is compatible with present patterns, we assume that fathers would take the 2 months to take advantage of the “bonus” money. We, again, use the data from Table 1 and the number of fathers hypothetically on leave. This number is based on the proportion of fathers who took the leave in Germany in 2009, the third year after the reform. This proportion was 17% of fathers, but this rate has been slowly increasing since then (Statistisches Bundesamt, 2019). We get that for the 17% of fathers who would spend 2 months the state would lose 883,282,907 CZK on taxes and health and social insurance yearly.

Secondly, we will calculate the costs of potential decrease in hours worked by fathers within one year following parental leave. Bünning (2015) analysed effect of the reform in Germany on time allocation of fathers. She examined those fathers who did and who did not take the leave and how it affected their working hours and time spent on childcare and housework. She found that after taking the leave, fathers reallocate their time from work to take care of children. Effects on housework were identified only after taking longer leave or taking it alone, when the mother was working. While the effects on time spent on childcare and housework were found to persist over time, the effect of reduced working hours became insignificant after the first year. We will, therefore, assume such change in labour behaviour only within one year.

We will use the findings of Bünning (2015) to calculate the potential costs of the reduced working hours of fathers within one year following the leave. We will calculate the lost taxes and contributions. The author finds that on average fathers worked 4 hours

less weekly after taking at least one month of the leave. Using mean hourly wages of men by educational attainment from 2014 (Eurostat, 2018) and inflation rates from 2015 to 2017 (ČSÚ, 2019d), we calculate the lost tax and contributions monthly for each educational level. Multiplying the total amount of fathers in each educational category who are estimated to take at least one month of the leave by the lost state revenues, we get the total costs of this effect to the public budget. For the 4h decrease we get about 920 million CZK of lost revenues to the state budget annually.

3.3 *Childcare provision*

All the above effects related to mothers' increased participation in the labour market, however, depend on whether mothers will have someone to take care of their children. Currently, there is highly limited supply of public childcare for children younger than two. Public childcare for children between two and six years of care is, theoretically, universal, but still undersupply is observed in many Czech regions. As it is impossible to separate potential increase in employment of mothers from provision of public childcare, increasing expenditure on nursery schools and kindergartens presents imperative costs of the reform. Mothers cannot be expected to return to the labour market if there is not appropriate offer of childcare services.

The Czech Republic has seen excess demand for places in kindergartens. Even though the demographic movements suggest that gradually supply and demand will even out, in some areas excess demand is predicted to persist, especially in densely populated areas, due to internal migration and other demographic changes (Pertold-Gebická 2015; Kalíšková, Münich and Pertold 2016). In 2011, Pertold-Gebická reports, number of children aged 3-6 exceeded number of places in public kindergartens by more than 20,000 (there were over 340,000 places in kindergartens), not counting 2-year-olds, whose admission is also permitted. Data for 2017 show that the excess demand was reduced to 5,000 (ČSÚ, 2019b; ČSÚ, 2019c) in total for the whole country.

It is clear that even without the reform the situation in Czech public childcare is problematic and increase in number of places available would be strongly advisable. A great challenge would, however, be also on the institutional level. Nursery schools for children under 2 years of age ("jesle") are not within responsibility of any ministry nowadays. They used to be part of programme of the Ministry of Health, but now they are stipulated solely by the law on children's groups or they can be operated as licensed

trade. They are often run by the municipality, but parents usually pay for the service anyway, the prices range from 1,000 to 4,000 CZK per month (Heroldová, 2016). But even more importantly, the system of nursery schools is comprised only of tens of schools in the whole country. The Czech Republic had actually the absolute highest share of children aged 0-3 not attending childcare in 2012 among all EU member states (Pertold-Gebická, 2015). In 2016 the Ministry of Labour and Social Affairs launched a project of “mikrojesle”, childcare service for small groups of maximum 4 children. Currently there are over 70 centres, therefore it presents only a very minor supply of places. The project is going to finish in 2020 and the government will draw conclusions from this experience, in order to elaborate a complex legislation regarding childcare services in small groups. Evidently, along with financial costs of provision of nursery care, the state would have to invest a lot of effort in legislative and institutional arrangements.

3.3.1 Calculation of impact of childcare provision

Given that increased support of nursery care is complementary to the reform, we will calculate the net costs of provision of places for children of the potentially newly working mothers, as we have quantified in one of the preceding sections, in nursery schools to assess whether such measures would be loss making to the Czech public finance.

As for individual costs of childcare, Kalíšková, Münich and Pertold (2016) report that yearly costs of placing one child in kindergarten were 55,767 CZK in 2014. As for nursery schools, the costs are much higher. Šímová (2014) reports that on average monthly costs for one child are 13,000 CZK, therefore 156,000 CZK yearly. We will work with the costs of nursery schools due to the age group of children.

We focus on children aged 1 and 2, because we assume the greatest effect on mothers with children in these two age groups. Employment rate of mothers with younger children is assumed to remain unchanged, as mothers would receive maternity and parental allowance for 14 months altogether, and therefore we do not assume increased demand for places in nursery schools from this group. Concerning children over 3, we do assume increased demand for childcare, yet at this age kindergartens are obliged by law to admit these children. Moreover, results of the study of Kalíšková, Münich and Pertold

(2016) are that revenues from every single extra place for one child stemming from possible employment of mothers exceed the costs.

Our assumption is that all the mothers who would newly return to employment would place their children in state nursery schools, in order to get the most conservative results. It is likely that a large share of women would benefit from provision of care of their child by grandparents, others might choose care by nannies or even private nurseries. In addition, parents usually contribute financially, monthly up to 4,000 CZK as was stated above. Therefore, the costs to the state would be most probably lower. However, this would depend on the institutional setting, it is likely that once complex legislative solution for nursery care were introduced, then all the costs might be funded by the state. On the other hand, if nursery care was provided on a larger scale, then the costs per child might drop. Altogether, the yearly costs of 156,000 CZK per child are probably higher than in reality. Furthermore, even children aged 2 can be admitted in kindergartens where the costs per one child are much lower. Provision of daily care could therefore be much cheaper. Nevertheless, given the very low number of nursery schools in the Czech Republic, alongside the legislative efforts there would be great fixed costs of establishing, building new nurseries. As such calculations are beyond the scope of this work, we will simply consider the highest possible running costs of childcare, therefore 156,000 CZK per child yearly.

3.4 Net costs to the state budget in total

In this section we will combine all the above potential costs and revenues to find the total effect of the hypothetical reform on the state budget. These comprise of the reduced costs of parental allowance, revenues resulting from increased employment rate of mothers with children aged between one and three, the lost revenues of fathers' taxes and insurance contributions and finally the costs of provision of childcare.

For employment rates of mothers, we introduced two different scenarios, one simulating the outcomes in Germany, one taking into account the differences between Germany prior to the reform and the Czech Republic today. In the former case, the employment rates are 8.3% for mothers of 1-year-olds and 24.2% for mothers of two-year-olds. In the latter case, we introduced rates of 15% and 30% respectively. These were further differentiated by assumed number of hours the mothers would work weekly. First, all the mothers newly returned to the labour market were assumed to work full time,

second all part-time, and finally half full-time, half part-time. For all of these we find, in fact, positive outcomes for the state budget.

We present all the possible amounts of revenues to the state budget in different scenarios in Table 4.

Table 4 Net revenues from the reform to the state budget in total

	100% employed mothers working full-time	100% employed mothers working part-time	50% employed mothers working full-time, 50% part-time
1st employment rate scenario (5,472,012,032 CZK	4,532,337,470 CZK	5,002,174,751 CZK
2nd employment rate scenario	5,983,950,581 CZK	3,498,758,646 CZK	4,741,354,614 CZK

The 1st employment scenario corresponds with increased employment rates of mothers with 1-year-olds of 8.3% and of mothers with 2-year-olds of 24.2%. The 2nd scenario corresponds with increased rate of 15% and 30% respectively.

The financial outcomes of the reform are therefore strictly positive, even when childcare is taken into account. Places in nursery schools are not a compulsory part of the reform, yet the positive effects can only be expected when sufficient supply of childcare is provided. The costs of nursery care are very high, the real costs of one place in nursery school might even be lower in reality, yet the total outcome of the reform is positive on the public finance reaching up to 6 billion CZK in the most optimistic scenario.

3.5 Other effects

In this chapter we will briefly discuss other than labour market effects which could follow the hypothetical reform.

Firstly, let us consider effects on the child. As for their health, the most important period is up to 6 months after birth when exclusive breastfeeding decreases child's risk of various diseases, especially ear, respiratory and gastrointestinal infections (Victora et al., 2016). In this respect, the reform should not impact children's health negatively, because even after the reform mothers would still be entitled to 14 months of paid leave in total. Another crucial condition for healthy development of the child is the bond

between parents and child and a stable home environment, especially in the first 4 to 6 months (Raub et al., 2018). Again, these conditions would be ensured by the reform.

On the other hand, the Czech social norms are very strict in this respect, Saxonberg (2012) treats the concept of threeness and its importance in Czech society, as was already stated above. It is generally believed that parental care is the sole best manner of childcare until the child is 3 years old. However, Huebener, Kuehnle, and Spiess (2017) studied effects of the German 2007 reform on children. They found zero impact on children's language or motor skills, nor on socio-emotional stability. It can be concluded that such reform would not present a threat to child development, as some advocates of long parental leave believe.

Secondly, we need to look at possible effects of the reform on fathers who would be actively encouraged to participate in childcare under the new system. This would also impact mothers, as households would be facing new circumstances. Objective of the so-called daddy months is not only to strengthen the bond between the father and the child, but also to promote gender equality in couples. The bond acquired during the time spent on leave may induce fathers to be more involved in childcare later and thus shift the division of roles in families to a more equal one. Bünning (2015) found that after taking leave, fathers reallocated their time from work to childcare, some of them even increased time spent on housework. The author lists many other benefits of fathers' leave-taking and their increased participation in general. For children, it is related with greater cognitive competences, increased empathy and fewer behavioural problems. For fathers, it means happier marriages or greater participation in their communities. We will not attempt to quantify these benefits, nor explore them in depth. They are, nevertheless, highly important and it is crucial to bear them in mind when assessing desirability of such a reform, or a different one which includes reserved paid leave for fathers.

Interestingly, the effect on gender equality is not as straightforward as we could think. Maříková (2012) studied families where the father took care of the child during parental leave and how this experience changed positions of the respective parties in the household. The author focuses on gender concepts within the family. She finds that while the man's dominance in the family as a whole is weakened by creating a bond between him and the child, dominance towards the woman persists. In the sphere of housework and leisure, it is still the father who gets to have much more freedom of choice. Childcare taken by fathers is then redefined as a male activity, manageable by fathers, yet

dispositions of female caregiving are not redefined, still perceived as differing from those of caregiving performed by fathers. Furthermore, evaluation of others often ends up negative in case of women. While fathers taking leave are more and more legitimised and praised, women leaving their children and returning to work early are still rather criticised. It shows an inclination towards overvalue men and undervalue women when performing the same activity. However, the findings stem from the context of singularity of fathers' leave-taking. The author describes how the feeling of uniqueness increases fathers' esteem of their activity. Should leave-taking become the norm for fathers, even these perceptions might change. Finally, introducing the daddy months on use-it-or-lose-it basis is probably the most the state can do to promote gender equality in couples whilst not restricting their freedom.

We can conclude that even the part of the reform concerning potentially newly institutionalised father-specific parental leave has its benefits exceeding its costs, even budget-wise. Potential of introduction of the daddy months in the sphere of gender equality is significant and the Czech Republic with its status of male-breadwinner-promoting welfare state and gendered familialism might reorient its position.

Overall, our analysis reveals that there is great potential of the reform regarding revenues for the state budget. If the government approached the issue responsibly and tackled all spheres related to parental leave, the Czech Republic could see increased revenues of the state budget, but even more importantly maternal employment and gender equality. Otherwise the shortened period of parental allowance might simply lead to inactivity of the mother and reinforcement of breadwinner role of the father.

The major challenge, as was already stated above, would be to carry out complex reform of nursery care. Municipalities have currently no obligation to set up nursery schools (Šímová 2014). Another problem is, as Kalíšková, Münich and Pertold (2016) point out, that municipalities are required to cover the costs related to provision of childcare and early education, but they do not enjoy the benefits and it is thus difficult to respond to incentives and try to equilibrate the opposing forces.

4. Problematic aspects of introduction of the reform

Even though we have found that shortening the length of drawing parental allowance in the Czech Republic would ease the public finance, would most likely improve the situation of mothers in the labour market or promote gender equality, enforcement of such a reform is only hardly imaginable here.

As we outlined in the literature review, Czech social norms are very strict in the matter of early childcare. Saxonberg (2012) examines in detail how the “magical” age of three shapes public opinions on the one hand, and governmental policies on the other. The poorly-managed nurseries of the communist regime have brought forth the general belief that children should stay with their mothers until 3 years of age. Nurseries came under the competence of Ministry of Health, they were not treated as educational institutions, the main objective was to keep the children healthy while they were kept in large groups (in contrast to pedagogical conventions) where diseases spread much more easily. Both the public and the politicians hold this view. Tomešová Bartáková (2009) claims that most of contemporary research finds that personal childcare by women is the most preferred strategy for most of the Czech population up to 3 years of age of the child. As for the governments, she mentions an official stance of the Ministry of Health from 2004 that the state should not support nursery schools because it is better for children below four to be taken care of by their parent or someone else in their home. The author then distinguishes a certain boundary of 2 years under which mothers, regardless of educational level, prefer to take care of their children themselves. In this context the suggested reform seems rather radical. Let us remind that Germany had, prior to the reform, paid parental leave only until 2 years of age of the child, the new 14 months in total for mother, combining maternity and parental leave, was not therefore such a shock.

Another problem is definitely the low availability of part-time jobs in the Czech Republic. Kalíšková and Münich (2012) attribute the big drops in employment of women with children exactly to the low offer of flexible employment schemes by employers and to insufficient public provision of childcare. Allowing women to combine maternity and work more freely would be another institutional challenge for Czech legislators. Nevertheless, this presents an obstacle to adopting the German model in the Czech Republic. There is a risk that mothers facing these difficulties would stay at home after the end of paid leave and fathers would reinforce their position as the breadwinners in the family.

Even Germany introduced a few years after the reform a second option of drawing the parental allowance, as we mentioned above. From 2015 parents have the possibility to double the duration of the leave whilst receiving half the money each month. The so-called Elterngeld Plus is, however, aimed at parents who wish to work part-time during the leave and to be able to spread their revenues evenly in a longer period of time.

Let us add that Czech politicians and various professionals took a negative stand against the OECD recommendation on parental leave. Politicians across the political spectrum expressed worries about suitability of institutionalised care for children below 3 years and pointed out insufficiency of places in kindergartens for even older children. (Břešťan and Pravec, 2014, March 20)

We can conclude that the reform, although promising financially and aspiring to improve women's status in the society and households, too, is not exactly viable in the Czech context due to the persisting strong social norms.

4.1 Alternative scenario

In light of the previous findings we will carry out a financial analysis of a milder version of the parental leave reform. In line with the findings of Tomešová Bartáková (2009) about the natural boundary of 2 years of age of the child, we will change the layout of the allowance, so that parents could be taking care of their children up to their second birthday. This alternative is based on the German model regarding its calculation based on net earnings. We have decided to determine the monthly allowance by multiplying net wages by 50%. This means a decrease compared to the baseline scenario, although not proportionate to the increase in the length of allowance collection. Decreasing the ratio of the allowance to net earnings below one half would be too severe in our opinion. Currently mothers with average wage can get up to 91% of their net wage monthly, for other levels this ratio is smaller but does not go below 60% (MPSV, 2017)⁷. To reach the desired length of the leave combined with maternity leave, we will use a setting of 16 months for one parent at maximum and 3 months of a bonus if the other parent takes the leave. Using, again, the data on length of the leave as taken by men and women and adjusting them to fit the “16+3” version and finally applying the shares of mothers of new-borns in the Czech Republic with different educational levels, while for fathers we

⁷ But until 2018 the monthly thresholds for parental allowance were much lower and most mothers drew the total amount 220,000 CZK until between their child's second and third birthday.

apply the German shares, and their average wages, we get the total amount of about 19,270,000,000 CZK per year that would be spent on the allowance, using data on children born in 2017. We also need to consider the lost taxes and insurance contributions from the 3 months fathers would take the leave. These amount to 1,324,924,360 CZK per year. Compared to the actual amount of 22,983,700,000 CZK spent in 2017 on parental allowance, this means about 3,713,700,000 CZK saved. These figures are summarised in Table 5.

Table 5: Net revenues from the alternative reform to the state budget in total

Real costs of parental allowance (2017)	22,983,700,000 CZK
Potential costs of parental allowance	19,270,176,738 CZK
Lost revenues due to fathers' leave	1,324,924,360 CZK
Total amount saved	2,388,598,902 CZK

We will refrain from drawing any conclusions about a potential decrease in working hours of fathers following their leave. Neither will we assume specific employment rates as this scenario of the reform is not based on any real experience. We can only contemplate the marginal effects of employment of mothers and childcare provision. In this scenario, parents could draw the allowance until their child's second birthday. After this, children can officially be admitted to kindergartens. We can therefore use the results of Kalíšková, Münich and Pertold (2016) who examined net costs of provision of one additional place in kindergartens. Using two different methods, they found that revenues from potential employment of the mother (subject to a probability rate) exceed the costs of provision of one place in the kindergarten⁸. We can therefore conclude that should parents decide to place their child in a public kindergarten after the end of allowance, this would not affect negatively total amount saved by the reform.

Altogether, financial impact on the state budget of such a reform would be positive. The discussed scenario provides a more moderate version of the reform which is more compatible with the customs and institutional settings in the Czech Republic. Important aspects of the reform are preserved, fathers would be still incentivised to

⁸ Only in one of the 6 scenarios, in the most conservative one, the costs exceeded revenues, but this amounted to only less than 2,500 CZK yearly.

participate in childcare, while mothers could potentially return to employment faster than in the current situation without compromising their values regarding childcare.

Conclusion

The issue of parental leave is of non-negligible importance in the matter of combining family and work and also regarding gender equality. Although the Czech arrangement is rather exceptional, especially by its length which is far beyond the recommendations of international scholars, Czech politicians are very reluctant to commit to a reform which would promote mothers' participation in the labour market. Our thesis focused on recommendations made to the Czech Republic by the OECD (2014) according to which the total length of the leave should be reduced to about one year and fathers should be actively encouraged to participate in the leave by reserving a certain share of the parental allowance to them. For our purposes, this was to be attained by implementing the German parental leave scheme, which was introduced in 2007.

We found that financially, the reform would be profitable, even under the most conservative assumptions. First, we obtained the direct costs of the parental allowance if reformed. The amount saved compared to the current expenditure is significant. Almost 7 billion CZK could be saved from almost 23 billion which were spent on parental allowance in 2017. Then we examined the possible revenues from increased employment rate of mothers with children aged 1 and 2, considering different schemes of their employment behaviour. We also considered the lost revenues from taxes and insurance contributions resulting from the changes in work behaviour of fathers, both direct and indirect. Finally, we added the costs of provision of childcare for children under 3 years of age, which are an imperative complement of the reform and must be taken into account. We concluded that even though nursery care for younger children is substantially more expensive than kindergartens, the positive difference between spending on the current layout of parental allowance and the suggested one combined with the revenues resulting from mothers' return to employment would exceed the costs linked with fathers' participation and provision of childcare in nurseries.

Apart from the increased employment rate of mothers with small children, we expect improvement of mothers' situation once back in the labour market. The negative effects of long leave from the labour market would be suppressed by the reform which could positively affect women's occupational allocation and consequently their wages and reduce unemployment which often follows return from the leave.

If we were to assume the adverse effect on mothers with children aged 1 or 2 years, i.e. they would stay at home even without the allowance and the fathers would strengthen their role as breadwinners, maternal employment would thus remain unaffected compared to the current situation. The only possible deterioration would thus occur in the sphere of gender equality. Furthermore, if such a scenario became reality, we can expect that mothers would time their return to employment in accordance with the end of the protected period of 3 years, therefore the problem of exceeding this period due to drawing of parental allowance and subsequent unemployment would be eliminated.

Despite all the benefits that we distinguished, we concluded that introduction of the reform we analysed is rather unrealistic in the Czech context. Social norms preferring a caring mother of a child under 3 to a working mother prevail both in Czech society and Czech politics. Therefore, we proceeded to analyse an alternative scheme, longer than that recommended by the OECD. We based it on the German model, but we extended it, so that in total the parents could stay at home with their child for 2 years. We discovered that even this scenario would ease the state budget, while offering the above-stated benefits to some extent.

The current system of parental leave in the Czech Republic offers a lot of space for amendment, although likely the greatest problem is the lack of provision of childcare, especially for children younger than 3. While the tendency of Czech legislators regarding parental leave is to provide more and more flexibility, in childcare rigidity prevails and therefore only some families can actually afford to benefit from the flexibility of the parental leave scheme. Stipulating nursery schools by the law is probably the greatest challenge that the Czech Republic needs to face, and future research might focus on that.

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List of appendices

Appendix A: Parental allowance periods

Appendix A

Germany data from 2007			Hypothetical Czech data 9+2 scenario			Hypothetical Czech data 16+3 scenario		
Months	Men	Women	Months	Men	Women	Months	Men	Women
1	422	283	1	76	50	1	36	32
2	114252	5416	2	20449	950	2	19652	621
3	5577	2444	3	998	429	3	480	280
4	4072	2475	4	729	434	4	516	467
5	2604	2302	5	653	649	5	467	284
6	3647	3702	6	516	751	6	299	264
7	2885	4283	7	383	1732	7	418	425
8	1855	4865	8	513	1968	8	592	486
9	1507	4829	9	2020	98968	9	331	491
10	2142	9877	10	1	48	10	213	558
11	2864	11223	11	4	2542	11	173	554
12	11284	564439				12	358	801
13	6	273				13	246	849
14	24	14495				14	328	965
						15	1294	1815
						16	934	97086
						17	1	23
						18	2	1247
						19	3	1270