Evaluating Local-Level Pronatalist Policies: Assessing the Impact of Stay-at-Home Allowances on Fertility in the City of Zagreb

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Introduction and context

In recent decades, pronatalist cash incentives have become almost universally adopted in cities and municipalities in Croatia. These policies, usually implemented as one-time payments or extended monthly allowances to boost childbearing, are usually presented as a response to depopulation issues faced by many cities and municipalities.

However, Croatia's capital city, Zagreb, stands out from this demographic pattern. Unlike numerous other regions of the country, Zagreb has not faced pronounced depopulation. Nonetheless, the recent implementation of a pronatalist measure akin to cash-for-care in Zagreb presents an intriguing and unprecedented case study among European capital cities.

In August 2016, the Zagreb City Assembly introduced an unconventional and exceptionally rare pronatalist incentive as part of the former Mayor's political agenda. This policy was designed to increase the city's birth rate and alleviate the burden on Zagreb's preschool programs, which were experiencing high demand. Under this policy, the 'mother-caregiver' concept was introduced, providing monthly salary to all mothers with three or more children who were unemployed at the time of application and remained continuously unemployed while receiving financial assistance. Eligible applicants had to meet specific criteria, including Croatian citizenship, uninterrupted residence in Zagreb for at least five years before applying, a household with a minimum of three co-residing children, with the youngest being of preschool age, and none of the preschool-aged children being enrolled in city-subsidized early childhood education and care facilities. In response to criticism about gender inequality, a policy adjustment was quickly implemented in October 2016. The initial 'mother-caregiver' label was substituted with the more gender neutral 'parent-caregiver', making fathers eligible under the same stringent criteria as applied to mothers.

Upon achieving the 'parent-caregiver' status, available to stay-at-home parents, mothers or fathers became eligible for a significant monthly allowance equal to 65% of Zagreb's average gross wage. This financial aid offered significant support to parents, and notably, these monthly allowances were intended to continue until the youngest child in the household reached the age of 15.

The implementation of these unconventional policy modifications had a remarkable impact on the utilisation of public nurseries and kindergartens. Between September 2016 and December 2019, parents eligible for the 'parent-caregiver' status chose to withdraw a total of 3,108 children from public childcare facilities. This made up almost 10% of all preschool children enrolled just before the policy began. The sudden increase surpassed earlier expectations and strained the city's budget. Because of this unanticipated demand and budget constraints, the new city government stopped accepting new participants into the 'parent-caregiver' programme starting from September 2021.

The cash-for-care allowance in Croatia has been the subject of ongoing political debate since its inception in 2016. It has drawn criticism for reinforcing traditional gender roles, similar to another measure that was attempted at the state level in the 1990s[1]. By primarily encouraging mothers to remain at home, it might have weakened their ties to the labour market. This is why, as it has been predominantly used by women, it has sparked concerns about increased domestic responsibilities, diminished retirement benefits, and the exacerbation of gender wage disparities, among other possible implications. Another possible negative consequence is related to the exclusion of children from early and preschool education programmes. These programmes play a pivotal role in improving educational outcomes at higher educational levels, equalising opportunities for all children, and combating societal disparities and poverty.

Cash-for-care incentives and fertility

Research on the effects of cash-for-care incentives on fertility remains limited. In their comprehensive systematic review of the literature examining the impact of policies on fertility patterns since 1970, Bergsvik et al (2021) suggest that the influence of cash transfer policies on fertility tends to exhibit a transitory nature. This

[1] This measure in Zagreb represents a modified version of a measure from the 1996 National Program for Demographic Development, which was adopted by the Croatian Parliament but was never implemented.

implies that the effects of such policies on birth rates are not lasting and may diminish over time. Existing studies suggest that monetary incentives have a stronger effect on higher-order births. This could be because as the family size increases, the additional cost of having another child decreases, possibly due to economies of scale within the family. In Hungary, child-related benefits increased second and third births (Gábos et al, 2009). In Quebec, cash benefits strongly influenced third- or higher-order births (Milligan, 2005). Australian studies found larger effects for the 'baby bonus' on further childbearing among lower income groups (Drago et al, 2011). When considering the timing of fertility decisions, pronatalist incentives appear to have a relatively limited impact on women who are already in the process of having their third or higher-parity children. This is because this demographic group typically exhibits a tendency to begin childbearing at an earlier age and displays a stronger inclination toward family-orientated lifestyles (Sobotka 2003).

According to Becker (1991), women with lower income and education levels are more inclined to have more children, given the lower direct and opportunity costs associated with child-rearing. In contrast, women with higher education and well-paid jobs tend to have fewer children due to increased costs in terms of career prospects. On the other hand, people with limited job prospects or those already unemployed tend to prefer financial assistance through the home care allowance rather than using day care services. Additionally, mothers are more inclined to use the cash-for-care allowance when they have poorly paid jobs.

During the 1990s, both Finland and Norway promoted private childcare solutions through a home care allowance in Finland and cash-for-care incentives in Norway. Much of the research on child home care allowance and its impact on fertility comes from Norway, where it is known as the cash-for-care benefit. Aassve and Lappegård (2009), using official registers, found that mothers with lower education and income levels are more likely to use this benefit. It is linked to the timing of having a second child within two years after the first. Lappegård (2010), also using Norwegian data, emphasises the positive effect on third births.

In the Finnish context, Ilmakunnas (1997) observed that a mother's potential earnings played a significant role in shaping her choice of childcare during the early 1990s. Lower earning potential was associated with a higher likelihood of mothers opting to stay at home with their children. Furthermore, Ilmakunnas (1997) found that an increase in the home care allowance heightened the probability of mothers choosing home care over public childcare. Using the allowance enables parents and especially mothers to prolong their absence from the labour market or exit from the low-paid jobs. The economic repercussions of opting for the stay-at-home allowance over employment are less significant for mothers with lower earnings and education, both in terms of current and future income. Given that the allowance represents a more substantial proportion of income for women with lower education and income, they are expected to have a higher likelihood of using it.

In 1993, in response to increasing labour market uncertainties and rising poverty among large families, the government in Hungary introduced child-rearing support, known as GYET. GYET offered a monthly basic income to families with stay-at-home mothers and with at least three children, provided from the child's third to eighth birthday. Initially, GYET amounted to 39% of the average woman's salary, reducing to 33% in the early 2000s. It was initially available to parents with previous employment (social insurance), and starting from June 1995, it became income-tested, although this had little impact due to low wages. In 1999, the social insurance requirement was removed, leading to a slight increase in potential recipients. The programme served as an alternative to both employment and unemployment during economic challenges, reflected in its common name: stay-at-home motherhood probably encouraged parents with lower socioeconomic status to have additional children (Spéder, Murinkó, & Oláh 2019).

However, it is essential to acknowledge that these generous financial incentives often possess a short-lived existence, and their future sustainability remains uncertain, especially during periods characterised by fiscal austerity (Spéder, 2016). Despite their potentially transient nature, these incentives can still have a notable influence on fertility patterns, even among those with higher parity, generating what are referred to as 'tempo effects'. These tempo effects signify a temporary alteration in the timing of childbirth, which can have implications for overall fertility rates within a population.

Research questions and data

This study explores the relationship between fertility and a specific pronatalist policy involving cash transfers, which encourages women to opt for domestic roles rather than active participation in the labour market. We specifically aim to explore the extent to which the use of the home care allowance influences overall fertility rates. Did the utilisation of the stay-at-home allowance have an impact on the timing of third- and higher-

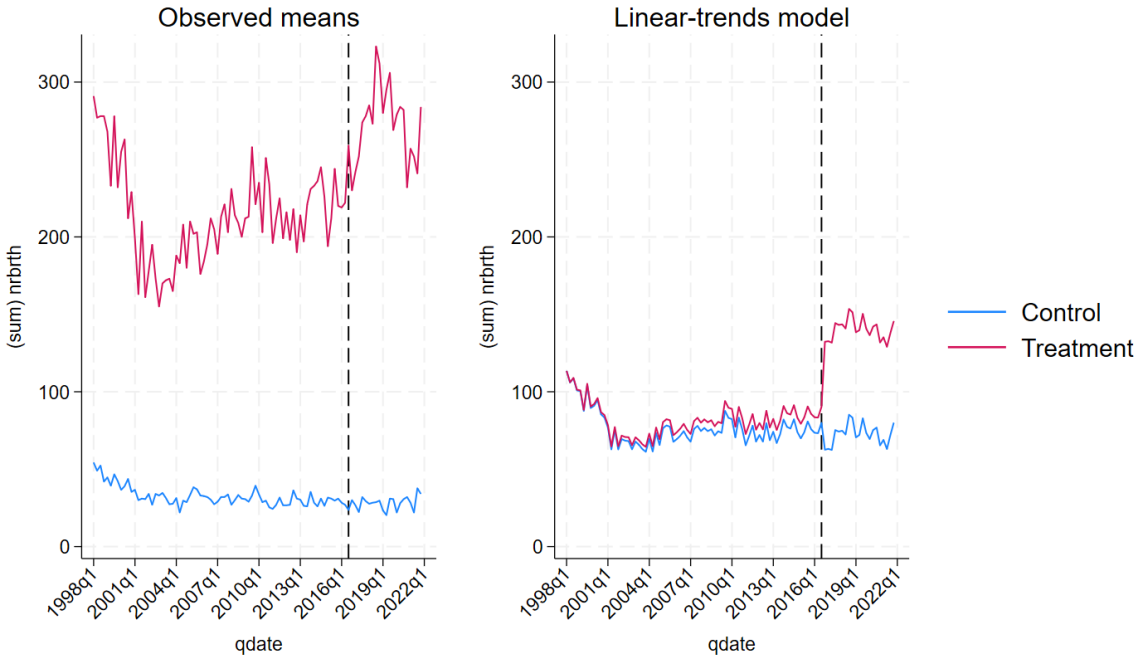
order births? And can a causal link be established between the use of the stay-at-home allowance and fertility outcomes, such as increased risk and the accelerated timing of higher-order births? Hence, this paper adds to the body of scarce research concerning the association between a 'cash-for-care' policy, frequently referenced as such in the literature, and its influence on both fertility rates and the timing of fertility decisions.

In our analysis, we utilise individual-level (vital statistics) data spanning the period from 1998 to 2021, pertaining to all births occurring in Zagreb, along with three other major cities in Croatia: Split, Rijeka, and Osijek. Notably, this dataset lacks an indicator on parent-caregiver status for mothers and fathers of children born in Zagreb after the policy introduction. Furthermore, the dataset does not provide longitudinal tracking of individuals over time, except for a linked dataset beginning in 2016, coinciding with the year of policy implementation. This dataset encompasses information regarding the child's sex, month and year of birth, place of birth, birth order, marital status of the parents, month and year of marriage, age, educational attainment, and the activity status of both mothers and fathers.

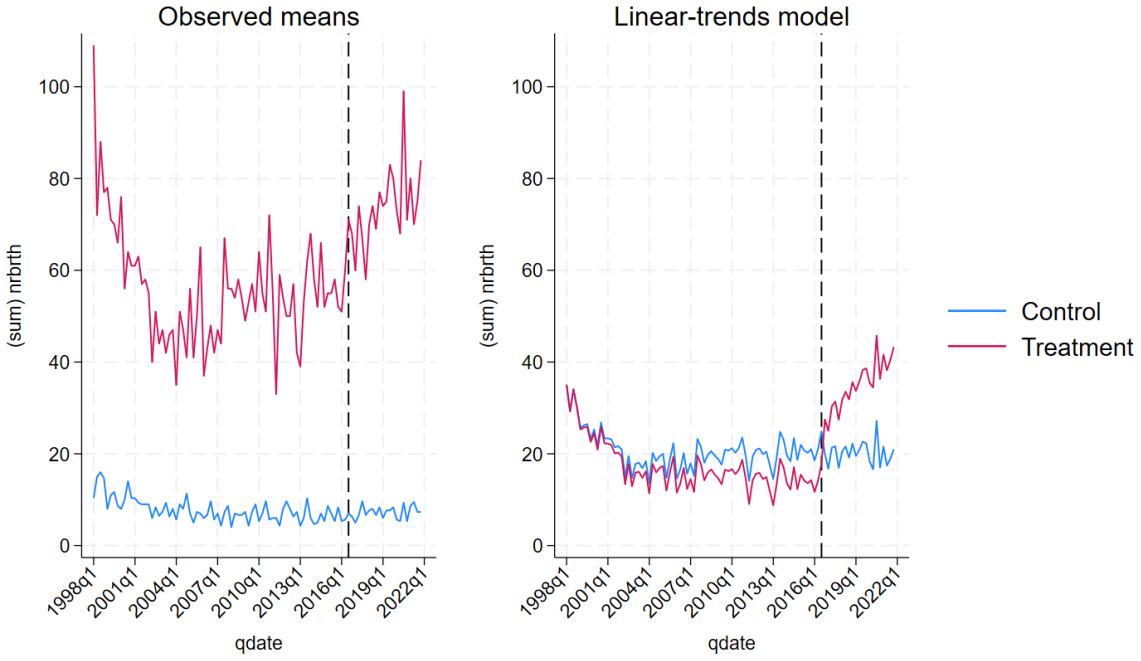
First results

For the purpose of an initial exploratory analysis aimed at gaining preliminary insights into the policy's effects, we adopt a difference-in-differences (DiD) approach, utilising the absolute quarterly number of births by birth order due to the current unavailability of the city-level fertility rates[2]. Mothers eligible for the 'parent-caregiver' status in Zagreb constitute the treatment group, while mothers from the other three largest Croatian cities form the control group. We delineate the pre-policy period (before 2016) and the post-policy period (after 2016), followed by an assessment of changes in the number of births by birth order within both the treatment and control groups during these periods. Essentially, the models estimate the effect of Zagreb's policy on the number of births and provide the effects of the policy itself rather than the effect of being a paid caregiver.

Our initial findings reveal significant variations in the number of third-order births (the first graph) and fourth-order births (the second graph) within the treatment group compared to the control group. If the City of Zagreb that implemented the policy had not done so, the number of third- and fourth-order births would be significantly lower, on average. The graphs also seem to indicate that the parallel-trends assumption is satisfied (this is also confirmed by a statistical test): prior to the policy implementation, treated and control cities followed a parallel path.



[2] These will become available at the beginning of 2024.



With more data available in the coming months, we will broaden our analysis (to assess the impact of Zagreb's policy on both fertility rates and the timing of fertility decisions) and conduct sensitivity checks to mitigate data limitations, aiming to ensure the robustness of our findings. Furthermore, we intend to investigate alternative analytical methods to estimate policy effects, potentially leveraging micro-level data.

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