THE SOCIAL AND ECONOMIC EFFECTS OF COVID-19 ON CHILDREN IN NORTH MACEDONIA: AN UPDATE

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ABBREVIATIONS

BDE	Bureau for the Development of Education
COVID-19	coronavirus disease of 2019
CSW	Center for Social Work
EBRD	European Bank for Reconstruction and Development
ESA	Employment Service Agency
EU	European Union
EUR	Euro
HIF	Health Insurance Fund
ICT	information and communication technology
ILO	International Labour Organization
IPH	Institute of Public Health
GDP	gross domestic product
GMA	Guaranteed Minimum Assistance
LFS	Labor Force Survey
MICS	Multiple Indicator Cluster Survey
MK-MOD	Tax and Benefit Microsimulation Model for North Macedonia
MKD	Macedonian denar
MoLSP	Ministry of Labor and Social Policy
MoES	Ministry of Education and Science
MoH	Ministry of Health
OECD	Organisation for Economic Co-operation and Development
PPP	Purchasing power parity
SARS-CoV-2	Severe acute respiratory syndrome coronavirus 2
SEI	State Educational Inspectorate
SILC	Survey on Income and Living Conditions
SSO	State Statistical Office
TBI	Temporary Basic Income
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VET	Vocational education and training
WHO	World Health Organization

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KEY FINDINGS

1. Despite not being designed to specifically target children, all key government measures to combat the socio-economic consequences of COVID-19 in North Macedonia have been pro-children, i.e., allocating proportionally more funds to households with children. The only exception was the one-off financial support of December 2020. **Section 2.1**

2. The expansion of the guaranteed minimum assistance (GMA) has been most pro-children, despite having being claimed by only 73 percent of the estimated number of people eligible to take advantage of the measure. The underutilization indicates that some of the potential beneficiaries may have been unaware of the relaxation of the eligibility criteria during the pandemic. The number of new GMA beneficiary households with children grew more than the number of beneficiaries without children. It is noteworthy that December 2020 amendments to the Social Protection Law have introduced certain elements of embedded shock responsiveness into the system, including the automatic relaxation of eligibility criteria for GMA in emergency situations. **Section 2.1 Section 3.2**

3. Only few of the cash benefit measures in the Government's response have directly targeted children. Mainly, pupils (16–17) benefited directly from the May 2020 general one-off financial support and another one-off measure supporting the purchase of school materials. **Section 2.1**

4. Government spending on children increased during the pandemic, but at a rate lower than the increase of the total government expenditure. This is, among other things, a reflection of the lack of specifically child-focused COVID-19 measures with fiscal implications. **Section 2.2**

5. Distance learning increased the financial burden on schools due to the need for computers, internet connections, software support, which were not fully covered with the modest financial resources allocated through block grants. It is likely that donations in education were crucial to enabling schools to continue the delivery of teaching and learning services during the pandemic restrictions. **Section 2.2**

6. Funds allocated to programs for children in 2021 are almost identical to 2020 expenditure. Positive developments include the increased funds for investments in primary education and for the regional Vocational Educational Training Centers. At the same time, reduced capital expenditures on kindergartens and centers for early child development halted the trend of increased investment in preschool education. **Section 2.3**

7. The reported cases of violence against children surged immediately after the outbreak of the pandemic showing a 14.7 percent quarterly increase in cases reported to Centers of Social Work (CSWs). During the third and fourth quarters of 2020, the number of CSW reported cases decreased, and so did the number of cases reported to the police, albeit less drastically. This dynamic reflects the disrupted provision of prevention services by social workers (part-time work and work from home) during the pandemic. **Section 3.1**

8. COVID-19 is projected to strongly affect child poverty: the relative poverty is forecasted to increase from 27.8 percent before the pandemic to 32.4 percent during the pandemic. This puts additional 19,000 children in North Macedonia below the relative poverty threshold; however, the number may increase to 22,000 depending on the length and severity of the crisis. **Section 4.2**

9. Nevertheless, government measures to combat the socio-economic consequences of COVID-19 were effective in moderating the negative effect of the pandemic on child poverty. Particularly, the relaxation of GMA eligibility criteria and the two one-off financial support payments contributed strongly to the reduction of the number of children living in extreme poverty (living on less thanUSD1.9 in PPP terms daily). **Section 4.2**

10. The National Platform for distance learning brought a systematic approach and a considerable degree of unity into the educational process for the pupils attending classes online.However, the issue of access to education, especially for the vulnerable groups such as children at risk of poverty, Roma children and children with disability, persists. In addition, work on creating high quality educational resources should remain a priority. **Section 5.1**

11. Teachers need to master improved pedagogical approaches, methods and skills for distance learning in order to ensure good quality teaching. School psychologists and the other professional support staff should be trained and prepared to help and support pupils to better deal with the consequences of the pandemic. Devising protocols for remedial learning and psychosocial support is especially important to ensure that all pupils will be offered tailored help if and when necessary to enhance learning and protect their mental health. **Section 5.2**

12. The re-opening of preschools enabled a number of parents and children to receive organized support in early learning. However, many children still stay at home and, therefore, support to parents needs to be ongoing to help ensure high quality early learning. **Section 5.4**

13. About 1 percent of children in North Macedonia have been reported infected with COVID-19, representing 5.4 percent of all cases. Globally, between 2.1 and 7.8 per cent of cases have been children, suggesting a typical incidence in North Macedonia. No child death due to COVID-19 has been reported. **Section 6.1**

14. Large majority of pediatricians saw a decrease of workload during COVID-19 predominantly due to the fear of parents and children to contract COVID-19 while visiting medical practices. This led to a reduction of health services delivery to children in the areas of diagnostics, treatment of chronic illnesses, primary healthcare and mental health. **Section 6.2**

15. The impact of movement restrictions, quarantines, switching to distance learning and reduced socialization negatively affected children's mental health, which has been identified as the key health risk for children stemming from the COVID-19 pandemic. **Section 6.2**

POLICY RECOMMENDATIONS

Even though government measures to combat COVID-19 and its consequences rarely targeted children directly, dozens of measures by the government, as well as other important stakeholders, effectively supported the wellbeing of children during the pandemic. Three groups of measures are especially noteworthy. The tailoring of the entire education system, since the onset of the pandemic, to operate in a new distance-learning mode, was the largest government move to accommodate children's needs. Various campaigns aimed at raising awareness and guiding parents and children in the steps they may take if they find themselves in a dangerous or difficult situation, such as in cases of violence against children, or when psychological support is needed. Last but not least, most government measures to save jobs and financially aid jobless individuals, disproportionately benefited households with children, curbing the pressure of the pandemic on child poverty. Yet, despite the pandemic presently subsiding, there is still need for added policy measures to further alleviate consequences of the pandemic that may well endure into the future. The proposed further policy measures are presented under three categories of interventions:

A Supporting children and parents in need of protection and counseling

B Strengthening efforts to combat child poverty

C Enhancing effectiveness of the learning process and of healthcare during pandemic

A SUPPORTING CHILDREN AND PARENTS IN NEED OF PROTECTION AND COUNSELING

The multi-stakeholder efforts to act against child violence and offer institutional support to the victims should be strengthened. This is particularly important as physical presence in schools will likely remain limited until the end of the school year. These efforts should stay aligned with the National Strategy (2020–2025) and Action Plan (2020–2022) for Prevention and Protection of Children from Violence, while the National Coordination Body for Protection of Children from Abuse and Neglect should consider standardizing social work provision during pandemics. Such an effort by the national body may also uncover and address some deficiencies in the system, particularly affecting such groups of children as children of divorced parents, fostered children, street children/children on the street and others who may have suffered from violation of their rights during the lockdowns.
The following recommendations will further strengthen the system of social protection in North Macedonia by securing equal access and improving the quality of services for children:

- Continue the work of CSWs in mapping, targeting, providing legal support to vulnerable children and families, and acting in cases of violence and abuse.

- The social service workforce could further benefit from capacity development in the area of outreach to timely identify and prevent violence, including gender-based and child-related violence.

- Develop a platform for the social service workforce offering a one-stop-shop for information and guidance on topics related to protecting children from violence.

- Continue the work of and increase awareness of the University Clinic of Psychiatry's telephone helpline which offer psychosocial support and counselling to children and their parents/caregivers.

- Closely observe children in small group homes and in correctional facilities with a view to identifying the need for further psychosocial support, on top of the theatre sessions, creative, mental hygiene and educative workshops already pursued.

- Develop targeted programs to address specific needs of the most vulnerable children.

B STRENGTHENING EFFORTS TO COMBAT CHILD POVERTY

There is a risk that households experien-cing income fallouts during the pandemic will continue to face material hardship even when the COVID-19 crisis subsides. This update was written at a time when the second one-off financial support measure for low-income individuals was being deployed and utilized, and when the fifth package of measures – especially the key measure to save jobs – is being discussed. This implies that the perils of the crisis for jobs and incomes have not vanished yet. Therefore, it is key that, at the minimum, the relaxed criteria for obtaining GMA are extended to apply until the end of 2021, while wage subsidy "MKD14,500 per worker" is reintroduced to cover the first half of 2021. The annual cost of the relaxed criteria for obtaining GMA were earlier estimated at EUR6.5 million, while the cost of the employment-retention subsidy may vary depending on the severity of the pandemic. In the first quarter of 2021 it is expected to have costed about EUR50 million per month.

Given the protracted economic and social effects of the pandemic, in November 2020, UN/Finance Think (2020) proposed the introduction of a temporary basic income (TBI) to replace one-off financial support measures and stabilize the incomes of the most disadvantaged citizens. The objective of a TBI is to top up incomes of people with livelihoods below a vulnerability-to-poverty threshold, which is usually above the value of the poverty line. One of the simulated options of TBI awards is a cash transfer equivalent to a fourth of the median household per capita income with an estimated monthly cost of about EUR40 million, about 2.5 times the current spending on social assistance. Table 1 presents the distribution of the TBI cost among households with children and households with 3 or more children, suggesting that TBI spending is strongly pro-children, i.e., assigns a larger share of the funds to households with children than their share in the population. As a result of such a measure, child poverty would be expected to decline by as much as one third.

Table 1: The distribution of TBI cost, by groups

TBI spending going to	Share in population	Share of TBI
Households with children	39.3%	53.4%
Households with 3+ children	6.9%	13.2%

Source: UN/Finance Think (2020).

Our recommendation from UNICEF/Finance Think to consider the universal child guarantee as the long-term option remains valid. This will involve removing the current income and property eligibility conditions for child allowance, and increasing the child allowance for GMA recipients to the level where the sum of the GMA (including the energy subsidy), the education allowance and the child allowance reaches the minimum wage. Such an endeavor needs to be: i) combined with interventions within the tax system in order to mobilize funds for its financing; and ii) carefully weighed against the possible labor-market distortions it may entail. The authorities need to carefully examine and take on board the experience of the failed progressive income tax reform of 2019. It is key to, first, work on enlarging the tax base and improving collection efforts, so as to collect more revenues with the same tax rates. Second, reforms of the profit tax and transfer prices, as well as the revision of specific tax exemptions, may provide further strengthening of the tax base. Finally, an income tax reform introducing progressivity for incomes from labor and capital, as well as taxing currently not taxed capital gains and interest, would be a logical next step.

Given that more than a quarter of the citizens who meet the relaxed GMA eligibility criteria have not utilized this cash benefit, it is vital to design outreach programs that would be put in place in emergency situations to inform all potential beneficiaries, including the households left furthest behind, of the changes in the provided social services and cash benefits and their delivery in times of crises. Even though the December 2020 amendments to the Social Protection law have introduced certain elements of shock responsiveness into the system, there is still a need to develop standard operating procedures and contingency plans to ensure rapid mobilization of human and other resources, as well as professional development and support programs enabling the social workforce to continue and even scale up work during emergency situations. Additionally, setting spending targets in the three child-related sectors—education, healthcare and social protection— for the next years may help in the medium-term planning and in the mitigation of the effect of COVID-19 crisis on multidimensional child poverty. There will be higher needs for additional resources (human resources, materials, soft skills, digitalization) for coping with any lingering effects of COVID-19 in early childhood education, schooling and healthcare for children.

C ENHANCING EFFECTIVENESS OF THE LEARNING PROCESS AND OF HEALTHCARE DURING PANDEMIC

The pandemic has highlighted inequality of access to education and the unmet need for psychosocial support among schoolchildren. The introduction and rolling out of Safe Spaces, as described in a UN/Finance Think (2020), would enable a more equal access, address actual and potential learning losses as well as mental health issues. Safe Spaces are designated areas/classrooms in primary schools where teachers and professional support staff engage in remedial teaching and psychosocial support of pupils. These areas/classrooms would also be equipped with technology allowing access to distance learning modalities for children who cannot access them at home. A survey of school principals (UN/Finance Think, 2020) showed that a number of schools do not have enough space within the premises that can be used as a designated safe space, and this is especially the case with satellite and rural schools. The latter also face most difficulties with internet connection. It is even more worrying that around 70 percent of the surveyed principals deem that they do not have enough computers to equip such a space. Therefore, the measure's costing included the fixed cost for equipping Safe Spaces in all the schools in the country, which amounts to EUR4.7 million, and variable costs for the functioning of the Safe Spaces (including cost of internet connection, office supplies and other materials) in the amount of EUR360,000. Having in mind the need of teachers for additional training as well as the lack of psychosocial help and support of pupils in the schools, Safe Spaces program may include a capacity building component for training teachers and school psychologists how to provide individualized help to pupils that need academic and psychosocial support within the Safe Space. The proposed measure will benefit 889 schools that reported presence of children who need assistance with learning. The approximate number of children that will benefit is a little over 43,000. The measure will also benefit 530 schools and an estimated number of 7,844 children with a need for psychosocial support.
The following recommendations will further tailor the educational and healthcare system in North Macedonia to secure equal access to services and improved quality of services for children:

- Invest in comprehensive teacher training to better prepare them for various aspects of distance learning: preparation, implementation, student assessment and pedagogical approaches to student motivation and engagement.

- Continue to develop, update and integrate online learning resources, including resources of the professional development of teachers.

- Find a way of reaching more parents and more actively engaging them in the education process. Reach parents of young children and engage them in educational activities to enable learning at home for preschool age children staying at home and to support learning in primary school. Inform and engage parents of older children to ensure support. Provide a digital tool for facilitating interacting between parents and teacher.

- Develop a more systematic approach to helping the children with disability continue to thrive and learn during the pandemic. This might mean purchasing special assistive technology to equip the schools or special resource centers at the municipal level. It also means creating a system of offering individualized help to the children and parents during distance learning.

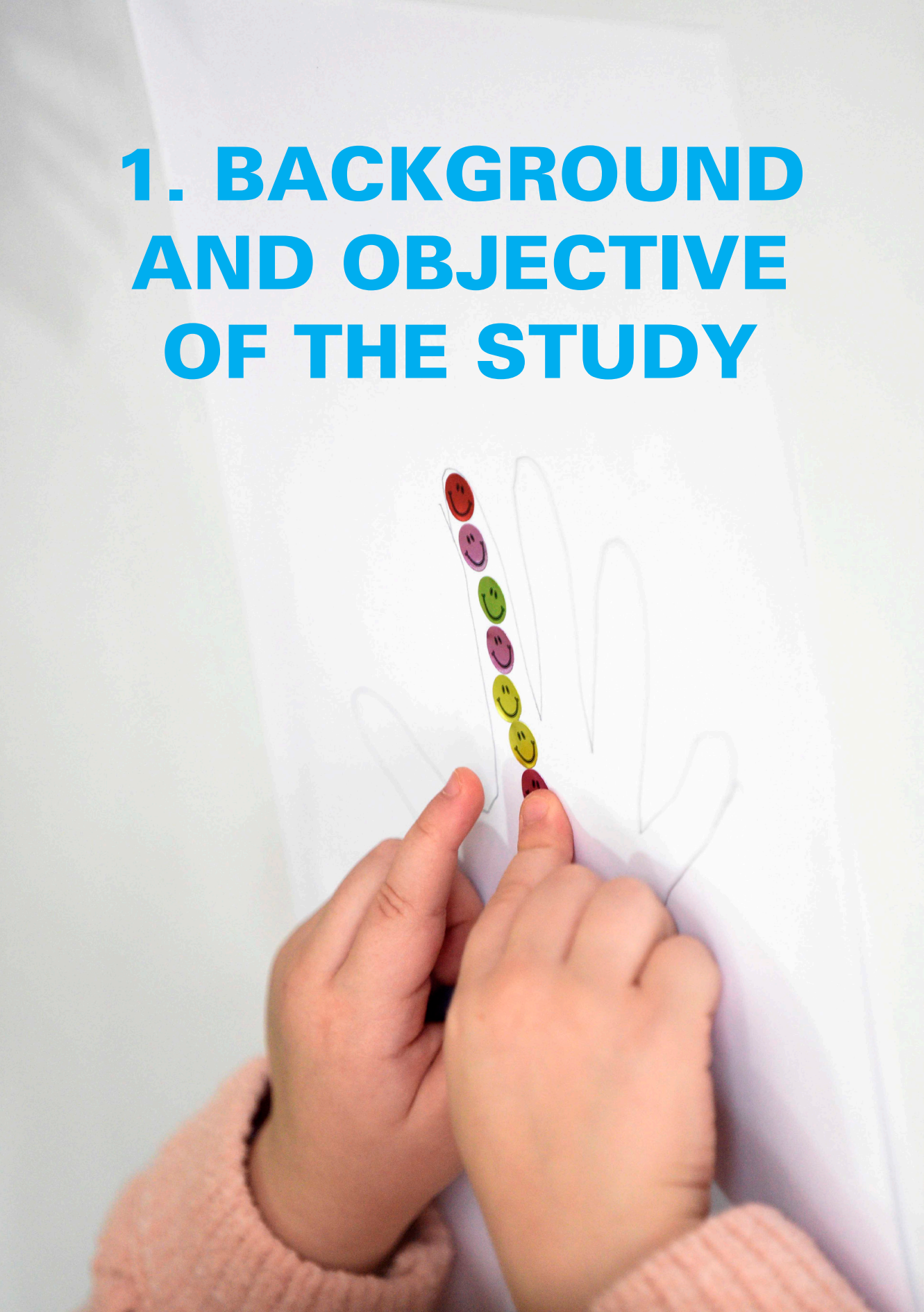
- Sustain the system of organizing online events and helplines to offer support to the children and parents that might need help with mental health issues.

- Even in these challenging times, basic services for provision of protection and psychosocial support must remain available, affordable and accessible. The professional support staff within schools (especially psychologists) need to be trained and motivated to provide guidance and counseling to pupils and parents faced with emotional and mental health difficulties arising from the pandemic and distance learning. Counseling can become part of their regular work after the pandemic is over.

- Awareness must be raised among parents that risks of postponing diagnostics and treatment of chronic diseases among children may lead to losses that outweigh the risks of COVID-19 infection in medical settings. A public campaign can be effective in educating and raising awareness of parents.

As pandemic subsides, authorities should reinvigorate demand for routine healthcare and regular vaccination, as well as intensify preventive check-ups among children, to contain, as much as possible, the risks posed by postponing regular healthcare during the COVID-19 period.

1. BACKGROUND AND OBJECTIVE OF THE STUDY



The coronavirus disease, known as COVID-19, has been relatively mild in children compared to adults, and children are reported to have a better prognosis (Dong et al. 2020). In North Macedonia, only 1.1 percent of children have been infected with COVID-19, as compared to 4.9 percent of persons older than 40. Mortality in children due to the infection appears rare (Zimmermann and Curtis, 2020), with no child death due to COVID-19 reported in North Macedonia. Clinical features of COVID-19 in children include fever and cough, but a large proportion of infected children appears to be asymptomatic and only contributing to the transmission. Therefore, for children, COVID-19 is less of a direct health risk; the more significant threats to child health and wellbeing are rather the social and-economic consequences of a prolonged pandemic. COVID-19 exacerbates the risks of children experiencing maltreatment and violence at home, while lockdown measures reduce learning opportunities. These issues are exacerbated by income poverty and poor housing, to which children in poor families are more exposed (OECD, 2020).

In July 2020, UNICEF North Macedonia and Finance Think – Economic Research & Policy Institute, with support of USAID North Macedonia, published an extensive analysis of the social and economic effects of COVID-19 on children in the country (hereinafter UNICEF/Finance Think, 2020). Building on the analysis of extensive empirical data, the study came to the following conclusions. First, COVID-19 had exacerbated child poverty in North Macedonia, likely putting additional 16,000 children below the poverty threshold and increasing the relative child poverty rate by hefty four percentage points. Moreover, poverty risk multiplied with related disadvantages such as undernourishment and stunting; low preschool attendance; failures in acquiring foundational skills and knowledge; constrained access to sanitation facilities; and heavier reliance on polluting fuels for cooking and household heating. Second, family violence increased during COVID-19, with children being nearly 10 percent of the reported victims. Third, the educational system in the country shifted to distance learning fairly quickly, but learning losses have likely been significant among children from poor households, Roma children and children with disabilities, due to unequal access to learning equipment, adequate internet access and parental support. Fourth, COVID-19 caused delays in accessing hospital care for newborns, children and mothers due to the pressure that the fight with the virus exerted on human resources of the national health system. Diagnostics and control of chronic conditions and, to an extent, mental health, have been mostly neglected during the pandemic. Fifth, the government responded to the crisis fairly quickly with a substantial set of health, social and economic measures, as elsewhere, however few measures have been explicitly aimed at children. However, the key economic measures – employment-retention measures, relaxation of social assistance criteria and the one-off financial support – have been pro-children.

At the time the study was published, the country achieved some stabilization in the spread of the disease and relaxed restrictions related to people's movement and company operations. In the third quarter of 2020, it seemed the worst of the economic effects of the pandemic had passed, since sectoral lockdowns and curfews were abandoned.

The economy continued operating under stringent health protocols, which, coupled with consumers' caution in the high-contact sector (hospitality, trade and entertainment) secured some balance between the health and economic risks. International travel remained considerably constrained, while the 'tourism vouchers' – a government measure awarding MKD6,000 to low-income individuals – stimulated an increase in domestic tourism. In Q3-2020, the one-off support to low-income and unemployed individuals, and to students was fully deployed, alongside the lingering effects of the "MKD14,500 per worker" measure from Q2-2020. Further key policy actions to address the effects of COVID-19 were postponed after the early parliamentary elections, held in July 2020. After the largest drop of economic activity in Q2-2020 of 14.9 percent, Q3-2020 registered a decline of only 3.3 percent, less than the expected drop of 5 percent, likely due to the massive government intervention, which by the end of Q3-2020 amounted to about EUR200 million.

The new incumbent government took office in early September 2020. It had to immediately take important decisions pertinent to the educational system. The summer without political government left the impression that the educational system was not preparing fast enough for the new schooling year, particularly in terms of filling teaching capacity gaps for online education and working out a unified approach towards distance learning. This was the likely reason that the start of the school year was postponed for a month, to 1st October 2020. The doubts regarding the expedience of allowing primary schools to open likely stemmed from the changing epidemiological conditions and the expected second wave of the pandemic during the autumn of 2020. Ultimately, students of grades 1–3 were allowed to return to schools, subject to parental consent, while older grades continued in a full distance-learning mode.

The COVID-19 situation started aggravating in early October 2020, that marked the beginning of a second wave of the pandemic, which peaked in early December 2020. The government introduced the fourth package of economic and social measures, which included: a redesigned "MKD14,500 per worker" measure with a narrower target to aid the hardest hit sectors; firm loans at favorable conditions (including with a grant component); second postponement of loan liabilities for citizens, sharply focused; second wave of one-off support with different target than before; postponement of tax liabilities for companies; VAT reduction in hospitality; and one-off grants for micro-firms (self-employed) in entertainment, recreation and personal services. Unlike the period of the technical government when the crisis first hit, the passing of the fourth package required parliamentary approval of most measures, which led to significant delays in the adoption of key measures for both companies and individuals.

The COVID-19 pandemic occurred at times when North Macedonia has been facing persistent and frequently growing vulnerabilities and inequalities relevant for children. In 2019, child poverty (0–17) stood at 27.8 percent, a decline by 1.5 percentage point compared to 2018, yet suggesting that of the total of 448,000 people living under the poverty line about 113,000 were children. The percentage of children who are seriously materially deprived—i.e., child population that cannot afford at least 4 of 9 basic needs—stood at 33.5 percent. Overall, 9.4 per cent of all children in North Macedonia

suffered from compound risks (income poverty, material deprivation and living in jobless households) in 2019, nearly four times higher than the EU-28 average. Moreover, the risk of violence against children and domestic violence have been looming despite recent progress achieved. The reformed system of social protection as of May 2019 included advanced integration of social services, including those aimed at responding to cases of violence against children. In parallel, the process of deinstitutionalization resulted in no children being in institutions, contributing to the provision of improved quality of care in alternative settings within local communities.

Children in North Macedonia face disadvantages at all levels of education. Pupils lag significantly behind their international peers in achieving functional literacy and numeracy in primary school, despite recent progress (OECD, 2019). Pupils with disadvantaged backgrounds fare worse than their more advantaged peers, everything else being equal. Inequalities start early: participation in pre-primary schooling is low (36.8 percent), with significant disparities: 7.4 percent of children from the poorest quintile attend pre-primary school compared to 67.4 percent of those from the richest quintile; 53.9 percent among Macedonian ethnicity compared to only 14.1 percent among Albanian ethnicity and 11.4 percent among Roma ethnicity (MICS, 2019). Completion rates of both lower and upper secondary education signal worrying disparities among children from different wealth quintiles. Namely, while the completion rates at national level are 94 percent and 87 percent respectively, for children from the poorest quintiles they are 84 percent and 64 percent, although both primary and secondary education are compulsory (MICS, 2019). Non-attendance and non-completion rates are particularly high in Roma settlements.

Perinatal and infant mortality rates in the country had been increasing, reaching a peak in 2016 – 16 per 1000 and 11.9 per 1000 respectively, despite almost all pregnant women receiving antenatal care and almost all births being attended by skilled health personnel. The trend was reversed to 5.6/1000 in 2019, however, it should be closely monitored. In the period 2005–2018, the MMR immunization rate of children of age 1–2 declined from 96 percent to 83 percent. Measles immunization coverage remains low, while more notable outbreaks and related fatalities were registered in 2018 and 2019.[1] These were contained with catch-up vaccination efforts notwithstanding significant vaccine hesitancy (IPH, 2019). Poor nutrition and insufficient physical activity of children have been prevalent in North Macedonia. For example, 13.1 percent of boys and 9 per cent of girls under the age of 5 were overweight (MICS 2019). Findings from a 2019 behavioral study of childhood obesity show that, among other things, the problem is centered on traditional concepts of what foods are 'healthy' and fueled by the food and nutrition environment in schools, as well as the regulatory framework.[2]

[1]See also a discussion here: link.

[2]Applying behavioral insights to tackle childhood obesity in North Macedonia. A report by the Behavioural Insights Team for UNICEF North Macedonia Filippo Bianchi, Hannah Behrendt. December 2019.

This study aims to provide a follow-up analysis of the social and economic effects of COVID-19 on child wellbeing in North Macedonia. In particular, the update assessment focuses on three complementary domains:

(i) impact on specific child-related sectors: social and child protection, education, and healthcare;

(ii) impact on child poverty; and

(iii) impact on public finance, in particular, the capacity of the Government to respond to and mitigate the impact of the crisis through public investments in key child related sectors.

The methodology used in this study includes the following tools and approaches:

a. Collection of administrative data. Limited and selected administrative data were collected from the Ministry of Labor and Social Policy to understand social effects of the crisis on households and children. Administrative data have also been collected on the planned and executed fiscal spending from the Ministry of Finance. Data pertinent to the labor market response and the execution of the government subsidies for the employment retention measures have been collected from the Employment Service Agency and the Public Revenue Office.

b. Collection of secondary survey data. For various parts of the study, two key surveys were drawn upon: individual-level data of the Survey on Income and Living Conditions (SILC) 2019 and the Labor Force Surveys (LFS) 2019 and 2020 (Q1-Q3), as made available in the safe room of the State Statistical Office.

c. Collection of primary qualitative data through interviews. Interviews with key stakeholders in the health domain were conducted to obtain expert overviews of the developments since the initial study was published in July 2020;

d. Collection of primary data through an on-line survey. An online survey of pediatricians was conducted in the period 1–10 February 2021, which provided 70 answers from of the total of 277 pediatricians (incl. trainee pediatricians) with valid e-mail addresses (response rate of 25.3 percent);

e. Microsimulation. The simulation is based on the MK-MOD Tax & Benefit Microsimulation Model which was originally built and is being maintained by Finance Think.[3] As for the initial study, selected features of the model were used, and it has been re-calibrated on the latest SILC 2019. With information on factual developments in the sectors sourced from LFS, the modeling exercise simulates the effects of the pandemic on child poverty, and gauges the poverty and fiscal effects of some policy proposals.

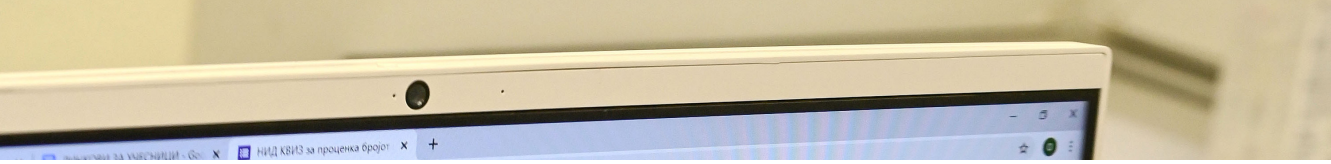
[3]MK-MOD is a static model applying user-defined tax and benefit policy rules to micro-data on individuals and households; it calculates the effects of these rules on household income, and then outputs results – still at the micro level. The model is STATA-based. For further details see: link.

f. Desk analysis. Available reports on the topic have been used throughout the analysis. The State Budget and its supplement, as well all Government decrees and laws adopted in 2020 after the proclamation of the state of emergency have also been analyzed.

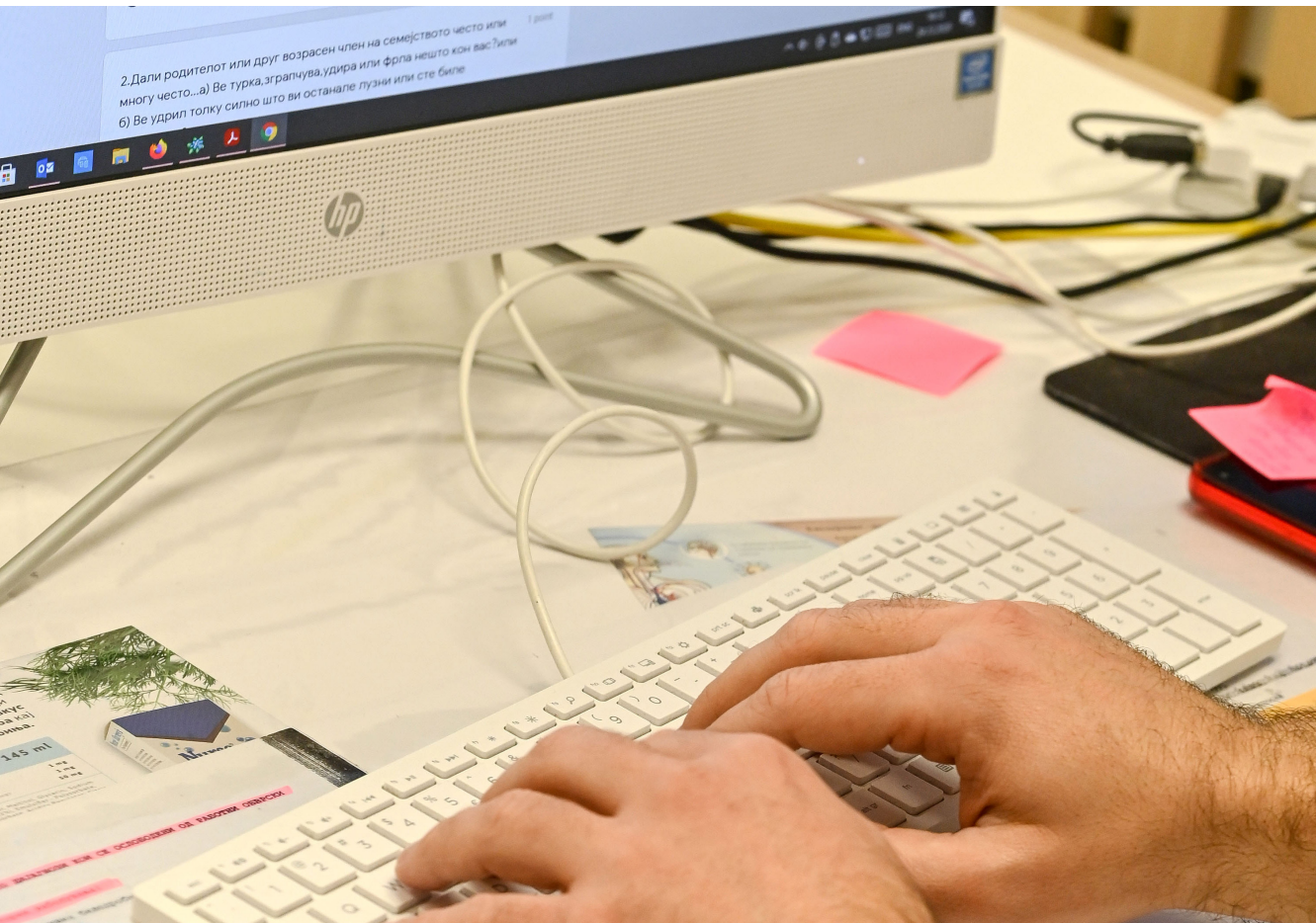
In relation to the initial study (UNICEF/ Finance Think, 2020), this one is an update in the true meaning of the word: it does not open new venues for discussion; rather, it appraises the situation as it developed since, following the same structure. A notable distinction lies in the analysis of child poverty, which is still based on simulation (as SILC became available for 2019 in the meantime, yet not covering the pandemic period), but almost all assumptions related to how labor income of households developed under the pandemic have been replaced with actual data from the Labor Force Survey, which is now available up to and inclusive of Q3-2020.

With the data set at our disposal at the time of this update, we were unable to pursue an analysis that would reveal the distributional impact of the crisis observed through income, ethnicity, age, gender and other characteristics of children. This is an important limitation of the current analysis. A potential design of a tailor-made survey for an extensive analysis capturing the distribution of child-related violence, social protection, child poverty, learning and health outcomes is left for future endeavor.

The structure of the study is as follows. Section 2 reviews the response of the Government of North Macedonia to COVID-19, with special reference to the policy moves directly and indirectly affecting children's wellbeing. It provides a child-focused assessment of the fiscal implications of key policy measures while paying special attention to the child-related programs in the state budget and assessing the relevance to children of the changed priorities in current and investment spending as defined by the 2021 Budget. Section 3 assesses the impact of the pandemic on the sector of social and child protection. Section 4 simulates the impact on child poverty. Section 5 assesses pandemic's impact on education outcomes for children, and Section 6 – its impact on health outcomes. Section 7 discusses the policy response and recommends some further plausible policy actions that the government may want to consider.



2. GOVERNMENT'S COVID-19 RESPONSE AND ITS EFFECT ON CHILDREN



The Government of North Macedonia responded to the outbreak and spread of COVID-19 fairly rapidly by devising four packages of social and economic policy measures. The enforcement of such measures was complicated by the fact that at the time of the outbreak the Parliament was dissolved in preparation for early elections and the country had a technical government tasked with organizing free and fair elections. The proclamation of a state of emergency by the President of North Macedonia on 18th March 2020 empowered the government to legislate by decrees. The first three packages of policy measures and the first Budget Supplement of May 2020 were adopted and enforced under such circumstances. Between the start of the election campaign in June 2020, and the election of the new government in September 2020, no lawmaking power existed. The fourth package of measures and the Budget Supplement of November 2020 went through the standard lawmaking procedures.
In this section, we review the key policy measures designed to tackle the consequences of COVID-19 on citizens. As the three packages of measures and the first budget supplement were analyzed in the UNICEF/Finance Think (2020), here we present only the information needed to understand later developments.

2.1.The policy response to COVID-19

The government packages of measures against the consequences of COVID-19 were designed to deal with four main risks: the risk of spreading the infection; economic risk, including income loss and worsening of the quality of life of the most vulnerable citizens; the risk of impaired access to services; and the risk of deterioration of the learning process.

The policy response to these risks, shown in Table 2, is particularly relevant to children – either directly or indirectly. **Measures to contain the spread of the infection** included: border closures, encouraging social distancing, imposing strict travel restrictions, prohibiting movement of citizens, including a curfew, mandatory mask wearing and use of disinfection, etc. Since the summer of 2020, most of these measures relaxed to some degree but have remained in place until the end of the year. An exception is the extension of parental leave benefits for newborns, which was suspended; and the State Matura Exam which was cancelled for the 2019/20 school year. The government discontinued parental leave, paid by the employer, to one employed parent per family with children up to the age of 10. Many employers continued to operate hybrid schemes with weekly rotations between working in offices and working from home, to reduce movements and office congestion.
The Government continued deploying the two types of **policy interventions to prevent income loss and maintain the quality of life** of citizens: employment-retention measures and additional cash benefits. The key employment-retention measure, first introduced in April-June 2020, was awarding a subsidy of MKD14,500 per worker to the affected companies. It was re-introduced in October-December 2020, with narrower targeting and expanded amounts conditional on the extent of turnover decline. The subsidization of half the employees' social security contributions in the affected companies was abandoned, as it was less attractive to companies compared to the "MKD14,500 per worker" measure (ILO/EBRD, 2020).

The second type of interventions focused on the social transfers income. First, eligibility criteria for guaranteed minimum assistance were temporarily relaxed by (i) introducing means testing based on income in the previous month, rather than the previous three, and by (ii) allowing beneficiaries to own real estate in which they reside, a car older than 5 years and a construction land parcel smaller than 500 m2 – all of which made applicants ineligible before. Finance Think (2020b) assessed that the measure had a positive effect on the income of the poorest segments. Second, unemployment benefit eligibility criteria were temporarily relaxed to cover all individuals who lost their job in March and April regardless of the reasons. Third, the government deployed a significant amount of one-off aid on two occasions: in May 2020 for social transfers income recipients, active registered unemployed, low-pay workers and youth (16–29) in public education; and in December 2020 for passive registered unemployed, low-pension pensioners, youth left out in the first cycle of one off-aid, single parents and some groups of artists.

Two additional measures provided one-off cash allowance for public secondary education students from low-income households for buying school materials in the amount of MKD3,000; and MKD6,000 for covering the costs for co-funding tuition fees, fees for accommodation in student dormitories and in private accommodation in the amount of MKD6,000 for undergraduate students from low-income households enrolled in public higher education institutions in the country.

Only the measures introducing one-off cash benefits directly targeted children during the pandemic. With the other social transfers children have been covered indirectly by targeting workers and households. All these measures affected children in multiple ways: by not allowing some households to fall into poverty, by ensuring that children have access to COVID-19 testing and treatment, and by providing minimum access to services. Of the 16 indirect measures, 10 have fiscal implications; 11 were still in force at the end of 2020 (Table 2).

Table 2: Policy measures supporting citizens to cope with COVID-19

Risks	Policy measure	Target group(s)	Fiscal implications	Sector (children-wise)	In force at end-2020
Direct child-related policy measures					
Risk of spreading infection	Physical school closure	School-age children	X	Education	√
	Canceling State Matura Exam (school year 2019/20)	High school graduates	X	Education	X
	Preschool facilities closure	Preschool children	X	Education	X
	Suspension of extra-curricular activities	All children	X	Education	√
	Extension of paid parental and adoption leave until the expiration of temporary measures against the spread and prevention of COVID-19.	Newborns and children	√	Social protection	X
	Extension of the deadlines set in the Child Protection Law for submitting a request for one-time financial assistance for a newborn, obtaining/extending parental allowance (third and fourth child) and for special child allowance, and waiving the school attendance criteria for payment of the education allowance.	Children	X	Social protection	√
Income loss	One-time financial support for purchasing domestically produced goods in the amount of MKD3,000	Public education students 16–29	√	Social protection	X
	One-time financial support in the amount of MKD6,000	Students 16–29 in regular education (left-out in the previous cycle)	√	Social protection	√
Reduced access to services	Paid leave for working parents (one per household) of children up to 10 years of age	Employed parents of children aged 0–10	X	Social protection	X
Deterioration of the learning process	Switching to distance learning	Children	X	Education	√
	Education through lectures broadcast on the national TV	Children	X	Education	√
	Purchase of school materials in the amount of MKD3,000	Public secondary education students from low-income households	√	Education	X
Indirect child-related policy measures					
Risk of spreading infection	Border closure	All citizens	X	Health	√
	Partial lockdown	All citizens	X	Health	√
	Isolation – quarantine	Infected and persons who have been in contact with infected persons	X	Health	√

Income loss	Social protection during the state of emergency through relaxed eligibility criteria for guaranteed minimum assistance (GMA)	Materially deprived households with income lower than GMA	√	Social protection	√
	Employment retention through subsidizing social security contributions for companies affected by COVID-19, for the months of April to June 2020	Employees in affected companies (roughly, those with revenue loss >30%) Companies are obliged to pay back the subsidy if they realize a profit over 2021, in an amount not exceeding 50% of the gross profit	√	Social protection	X
	Employment retention through financial support for companies affected by the health and economic crisis caused by COVID-19, for payment of wages for April to June 2020 at a maximum of MKD14,500 per worker	Employees in affected companies (roughly, those with revenue loss >30%), with three-month average salary below MKD39,900 Companies are obliged to pay back the subsidy if they realize a profit over 2021, in an amount not exceeding 50% of the gross profit	√	Social protection	X
	Employment retention through financial support for companies affected by the health and economic crisis caused by COVID-19, for payment of wages for October to December 2020 at a maximum of MKD21,776 per worker	Employees in affected companies (roughly, those with revenue loss >30%, the amount of the subsidy per employee rises with the severity of the revenue decline), with three-month average salary below MKD39,900 Companies are obliged to pay back the subsidy if they realize a profit over 2021, in an amount not exceeding 50% of the gross profit	√	Social protection	√

Income loss	One-time financial support with a payment card for purchase of domestically produced goods in the amount of MKD3,000 (low-pay workers) or MKD9,000 (social transfers income recipients and unemployed)	Individuals with low income, recipients of GMA and unemployed	√	Social protection	X
	One-time direct cash payment of MKD6,000 (passive job-seekers; low-pension pensioners; single parents; artists, singers and other arts-related groups)	Individuals with low income, recipients of GMA and unemployed	√	Social protection	√
	Expansion of unemployment benefit coverage through relaxed eligibility rules	All individuals who lost their jobs between 11 March and 30 April	√	Social protection	X
	One-time grants for tour operators, wedding restaurants, children's playrooms, foreign language centers, night clubs, design studios, private kindergartens	Direct financial support determined as lump sum amount per unit of employee (or per unit of children in the case of kindergartens)	√	Social protection	√
	VAT-free weekend	VAT refunded on purchased domestic or IT-related goods and services	√	Social protection	X
	Postponement of the payment of loan annuities for citizens (two occasions, 6 months each)	Individuals with loans	X	Social protection	√
Reduced access to services	Postponement of rent payment for social housing	Tenants of social apartments	X	Social protection	√
	Cash allowance to cover part of the households' electricity costs from April to December 2020	Materially deprived households with income lower than GMA	√	Social protection	√
	Expanded health coverage	All citizens	X	Health	√

Source: Official Gazette of the Republic of North Macedonia

Table 3 presents current data on the coverage and allocated funds for the COVID-19 measures. It reveals that the measure for extended parental leave covered about 4,120 beneficiaries, which is double the initial plan, mainly due to the extension of the measure from June 2020 to September 2020. The Health Insurance Fund spent almost EUR6 million on the measure.

Nearly four thousand new households entered the system of guaranteed minimum assistance (GMA) between March and December 2020 – during the relaxation of the eligibility criteria. This cost additional EUR4.8 million annually (12 percent increase of the pre-pandemic cost). In our simulation in UNICEF/ Finance Think (2020), we projected the maximum expenditure needed to provide GMA to all newly eligible persons at EUR6.6 million, which suggests that the measure reached 72.7 percent of this potential expenditure.[4]

Most of the funds have been spent on the employment-retention measures – about EUR115 million,[5] which also have had a large coverage that reached the maximum of 134,000 workers in April 2020, which then subsided to about 60,000 workers in the October-December 2020 cycle of the measure. Finance Think (2020a) calculated that about 75,000 jobs were at the verge of being lost when the pandemic hit in Q2-2020, and that the measure saved about 60,000 jobs, which is very close to the actual Q4-2020 figures. UN/Finance Think (2020) built on these calculations and proposed a modification and extension of the measure to October–December 2020, which was accepted by the government, to a large extent.[6]

The additional measure for subsidizing half of the social insurance contributions was only marginally used by companies, due to its mutual exclusion with the "MKD14.500 per worker" measure that proved to be more attractive.

The two cycles of one-off support to individuals injected a total of approximately EUR50 million into the economy. Overall, the measures presented in Table 3 infused nearly EUR180 million, which is 1.7 percent of GDP.

[4]The utilization of GMA relaxation potential has been also estimated by Finance Think (2020b), at 65 percent, which corroborates our calculation.

[5]This amount is net, i.e., the difference between the initial amount of the subsidy of EUR135 million and about EUR20 million that beneficiaries need to return due to realized profit over 2020. More details available in the announcement of the Public Revenue Office: https://vlada.mk/node/24790.

[6]With the redesign, UN/Finance Think (2020) projected a coverage of about 72,000 workers, which is of the magnitude of the realization for October-December 2020.

Table 3: Fiscal cost of COVID-19 policy measures

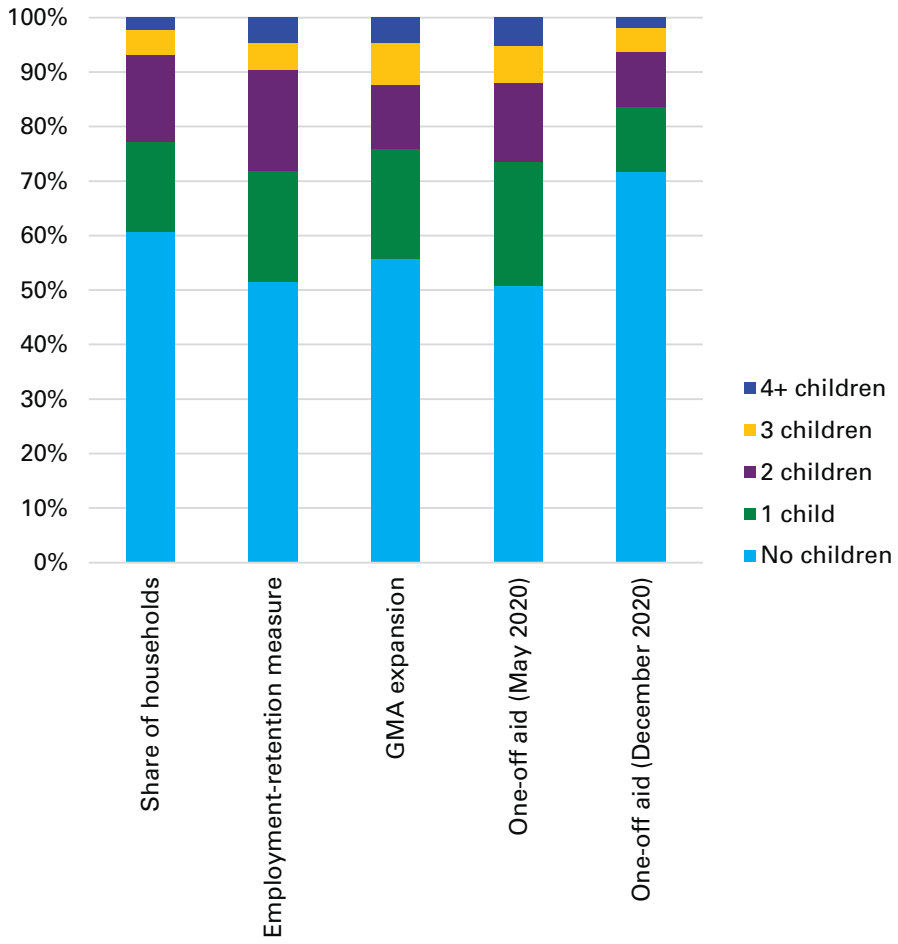
Policy measure	Covered period	Number of beneficiaries due to COVID-19	Average cost per beneficiary (MKD)	Total spending due to COVID-19 (mil. MKD)
Extension of the parental and adoption leave	11 March – 30 September 2020	4,120 individuals	45,455	363
Relaxation of criteria for GMA, incl. expansion of energy subsidy	1 April – 31 December 2020	3,944 households	74,262	292.9
Relaxation of the criteria for obtaining unemployment benefit	11 March – 30 April 2020	3,123 individuals	17,387	54.3
Employment retention through financial support of companies with MKD14,500 to MKD21,776 per worker*	1–30 April 2020	134,201 workers	13,986	1,564.7
	1–31 May 2020	124,054 workers	13,792	1,444.8
	1-30 June 2020	101,148 workers	13,884	1,170.7
	1-31 October 2020	61,830 workers	15,627	915.8
	1-30 November 2020	66,093 workers	15,593	976.8
	1-31 December 2020	60,485 workers	15,774	904.3
Employment retention through subsidizing social security contributions*	1–30 April 2020	11,686 workers	3,137	30.2
	1–31 May 2020	12,924 workers	3,161	33.6
	1-30 June 2020	12,107 workers	3,158	31.4
One-off support for individuals with low income (first cycle)	One-time effective on 27 May 2020	304,933 individuals	5,385	1,642
One-off support for individuals with low income (second cycle)	One-time effective on 7 December 2020	266,670 individuals**	6,000	1,600**
VAT-free weekend	10-12 October 2020	-	-	67

Source: Health Insurance Fund; Public Revenue Office; Ministry of Labor and Social Policy; Employment Service Agency.
** The amounts are net, i.e., the amount awarded as a subsidy over 2020 minus the amount companies were obliged to return at the beginning of 2021 due to realizing a profit over 2020. The number of workers, on the other hand, refers to the initial coverage.*
*** Refers to an estimated/expected number by the government.*

Figure 1 looks at the distribution of state support payments among families with a different number of children. We have simulated the costs of the three groups of policy measures indirectly affecting children – the relaxation of GMA criteria, employment retention measure and the one-off financial support (two cycles) – and used SILC data for assessing the distributional impact on children. The distribution of the funds of the employment-retention measure "MKD14,500 per worker" suggests that it is considerably pro-children, as households with one and two children received a higher share of the funds than their share in total households. This is at the expense of the no-children households, rather than the 3+ ones. The decline of the share of no-child households is likely driven by families near or in retirement, while the maintained share in households with 3+ children corroborates the notion that social income plays a stronger role for them. Indeed, the distribution of the GMA expansion favors 3+ children households, whose share in GMA is almost double their share in total households (12.3 percent compared to 6.7 percent). Hence, considering that poverty is the highest among households with 3+ children, this measure could be depicted as strongly pro-children.

The one-off aid presents differential distribution in its two cycles. The May 2020 cycle is estimated as being strongly pro-poor, because that cycle targeted low-pay workers, unemployed and pupils/students (16–29 years of age). Hence, it targeted not only children (16–17) directly, but also poorer households which tend to be households with more children (as is the case with the GMA). The distribution significantly altered in the December 2020 cycle of the one-off support, when it became less favorable for households with children. This was to be expected as it targeted the inactive population, which is dominated by inactive women who are usually older, hence less likely to have children aged 0–17 years, as well as pensioners.

Figure 1: Distribution of the funds of key government support measures, by number of children in the household



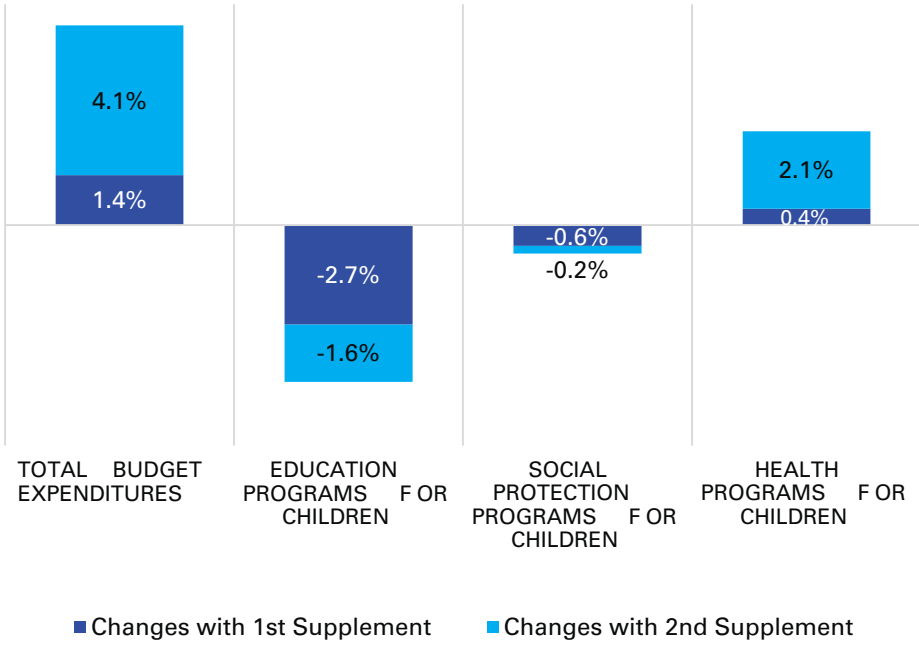
Source: Authors' simulations based on 2019 SILC data.

2.2. 2020 State Budget reallocations

The financial response of the government to the COVID-19 outbreak consisted of reallocations between budget items and two Budget Supplements, adopted in May and November 2020. With the first Budget Supplement, the Ministry of Health immediately transferred funds from preventive programs to the COVID-19 response to enable uninterrupted procurement of medical supplies and equipment for healthcare providers. With the second Budget Supplement, the funds for collective immunization and for universal health insurance increased. The Supplements incorporated the four packages of policy measures adopted by the government to combat the consequences of COVID-19.

Figure 2 displays a clearer picture of the key changes introduced with the Budget Supplements. The total public spending increased as a result of the urgent needs for financing the response to COVID-19, yet planned spending for children dropped by 4.3 percent for education programs and by 0.8 percent for social protection (cumulatively, compared to the pre-COVID-19 Budget). The spending on health programs for children increased by 2.6 percent. These changes confirm the previous findings in UNICEF/Finance Think (2020) that government spending on children did not follow the general increase of government expenditure, which cumulatively increased by 5.5 percent.

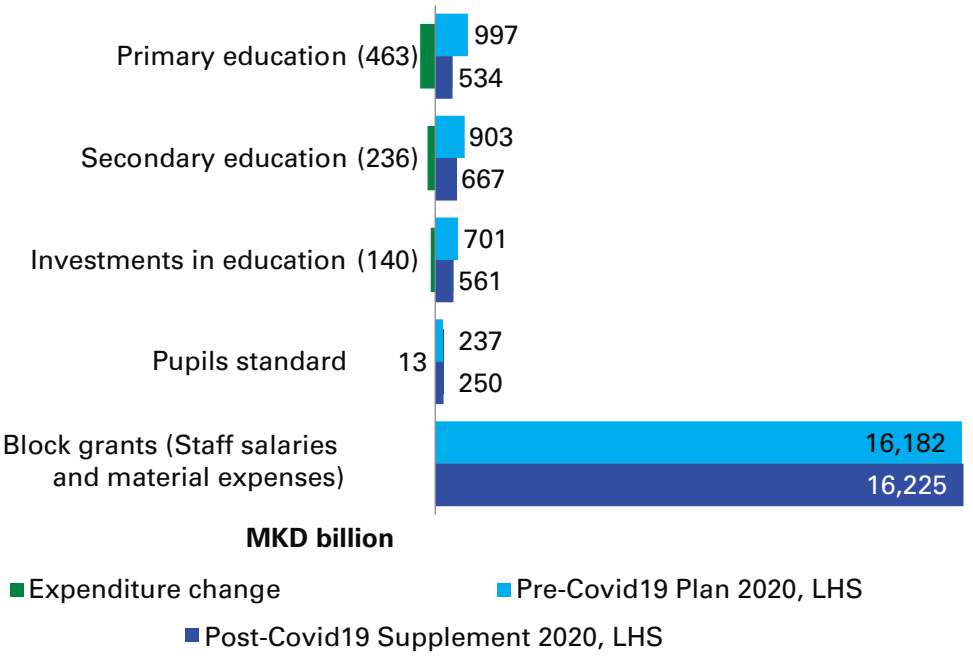
Figure 2: Changes in planned expenditure with the 2020 Budget Supplements compared to the initial 2020 Budget



Source: Ministry of Finance: State Budget for 2020 - initial plan and Budget Supplements.

Figure 3 details the reallocations in education. Although the pandemic caused a complete restructuring of the education processes, some of which required additional investment, the overall planed funds for primary and secondary education were further reduced with the second Budget Supplement. Primary education programs (projects, inclusive education, primary education, international primary education) have been the most affected, with a reduction of 46.5 percent. Expenditure on secondary education programs (projects in high schools, adult education centers; regional Vocational Education and Training (VET) Centers; Roma support project and International Matura) and funds for investment have been reduced by 26 percent and 20 percent, respectively. The education funds reduction is a result of school closures (postponement of projects requiring physical presence for various target groups, inclusive education with teaching with physical presence, etc.). On the other hand, funds for improving students' standard of living and block grants for the municipalities – intended for material expenses and school staff salaries – increased by 5.3 percent and 0.3 percent, respectively. Considering that the burden of delivering distance learning mainly fell on schools (need for computers, internet, software support, etc.), the additional material resources allocated through block grants were very modest. It is likely that donations in education were crucial to enable schools to continue the delivery of teaching and learning services under the COVID-19 restrictions and precautions.

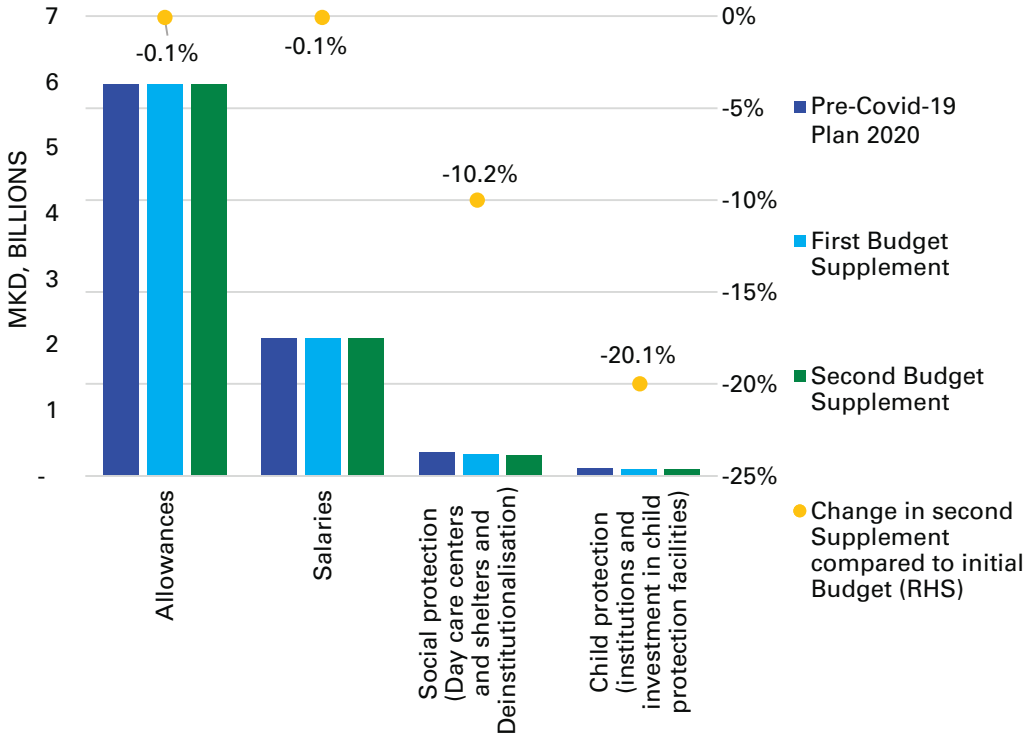
Figure 3: Changes to planned expenditure on education, budget supplements 2020



Source: Ministry of Finance: State Budget for 2020.

Unlike the cuts in education spending, overall social protection spending has largely remained intact. While this is positive, it may actually be a reflection of the lack of direct child-related policy measures with fiscal implications (see Table 2). Social protection spending on children decreased by 0.8 percent (Figure 4), and compared to the first Supplement, there are no significant changes. Child allowances and staff salaries have been maintained. The development component suffered the most, and mostly its deinstitutionalization program: a total cut of 16 percent, or MKD33 million. Funds for construction, equipment and maintenance of kindergartens and centers for early children development were reduced by 20.1 percent with the Budget Supplements. Although the reductions for this program are seemingly small in absolute value and may be partly related to the closure of preschools for a period of six months, they made it more challenging for these facilities to adapt to the preventive protocols.

Figure 4: Changes to planned expenditure on social protection of children, budget supplements 2020

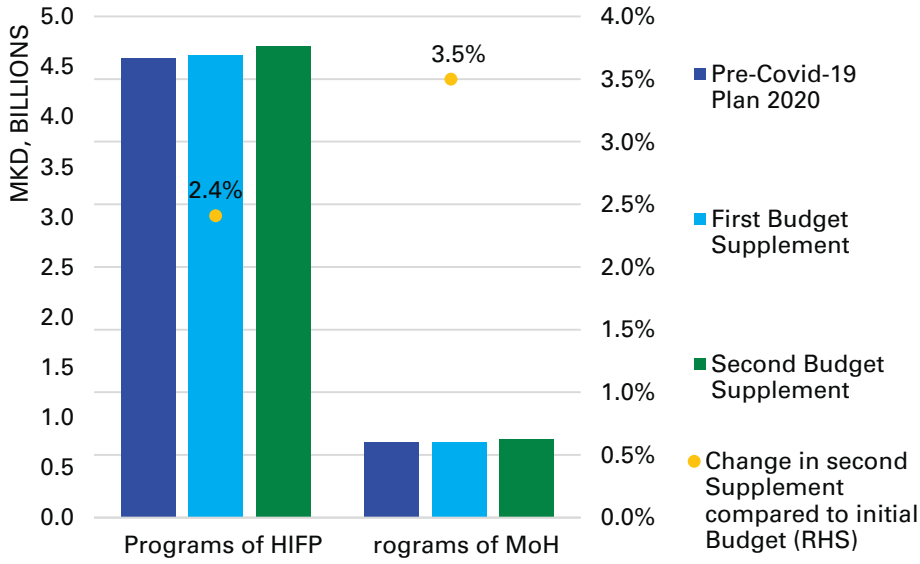


Source: Ministry of Finance: State Budget for 2020.

Health spending on children increased by 3 percent (Figure 5), mainly due to reallocations to increase the budget of the Health Insurance Fund (HIF). The increase primarily reflects the policy measure for extension of paid parental leave from work due to pregnancy, childbirth, parenting and adoption.

Namely, the initial plan for spending on this measure was MKD100 million (UNICEF/Finance Think, 2020), while ultimately MKD363 million have been spent (Table 3). The spending on rare diseases, tuberculosis and public health suffered cuts.

Figure 5: Changes to planned expenditure on health programs for children, budget supplements 2020

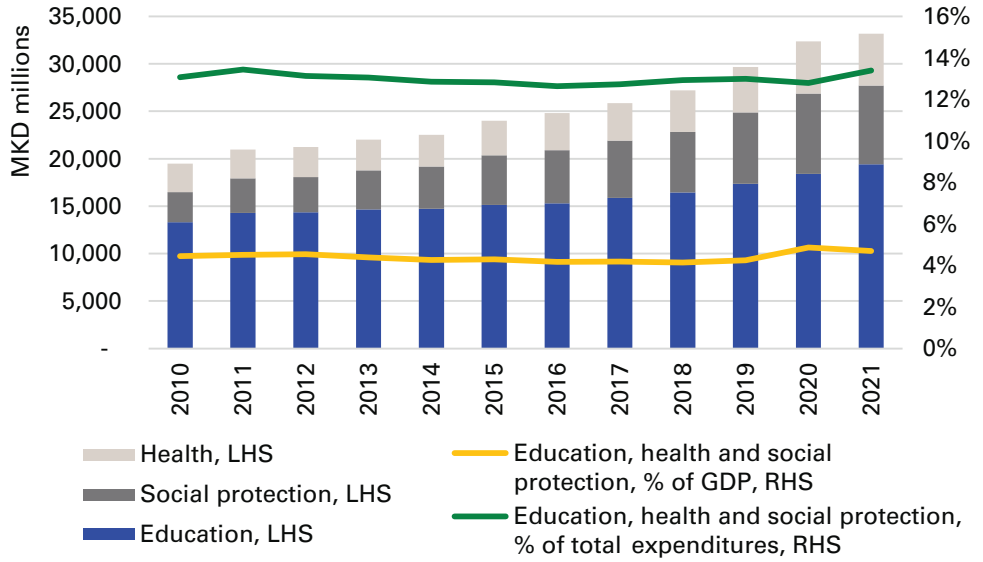


Source: Ministry of Finance: State Budget for 2020.

2.3. 2021 State Budget and planned spending on child-related sectors

The outbreak and persistence of the COVID-19 pandemic has negatively affected the state budget. As a result of the induced recession and the contraction of the economic activity, budget revenues decreased. At the same time, the Government increased budget expenditures specifically allocated to the COVID-19 response, in part funded with budget reallocations and cuts in other spending areas, and in part sourced by new funding. This resulted in a budget deficit of 8.5 percent of GDP in 2020, compared to the pre-pandemic plan of 2.4 percent. The budget deficit for 2021 is set to 4.9 percent, implying some fiscal consolidation compared to 2020. Higher financing needs in 2020 pressed for higher public borrowing, which altogether increased by about EUR1 billion, thus reaching almost 10 percent of GDP. Large part of it came from a Eurobond issued in May 2020, while the rest comprised emergency loans from the International Monetary Fund, the World Bank and domestic financial institutions. In 2021, on top of the projected budget deficit, there is a looming financial need associated with the repayment of foreign debt amounting to EUR773 million, of which a dominant part is an earlier issued Eurobond in a nominal value of EUR500 million. Such context of the public finances limits the fiscal space for crucial public investment and public service delivery in the medium run, however, represents a fairly prudent path if the COVID-19 crisis subsides with the vaccination. Considering the overall fiscal potential, expectedly, total budget funds allocated to programs for children in 2021 are almost unchanged compared to the year before (Figure 6). However, there are differences among programs. While spending on education programs is programmed to increase by 5 percent, spending on social protection and on child health programs decreases by 2 percent and 1 percent, respectively. Their shares in GDP and in total government expenditures remain the same.

Figure 6: Public spending on child-related programs

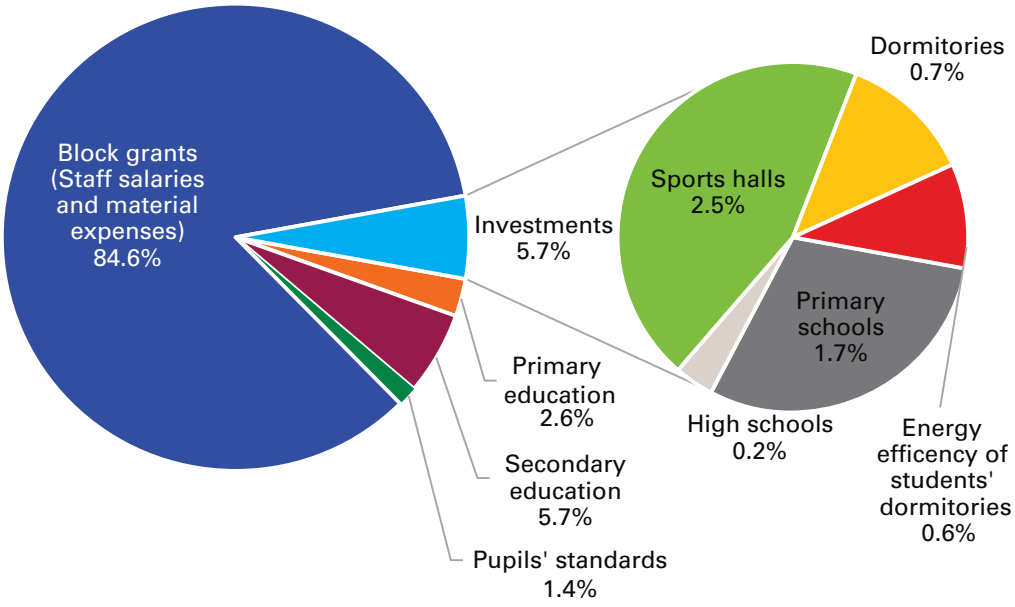


Source: Ministry of Finance: State Budget for 2021; State Statistical Office.

Figure 7 shows the structure of the budget funds allocated to programs for children in education in 2021. The teaching staff wages and the material costs for the primary and secondary schools paid through block and earmarked grants are still dominant, accounting for 85 percent in 2021. Although block grants increased by 2 percent in 2020 and 2021, caused by the requirements of introducing large-scale distance learning, their share in total expenditure for primary and secondary education decreased from 89 percent in 2020.

Investments and improvement of quality of secondary education expenditures are programmed to double in 2021, reaching a historical maximum. Funds allocated to improving the quality of secondary education increased to 5.7 percent in total education expenditure in children, mainly due to planned allocations for the regional Vocational Educational Training Centers. This is expected to aid in occupational specialization of pupils and accelerate their school to work transition. Investments in capital projects and in infrastructure for education stand at 5.7 percent of total education expenditures on children, almost doubling compared to the plan for 2020. The increase is mainly related to construction of primary schools; construction and reconstruction of sports halls; students' dormitories and, for the first time, improving the energy efficiency of students' dormitories. While investments in development programs remain insufficient, these changes in planned spending on education and their realization are key for enhancing the quality of education.

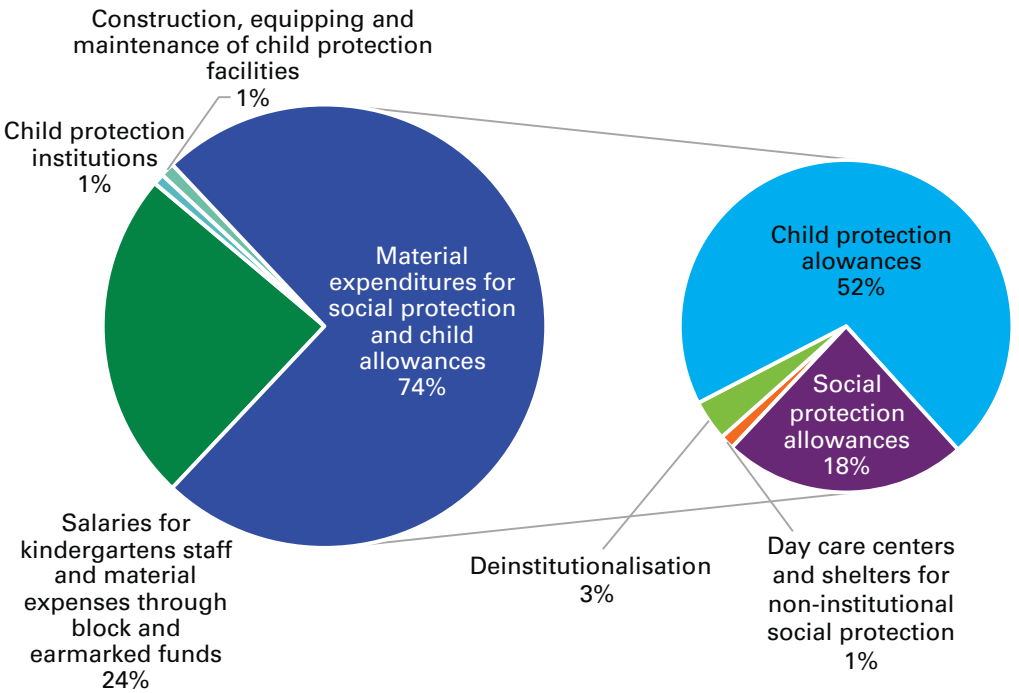
Figure 7: Structure of allocated budget funds for children, on education, 2021



Source: Ministry of Finance: State Budget for 2021.

Figure 8 presents the structure of the budget funds allocated to social protection of children in 2021. The structure is almost identical to 2020 and preceding years. Almost two thirds of the funds are intended for the allowances for social and child protection. The wages of staff in kindergartens and the material costs of kindergartens, allocated through block grants to municipalities, account for 24.1 percent in 2021, and their share in the total funds is similar to 2020. In absolute terms, in 2021 only material expenditures for social protection services (day care centers and shelters for non-institutional social protection and deinstitutionalization) slightly increased, while all major items (social protection allowances, wages and material costs through block and earmarked grants, and child protection allowances) note a downward trend. This can be largely explained by the absence of new direct child-related policies with fiscal implications among the policies aiming to combat COVID-19 consequences. As the uncertainty pertaining to COVID-19 is still high, the reduction of funds for construction, equipping and maintenance of kindergartens and centers for early children development may undermine the potential of kindergartens to further adapt and operate under the pandemic protocols. They likewise reverse the upward trend of investment in kindergartens and revert to the pre-2019 level.

Figure 8: Structure of allocated budget funds for social protection of children, 2021

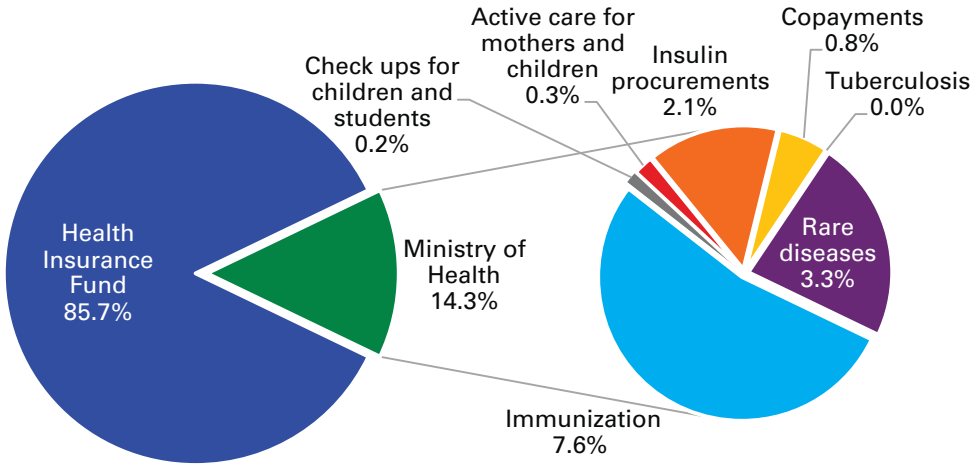


Source: Ministry of Finance: State Budget for 2021

Figure 9 presents the structure of the budget funds allocated to children's health in 2021. The Health Insurance Fund (HIF) programs account for 86 percent of the total. Although, HIF funds are projected to reduce in 2021, the total funds remain at the pre-pandemic level, and the overall structure remains intact. The immunization program is dominant in the allocated funds for the Ministry of Health (MoH), with 53 percent of the total funds for children, and the only program with higher funds in 2021 compared to 2020. This reflects the plan for COVID-19 immunization in 2021, so it is not exclusively related to children. Considering the State Budget design and the investment prioritization in the last decade, the child-related developmental component is at the highest risk of cuts and reallocation, especially investments in construction and reconstruction of preschool and school facilities, and funds aimed at raising the quality of service delivery. Additionally, there will be higher needs for additional resources (human resources, materials, soft skills, digitalization) to cope with any lingering COVID-19 effects in early childhood education, schooling and healthcare for children.

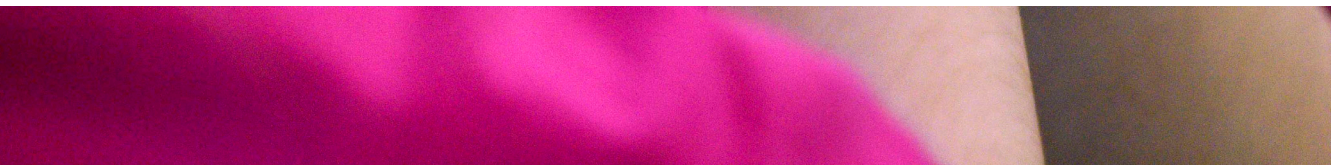
All of the above indicates that the financial pressure overall, and particularly on child-related spending and programs, will be likely intensifying, especially if the crisis extends throughout the entire 2021. The increasing financial needs in the three child-related sectors—education, healthcare and social protection—will confront a limited and shrinking fiscal space, as well as the pressure of public debt. Setting spending targets in the key child-related areas for the next years may help in the medium-term planning and in mitigating the unfavorable effects on children of the COVID-19 crisis.

Figure 9: Structure of allocated health budget funds for children, 2021



Source: Ministry of Finance: State Budget for 2021

3. SOCIAL AND CHILD PROTECTION DURING COVID-19 PANDEMIC



3.1. Protecting children from violence in the time of COVID-19

The Law on Child Protection regulates the protection of children to ensure life and development, protection against discrimination, freedom and safety, free expression, education, conditions for healthy life and other social rights and freedoms. The COVID-19 pandemic and the associated restrictive measures undermined the rights of children and disrupted the delivery of protection and prevention services by the state.

Domestic violence and violence against children. There have been indications that the restrictive measures adopted by the Government to prevent the spread of COVID-19 combined with the financial challenges due to reduced income have led to an increase in domestic violence, including child violence and abuse. This has been confirmed in many countries: Lawson et al. (2020) found that in the United States, job losses due to the pandemic have been associated with violence against children, especially psychological abuse. In France, after the introduction of restrictive measures, the number of cases of domestic violence increased by 36%,[7] while in China the increase was threefold in February 2020.[8]

In North Macedonia, victims have the options to report domestic violence to the police or to a social worker at a center for social work in any of the 30 municipalities across the country. The data from the Ministry of Interior (Table 4) show that in the second quarter of 2020, the quarter following the outbreak and with the most restrictions on movement, the number of cases of reported domestic violence in which children were direct victims more than doubled, compared to the previous pre-pandemic quarter. In the third quarter, fewer cases were reported than in the second quarter, though still more than the first quarter. The reported cases of domestic violence between spouses showed a reversed dynamic, slightly lowering in the second quarter and increasing again in the third.

Table 4: Number of cases of domestic violence reported to the police in 2020

Victim	Q1	Q2	Q3
Spouse	110	78	123
Son/ daughter	13	29	21

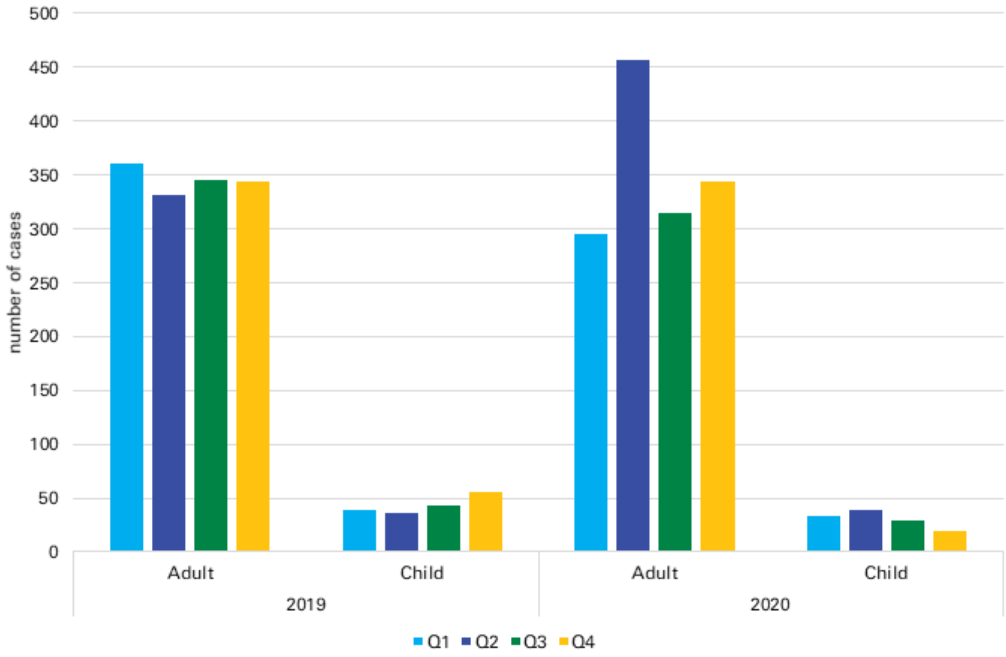
Source: Ministry of Interior

The number of quarterly reported cases of violence against children at the centers for social work (CSWs) likewise increased by 14.7 percent in Q2-2020 compared to the previous quarter (Figure 10). In the last two quarters of 2020, the number of registered children-victims decreased notably. On the other hand, the number of reported cases of violence between spouses surged in Q2-2020 by 54.6 percent compared to the previous quarter (and by 32.2 percent compared to the 2019 average), in contrast with the lower number of cases reported to the police. Thereafter, it declined but remained at a level higher than before the pandemic.

[7] French Government to House Domestic Abuse Victims in Hotels as Cases Rise During Coronavirus Lockdown: link

[8] As Cities Around the World Go on Lockdown, Victims of Domestic Violence Look for a Way Out: link

Figure 10: Number of cases of domestic violence reported at the centers for social work in 2020



Source: Ministry of Labour and Social Policy

Closure of schools and other educational institutions, coupled with other restrictive measures, forced children to stay at home and heightened social risks, such as violence, exploitation and abuse. In the first quarter of 2020 when schools were open for physical presence, the share of cases of domestic violence against children reported to the police was 5 percent of the total number of reported domestic violence cases, while in the second quarter, when students studied online, the rate almost tripled to 13.7 percent. Unfortunately, in North Macedonia, there are no statistics on the number of reported cases of domestic violence by type of reporter.

Social services for victims of domestic violence. The state, as the main provider of social protection, offers several services for victims of domestic violence, including children, such as counselling and professional support and/or temporary accommodation. Counselling and professional support service are offered in the 30 inter-municipal centers for social work, and by several civil society organizations. The temporary accommodation service is offered in the centers for women victims of gender-based violence, operating in six municipalities (Ohrid, Bitola, Sveti Nikole, Veles, Kocani and Skopje) and in two crisis centers for women victims of gender-based violence that offer day-time accommodation (Prilep and Stip). According to Petreski et al. (2020), the lack of temporary accommodation centers in the municipality where the victims live may be one important factor for non-reporting of domestic violence. In the few centers that operate, a total of 114 people (51 adults and 63 children) were sheltered in 2020, only 7.5 per cent of the total number of victims reported to CSWs. The number of people temporarily sheltered in these

centers started to decline steadily with the outbreak of COVID-19 pandemic, indicating that many victims did not want to be sheltered for fear of infection with COVID-19 (National Network to End Violence Against Women and Domestic Violence, 2020).

Exploitation of child labor. School closures and isolation of children in their homes, aside from increasing the incidence of domestic violence, can also increase the risk of child labor. Children may be burdened with additional responsibilities to aid the strained family finances suffering from the economic effects of the crisis. This risk may particularly affect vulnerable families along various axes of poverty (materially deprived, lower-educated, Roma). According to ILO/UNICEF (2020), in 2020, child labor is expected to increase for the first time in 20 years, and for every percentage point of increase in the poverty rate, child labor will increase by 0.7 percentage points. In North Macedonia, there are no administrative statistics on child labor that would permit us to track development fairly fast, yet, according to Finance Think (2021), parents reported increased reliance on their children in household agricultural work. On one hand, children were more often at home instead of attending physical schools, while on the other hand, the usual reliance on seasonal workers was made difficult with the reduced movement caused by the spread of the virus and lockdowns.

Table 5: Number of persons sheltered in 2020 in the centers for temporary accommodation of victims of domestic violence

	2019		2020	
	Adult	Child	Adult	Child
Q1	7	13	13	25
Q2	9	13	16	13
Q3	6	13	11	14
Q4	16	25	11	11

Source: Ministry of Labour and Social Policy

During the pandemic, the Ministry of Labor and Social Policy put a special emphasis on the promotion of the free of charge National SOS Mobile Line for Victims of Domestic Violence which provides 24-hour accurate, timely and confidential information on victim protection, available services and telephone counseling to victims of gender-based violence and domestic violence, particularly when the victim of domestic violence is a child.[9] The Government prepared a campaign on how to recognize various forms of violence, how victims can report violence and where to seek help during the pandemic.[10] A special video on this topic featuring the President was also prepared.[11] Civil society organizations working in this domain continued to provide various services for victims of violence, including information services, as did the international organizations and UN agencies.

[9]Reporting to victims of domestic violence: link

[10]MoLSP with a campaign for prevention and protection from domestic violence: Be encouraged, report the perpetrator!: link

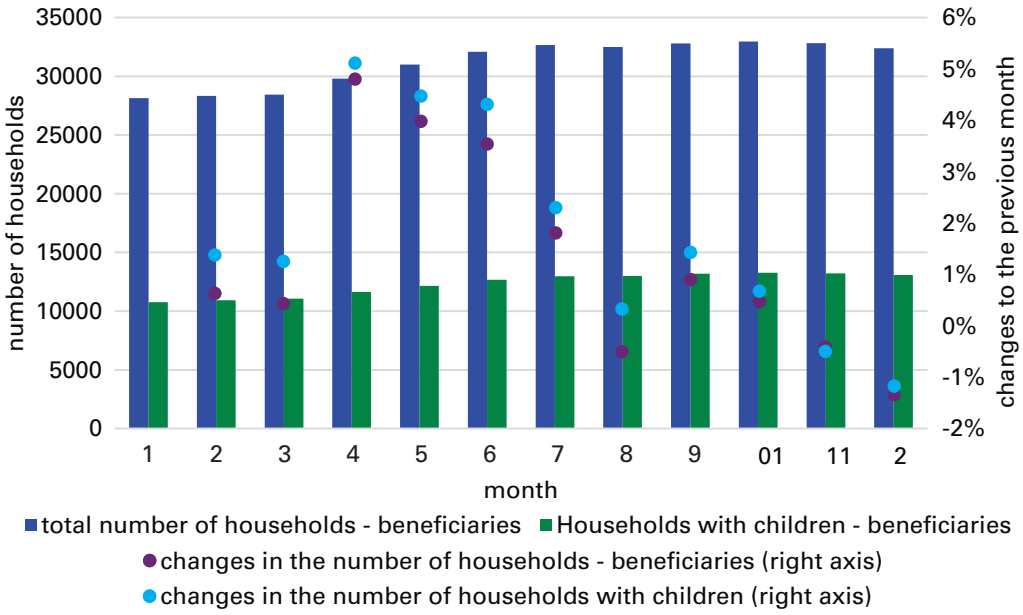
[11]Pendarovski: Zero tolerance of all forms of gender-based violence: link

3.2. Financial response of the social and child protection system to COVID-19 pandemic

The Law on Child Protection provides financial benefits for social protection of children, in the form of child allowance, special allowance, one-time financial assistance for a newborn, parental allowance for a child and education allowance. Additionally, any positive effects of guaranteed minimum assistance received by the households may be extended to the children in these households.

Guaranteed minimum assistance (GMA). According to the Law on Social Protection, guaranteed minimum assistance is granted to materially insecure households whose average income in the last three months is lower than the GMA threshold set at MKD4,000 multiplied by a coefficient based on the household size. To protect citizens who experienced income fallouts during the pandemic, on 3rd April 2020, the Government adopted a Decree which envisaged an assessment of GMA eligibility based on the income from the last month instead of the last three, as well as relaxing the real-estate ownership criteria. This enabled a rapid entry of 1,366 households, of which 566 with children, into the GMA system in the same month. Then, the number of GMA beneficiaries continued to grow, reaching almost 33,000 households in December 2020, an increase of about 13 percent compared to the pre-pandemic period (Figure 11). The increase in the number of beneficiary households with children outpaced the increase of the total number of beneficiary households, reflecting the fact that the relaxation of the eligibility criteria better suited their circumstances. At the end of 2020, about 13,000 households with children received guaranteed minimum assistance, which is two thousand households more than the pre-pandemic monthly average, an increase of over 15 percent.

Figure 11: Number of households receiving of GMA in 2020

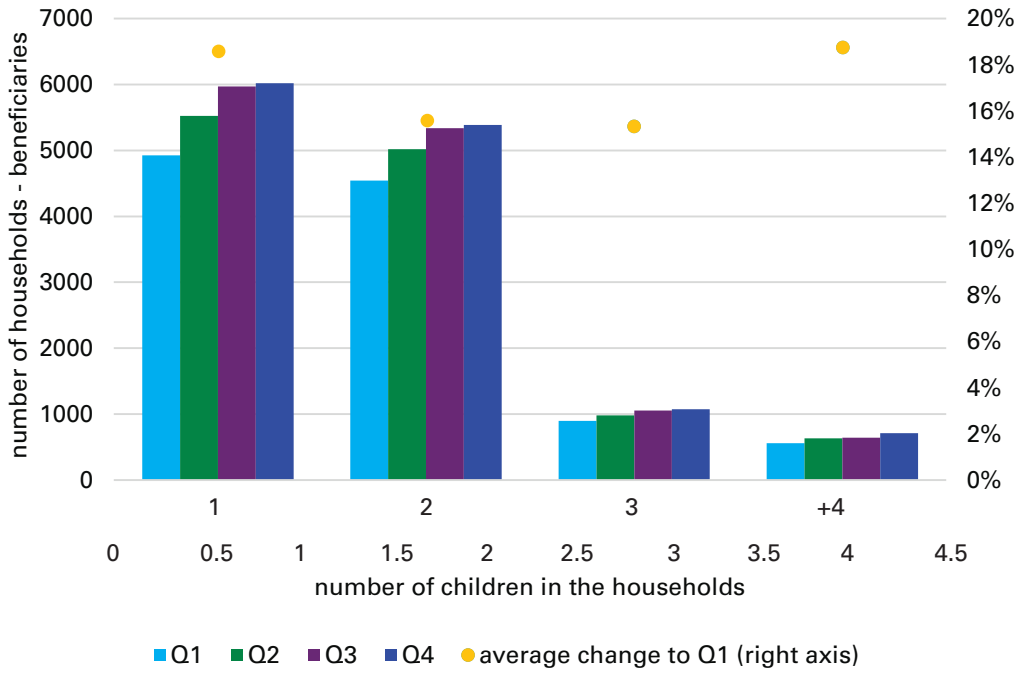


Source: Ministry of Labour and Social Policy

Households with children constituted 39.5 percent of GMA beneficiaries in 2020; most of them had one child (45 percent) or two children (42 percent). Nearly 600 GMA beneficiaries have more than four children, yet as GMA formula is limited to five household members, these households receive lower per capita assistance. On average, in 2020, GMA was disbursed to households with almost 22,000 children, which is less than 20 percent of children living in relative poverty.[12] Figure 12 shows that, in the first three quarters of 2020, the number of households with children eligible for GMA increased steadily, as opposed to the number of households without children that increased only in the last quarter.

In 2020, EUR43.2 million were spent on GMA. The largest quarterly growth was recorded in Q2-2020, when the amount spent increased by 7.4 percent, while growth deceleration is observed in Q4-2020 (Figure 13). The annualized cost for GMA increase due to the relaxed eligibility criteria is estimated at 72.7 percent of the potential of the measure which according to UNICEF/ Finance Think (2020) amounts to EUR6.6 million.[13] A possible factor of the underutilization of this benefit is the unawareness of the poorest and most excluded households of the relaxed criteria for obtaining GMA.

Figure 12: Number of children in households with GMA beneficiaries in 2020

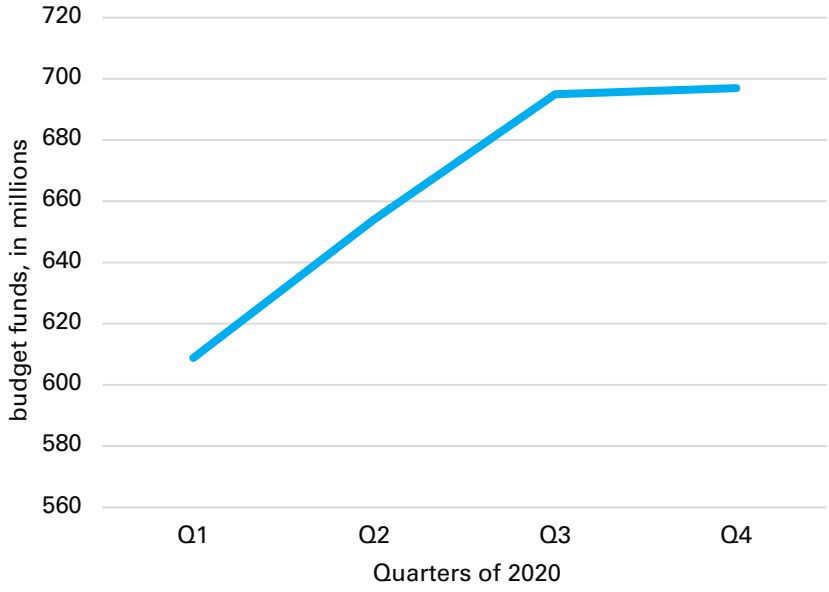


Source: Ministry of Labour and Social Policy

[12]According to the State Statistical Office (SSO) population estimates, the number of children 0–17 in 2019 in North Macedonia has been 407,865. With the child poverty rate of 27.8%, this results in 113,386 children living in poverty.

[13]The potential is assessed as total expenditure if all eligible persons applied for GMA.

Figure 13: Budget spending on GMA in 2020

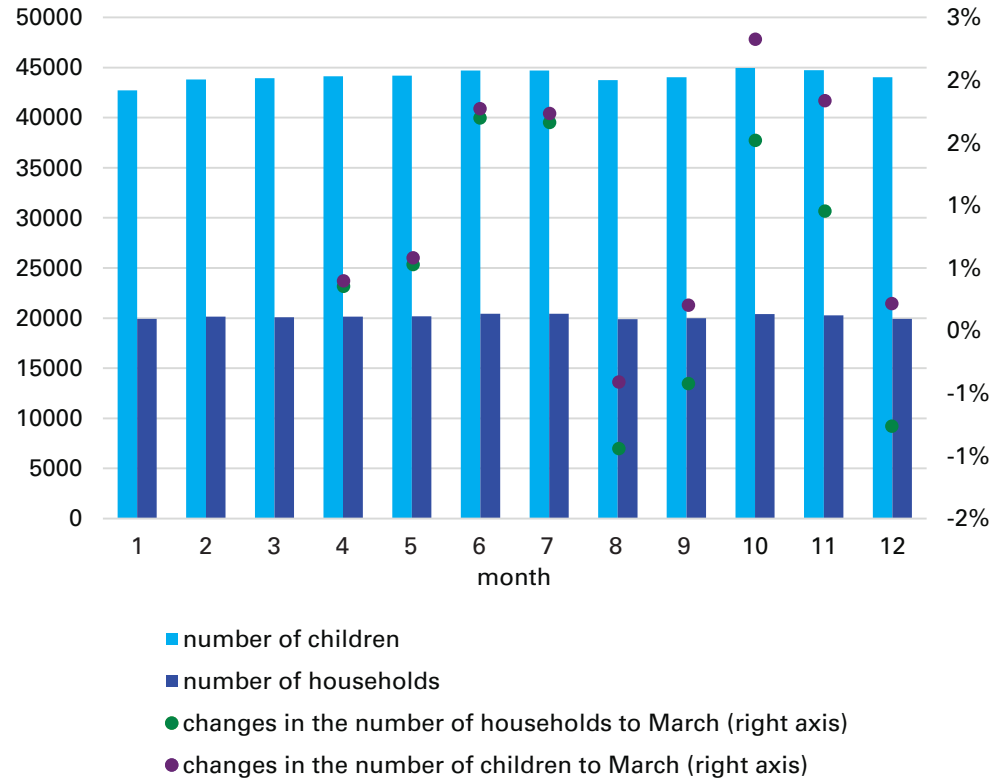


Source: Ministry of Labour and Social Policy

In order to protect households facing reduced or lost income in times of crisis and embed elements of shock responsiveness in the system, in December 2020, the Parliament amended the Law on Social Protection, transposing relaxed conditions for acquiring the right to GMA from the April 2020 Decree making them generally applicable in emergency circumstances. This includes the automatic relaxation of the eligibility criteria for GMA, relaxation of the administrative requirements imposed on beneficiaries, as well as prolongation of the energy supplement to cover all the months in the year – even outside of the heating season. These legal amendments have been in line with the recommendation of Finance Think (2020b).

Child allowance. It is awarded to households for covering the costs of raising a child if the average household income in the last three months is below MKD6,800 multiplied by a coefficient determined by the household size. The negative influence of the pandemic on household income led to an increase in the number of beneficiary households, which peaked in June. The number of beneficiaries of child allowance is slightly above 40,000, of which 75 percent are school-age children and 25 percent under the age of 6 (Figure 14).

Figure 14: Number of beneficiaries of child allowance in 2020



Source: Ministry of Labour and Social Policy

On average, 1,100 single-parent households receive child allowance, while over half of the households receiving child allowance are also beneficiaries of guaranteed minimum assistance. A significant increase in the number of households receiving both GMA and child allowance has been recorded in June 2020. As child allowance is subject to means-testing, the increase in the number of beneficiaries in June shows that the effect of the crisis on family budgets peaked three months after its start. In 2020, EUR5.7 million have been spent on child allowance, with the average amount per beneficiary being almost MKD1,500 per month.

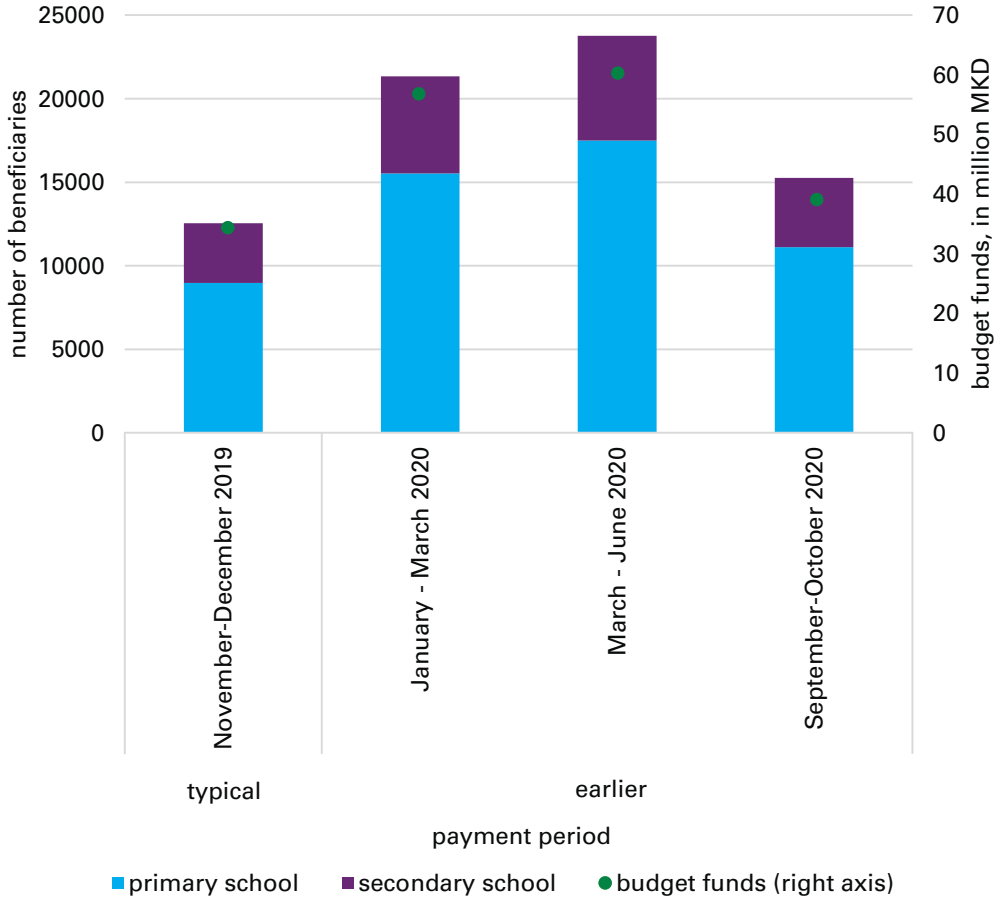
Education allowance. It covers the costs of education in the households eligible for GMA (with children) and for child allowance. The allowance is conditional on the attendance of at least 85 percent of the total number of instruction hours. With the Decree for application of the Law on Protection of Children in state of emergency, adopted on 3rd April 2020, the Government abolished this condition for the school semester between January 20 and June 10, 2020. Education allowance is paid out in four equal instalments – in the months of February, May, July and December –of MKD2,100 for children in primary and MKD3,000 in secondary education per quarter.

During the COVID-19 outbreak in March 2020, the Government advanced payments a month earlier than scheduled.

Figure 15 shows that the number of education allowance beneficiaries almost doubled with the first early payment when the requirement for 85 percent attested attendance was suspended. The early payments helped relieve the pressure the crisis exerted onto recipients. The number of beneficiaries increased proportionally between primary- and secondary-school pupils during these two periods; the number then declined in the last payment period, yet levelling higher than in February 2020.

The annual cost of the education allowance has been EUR3.1 million in 2020, with the average cost per person being MKD10,000 per year.

Figure 15: Number of beneficiaries and budget expenditure on education allowance in 2020



Source: Ministry of Labour and Social Policy

4. IMPACT OF COVID-19 ON CHILD POVERTY

Child poverty correlates with the employment status of parents, so economic downturns heighten child poverty risks. Even when a parent is employed, low work intensity, low pay, informal work and, in general, vulnerable employment may enhance the risk for a household to be easily thrown into poverty. Such households are unlikely to handle well an income loss associated with COVID-19. It is critical for the governments to intervene quickly and rescue income fallouts, thus enabling families to function properly and be able to support children in time of crisis such as is the current pandemic (Diwakar, 2020).

In UNICEF/Finance Think (2020) we simulated the evolution of child poverty based on a couple of assumptions on the developments of wages, self-employment, social and one-off income of households. At the time, we based our assumptions on the extent to which sectors of economic activity were hit by the COVID-19 crisis, following a survey used in ILO/EBRD (2020). Since then, an abundance of information on the actual effect of the crisis has emerged and we rely on it to make a more precise assessment of the child poverty evolution.

4.1. Methodological approach

This assessment of child poverty under COVID-19 uses the MK-MOD Tax and Benefit Microsimulation Model for North Macedonia. MK-MOD allows for simulations of social assistance, child allowances, unemployment benefits, direct taxes and social security contributions. For the purpose of the modelling exercise in this study, we rely on a limited set of features of MK-MOD. We simulate wages from employment; income from self-employment; their associated tax and social contributions wedges; and finally, guaranteed minimum income and child and educational allowances. The following categories of income and associated taxes are not modelled but are taken as reported in 2019 SILC: income from capital (rents and dividends); pensions; unemployment benefits; and inter-household cash transfers. Income from capital changed between 2019 and 2020, as the taxation of dividends reverted back to 10 percent from the 15 percent flat rate introduced in 2019. The pension contribution rate was increased by half a percentage point. However, we assess that the former is mainly associated with the richer segments on the income ladder and that the latter has negligible effect on wage income. Thus, we ignore both changes in the context of child poverty analysis.

As in UNICEF/Finance Think (2020), we do not model the unemployment benefit, because MK-MOD is a static model that does not observe transitions from employment to unemployment. Secondly, a major reform of the social assistance system was enacted in May 2019, and it is now captured in SILC 2019, which was not the case with SILC 2018. However, since the reform was implemented half way through 2019, and given that it is reasonable to assume that there was a time-lag between implementation and its effects on the beneficiaries, the simulated changes will, again, combine the effects of the 2019 reform and of the relaxation of the cash benefits eligibility criteria in response to COVID-19. Unlike the original UNICEF/Finance Think (2020), we do not elaborate this aspect in the present update.

In order to simulate the effect of COVID-19 on household incomes, we use parameters of how incomes behaved during the pandemic from another survey, namely, the Labor Force Survey (LFS), which is conducted quarterly in North Macedonia.[14] At the time of writing of this update, LFS Q1-Q3 was published. LFS has two key income sources: from wages and from self-employment. Therefore, we make use of the observed changes over Q1-Q3 of 2020, compared to 2019, to capture the actual effect of the crisis.[15]

We check the general validity of our procedure by comparing the behavior of wage and self-employment income from LFS and after that we conduct the simulation in SILC. The results are presented in Table 6. In general, the simulated changes are of a comparable magnitude with the observed changes, which proves satisfactory robustness of the approach.

The simulation of the guaranteed minimum assistance (GMA) is based on the assumption that the removal of the income from rent component as criterion mimics the relaxation of the eligibility criteria. On the obtained number of GMA recipients, we simulate the extension of the energy supplement from 6 to 12 months. More importantly, the losses in wage/self-employment income increase the number of households eligible for GMA (the so-called, automatic stabilizers); the means testing was done on income in the last month, instead of the last three, but over time this lost general importance given that the crisis has already lasted for 10 months by the time of writing.

Table 6: Simulated versus observed changes in wage and self-employment income during COVID-19 pandemic

	SILC (simulated)	LFS (observed)
Wage income	5%	9.8%
Self-employment income	-11.6%	-10.7%

Source: Authors' calculations based on SILC 2019, LFS 2019 and 2020, and MK-MOD

[14]This is different to UNICEF/Finance Think (2020) where we made assumptions regarding income which always includes a degree of subjectivity

[15]We use this information in the following way. For wages, we define a cell by the branch at two-digit NACE Rev.2 (a total of 89 branches), sex (males and females) and age group (youth 15-24, adults 25-49, elderly adults 50-64), which leads to 534 cells. Then, for each cell – e.g., employees in computer programming who are young and male – we calculate the total income from wages in the observed periods: 2020 (first three quarters, scaled to reflect the year) and 2019 (entire year). For each cell, we obtain the change in wage income between the two periods. For the cells for which the number of employees in 2019 has been less than 1,000, we arbitrarily assign a no-change number of wage income, because such small cells face large standard errors, and the actual numbers may be driven by particular observations.

For self-employment income, we calculate the changes in income for 21 sectors at one-digit NACE Rev.2. Hence, we apply the same approach, but our cells here are aggregately defined, since splitting the sample of self-employed further than this leads to large standard errors.

Therefore, we have at our disposal the observed changes during the pandemic in wage income in 534 cells and observed changes in self-employment income in 21 cells. We use them to simulate how the income observed in 2019 SILC potentially behaved during the pandemic of 2020.

Finally, we simulate one-time cash assistances that the government pursued on two occasions:

- In May 2020, assistance of MKD9,000 to persons older than 18 living in households receiving social assistance (GMA and other allowances) and to active registered job seekers; one-time cash assistance of MKD3,000 to employees whose income originates solely from employment and which did not exceed MKD15,000 monthly; and one-time cash assistance of MKD3,000 to regular public education pupils and students aged 16–29.

- In December 2020, the one-off support was aimed at the passive jobseekers with low income (not exceeding MKD15,000 monthly in 2020);[16] pensioners with pension income lower than MKD15,000 monthly; and some other specific categories (like film artists, singers, etc.).

4.2. Simulation

Based on the methodology and assumptions outlined above, a new set of household income data that we call "post-COVID-19 scenario" was produced. Based on these data, the post-COVID-19 child poverty rates were calculated taking into account the differential effects of wage income, self-employment income, social transfers income, and one-off payments. We have also disaggregated child poverty rates by some individual and household characteristics.

Table 7 presents the effects of COVID-19 on child poverty by contrasting 2019 headline child poverty rates with the post-COVID-19 estimates. Three child poverty indicators are used: the relative one based on the share of the child population living in households whose income has fallen below the 60th percentile of the median equivalent income; and two absolute poverty rates – extreme-low and upper-middle-income poverty thresholds. For the discussion of caveats related to the poverty lines used see UNICEF/Finance Think (2020). Columns (2)–(5) refer to the impact of each factor on the pre-COVID-19 poverty rate, considered separately, while column (6) presents the simulation of the impact of all four factors taken together. COVID-19 is projected to strongly affect child poverty. The relative poverty rate is estimated to have increased from 27.8 percent before the pandemic to 32.4 percent during the pandemic. This increase of 4.6 percentage points (0.6 percentage higher than UNICEF/Finance Think, 2020 projection), would put additional nearly 19,000 children in North Macedonia below the relative poverty threshold.[17] Results further suggest that absolute poverty is likely to reduce primarily because of the automatic stabilizers in the case of social assistance and because of the one-time cash assistance.

[16] However, as mentioned in UNICEF/Finance Think (2020), we did not have a technical way to disentangle active and passive jobseekers and, hence, part of them were captured even then.

[17] According to SSO population estimates, the number of children 0–17 in 2019 in North Macedonia was 407,865.

Table 7: COVID-19's effect on child poverty

	Pre-COVID-19	Post-COVID-19				
		Individual impact of considered factors				
	Actual 2019	Impact of wage income decline (incl. informal wages)	Impact of self-employment income decline	Impact of social assistance relaxation	Impact of one-time cash assistance	Assessment for 2020
	(1)	(2)	(3)	(4)	(5)	(6)
Relative poverty (below 60% of the equiv. median income)	27.8%	30.9%	31.3%	28.4%	28.3%	32.4%
Absolute poverty, below extreme-low-income threshold	1.5%	2.1%	2.8%	0.5%	0.4%	0.6%
Absolute poverty, below upper-middle-income threshold	8.1%	8.5%	9.3%	8.1%	7.1%	7.5%

Source: Authors' calculations based on SILC 2019 and MK-MOD.

This reassessment highlights some interesting changes compared to UNICEF/Finance Think (2020).[18] The impact of changes in wages, as in earlier analysis, to a great extent reflects the impact of "MKD14.500 per worker" measure, given it ultimately resulted in overall increase of wage income in the first three quarters of 2020 compared to the 2019 average. However, the increase of child poverty when developments of wage income are solely considered suggests that the distribution of the measure has been such as to less favorably affect households on the left of the wage income distribution. This corroborates the notion that households with more children are facing lower work intensity and higher poverty incidence, and that they more frequently rely on social transfers income than other households. This indicates that the poverty-aggravating effects of the crisis for such households were not alleviated by employment-retention measures. The impact of the self-employment income changes on child poverty was slightly stronger than our projection in UNICEF/Finance Think (2020): an increase in relative poverty of 3.5 p.p.

[18]Note that in columns (4) and (5) of Table 6 relative poverty increases because this is a simulation associated with a random error commonly associated with quantitative analyses. While the policy measures simulated in these two columns affect predominantly the poorer segments of the population, still such changes may slightly affect the median income that is used when setting the relative poverty line.

as compared to projected 3.1 p.p. This is mainly due to the fact that the self-employment income possibly declined more than our earlier assumptions and/or that the sectoral distribution of the self-employment income decline (which was not considered in our 2020 analysis) accounts for the differential effects on households with different numbers of children.

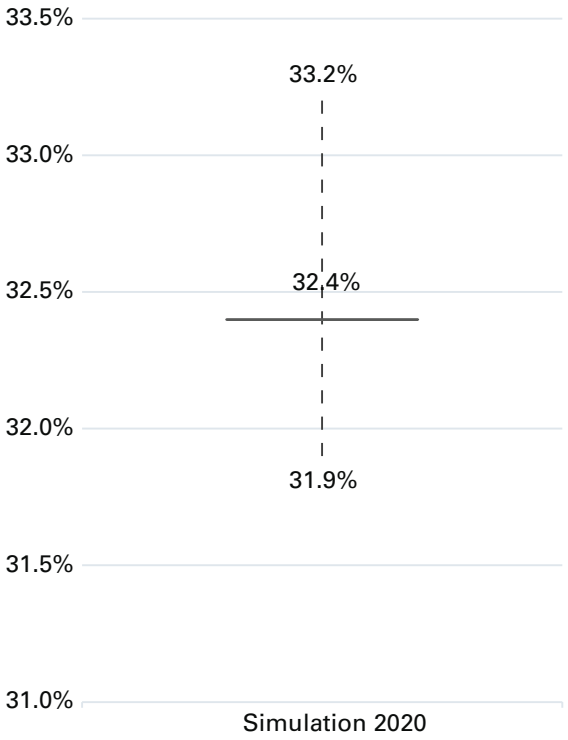
We currently assess that the relaxed GMA criteria have had a slightly stronger effect on reducing absolute poverty than initially estimated in UNICEF/Finance Think (2020). This is likely driven by the social assistance reform being better reflected in SILC 2019 than in the initial simulation based on SILC 2018. It is interesting to note that the relaxed GMA criteria target quite well the poorest of the poor, as extreme poverty reduces to a third of its pre-pandemic level. Finally, the effect of the one-off support is better than our initial estimation, however this is entirely driven by the second wave of the support which covered the inactive working-age population and low-pension retirees. Overall, the aggravated impact of lost self-employment income is compensated by the more favorable effects from social transfers, including one-off support.

These estimates assume that the effect of the COVID-19 crisis in the fourth quarter of 2020 will follow the pattern of the first three quarters. This may be a reasonable assumption, given that the "MKD14.500 per worker" measure was repeated in October 2020. Even though it had a narrower targeting, it nonetheless helped to sustain incomes and jobs. Self-employment income may have declined similarly to the trend in the previous quarters, given some types of small businesses – such as wedding restaurants, playrooms and language schools – remained closed, while others – such as restaurants and cafes – continued to face restrained demand.

The government's fourth package of response measures also included small grants for the small businesses that remained shut, but it is more likely that they would be used for covering the accrued fixed costs (most notably rents) than for self-employment income. Given these uncertainties related to income developments in Q4-2020, we introduce a confidence interval of 20 percent on both sides and re-calculate the total relative poverty.

Figure 16 presents the results and suggests that regardless of whether the impact of COVID-19 on income will lessen or increase, the estimated number of additional children facing relative poverty is expected to rise significantly during the pandemic. Namely, if the crisis impact in Q4-2020 is 20 percent lower than the overall impact in 2020, then the child poverty rate would have subsided to 31.9 percent; and if it was 20 percent higher than the overall impact, then the child poverty rate would have increased to 33.2 percent. With this interval, the number of children thrown into relative poverty due to the COVID-19 crisis lies between 17,000 and 22,000.

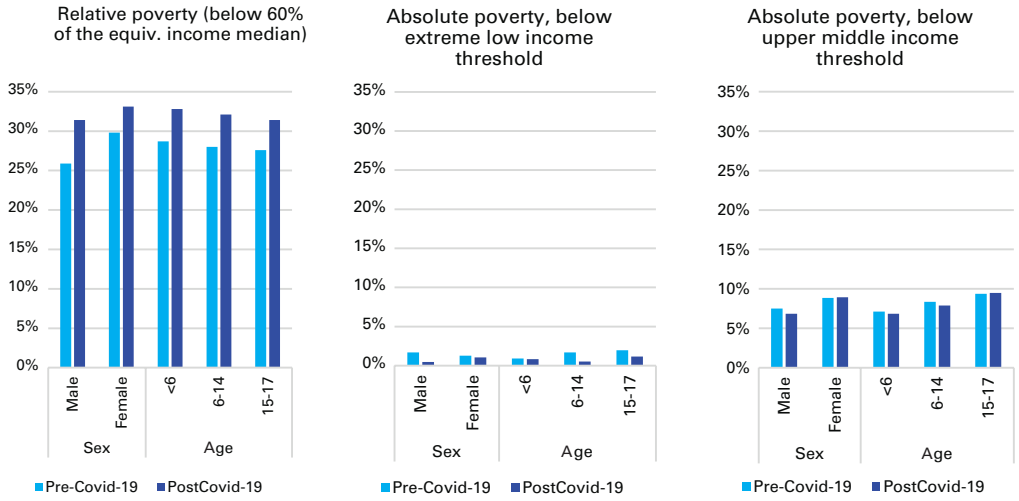
Figure 16: Uncertainty around the relative child poverty rate estimate (2020)



Source: Authors' calculations based on SILC 2019 and MK-MOD.

We proceed by disaggregating the COVID-19's effects on child poverty by individual and household characteristics. Generally, the findings are aligned with UNICEF/Finance Think (2020), with some structural differences. Figure 17 presents child poverty rates by gender and age of the child. Girls fall into poverty more frequently than boys, but in terms of relative poverty, the pandemic affects boys disproportionally stronger than girls. Conversely, boys experience more favorable effects of expanded social transfers on extreme poverty. In 2020 we found fewer differences between the sexes. In terms of age, COVID-19's effect is spread among all the sub-categories. The relative poverty surges by about 4 percentage points, while the absolute poverty rate at the upper-middle-income threshold declines for the 0–5 and 6–14 sub-groups.

Figure 17: COVID-19's effect on child poverty, by gender and age

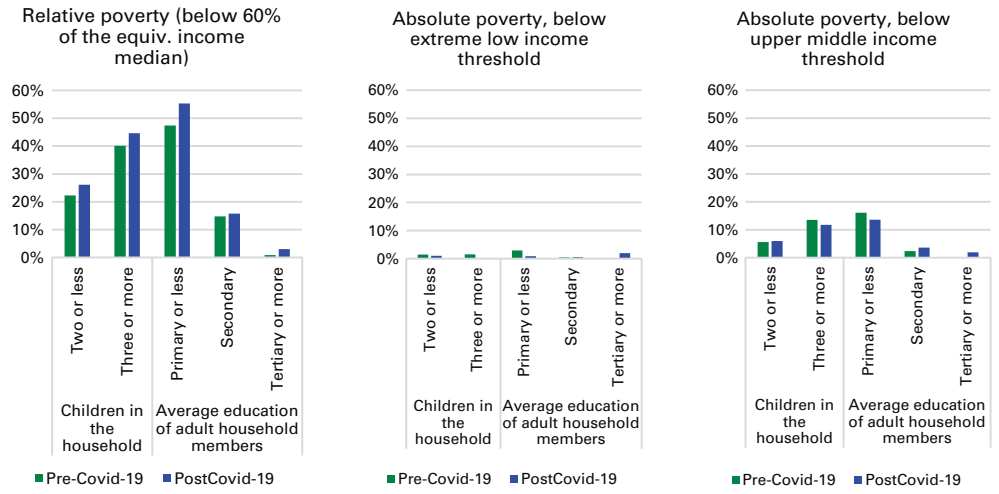


Source: Authors' calculations based on SILC 2019 and MK-MOD.

Figure 18 looks at two household characteristics: whether the household has 3 or more children, and the average education of the adult members. The relative poverty of children in multi-child households is astonishingly high, and COVID-19 aggravates it. However, unlike in our earlier findings, the poverty increasing effect of the pandemic is not tilted towards households with 3+ children; quite the opposite, extreme poverty is more intensively eradicated among such households. Child poverty is significantly more prevalent in households where the average education is primary or less, and COVID-19 further intensifies it. On the other side of the spectrum, when adult members of the household have an average of tertiary or higher education, child poverty grows post-COVID-19 but remains very low. However, the relaxation of social assistance eligibility criteria and the one-off aid have likely properly targeted those with high intensity of poverty, i.e., households with 3+ children and with low average education, as it is likely that they were at the same time the households with no or low work intensity, which constituted eligibility for such assistance.

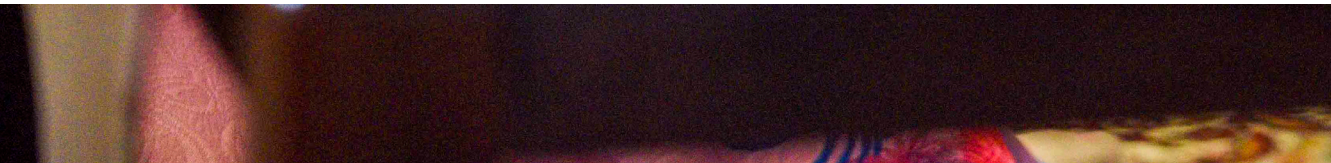
In the first few months after the onset of

Figure 18: COVID-19's effect on child poverty, by household characteristics



Source: Authors' calculations based on SILC 2019 and MK-MOD.

5. LEARNING DURING PHYSICAL SCHOOL CLOSURES



the pandemic, North Macedonia made a fast transition to distance learning and quickly provided modalities for sharing teaching materials and individual lectures (the TV Classroom and EduIno portal), although the organization of distance learning was left to individual schools and even teachers, which created unequal learning opportunities, more often than not to a disadvantage of children in poor households, Roma children and children with disability (UNICEF/Finance Think, 2020). As the pandemic continued to take its toll, educational authorities took executive decisions pertinent to the functioning of the educational system and the child-care system. The Ministry of Education and Science (MoES) adopted a Concept for the development of distance education system in the primary and secondary schools (MoES, 2020), focusing on three pillars of the distance learning process: education policy; technical support/educational technology and pedagogy. For better integration of distance learning within the regular curriculum and work of schools, the Concept proposed changes to the Laws on Primary and Secondary Education, but the adopted amendments allow distance learning only in special circumstances and emergencies (like pandemics, natural hazards, etc.).[19]

In September 2020, the Government postponed the start of the school year to the 1st October 2021, to enable better preparation for instruction during the pandemic. A working group with members from the MoES, MoH and the Office of the President was formed to assess the readiness of primary and secondary schools for physical presence of pupils.[20] It granted permission to 162 primary schools and 4 upper secondary schools for teaching with full physical presence, and to 10 upper secondary schools for partial physical presence. In addition, permission for physical presence was granted to pupils with disabilities in the special schools, considering the difficulties they faced with distance learning.[21] Special Plan and Protocols were drafted to ensure the safety of pupils and staff within the schools.[22] According to the Plan, a minimum of 1.5 meters distance between pupils should be ensured in classrooms, and schools should ensure that children have minimal contacts during breaks. All classes, physical and distance-learning, would last for 30 minutes with breaks of 5 minutes and one longer break of 15 to 20 minutes. Parents of children going to grades 1–3 of primary school—in the schools that had been granted permission for physical presence—could choose between physical presence and distance learning. In September 2020 the National Platform for distance learning[23] was launched in an effort to provide a unified approach to distance learning delivery for all schools and all pupils in the country.

[19]Amendments to the laws on primary and secondary education have been passed, teaching will take place smoothly and in times of emergency: link

[20]From the 82nd session of the Government: Protocols for physical education in primary and secondary schools adopted; The Ministry of Education and Science is in charge of changing the calendar for the beginning of the school year on October 1: link

[21]The government approved physical attendance in 169 schools: link

[22]Plan and protocols for acting of the primary and secondary schools for realization of the educational process with physical presence of the students in the academic year 2020/2021: link

[23]https://schools.mk/

The previously launched TV Classroom and EduIno platform continued to be used as valuable resources in teaching and learning. The issues that the educational system faced during the distance learning process in the second half of 2020 will be elaborated in the text below.

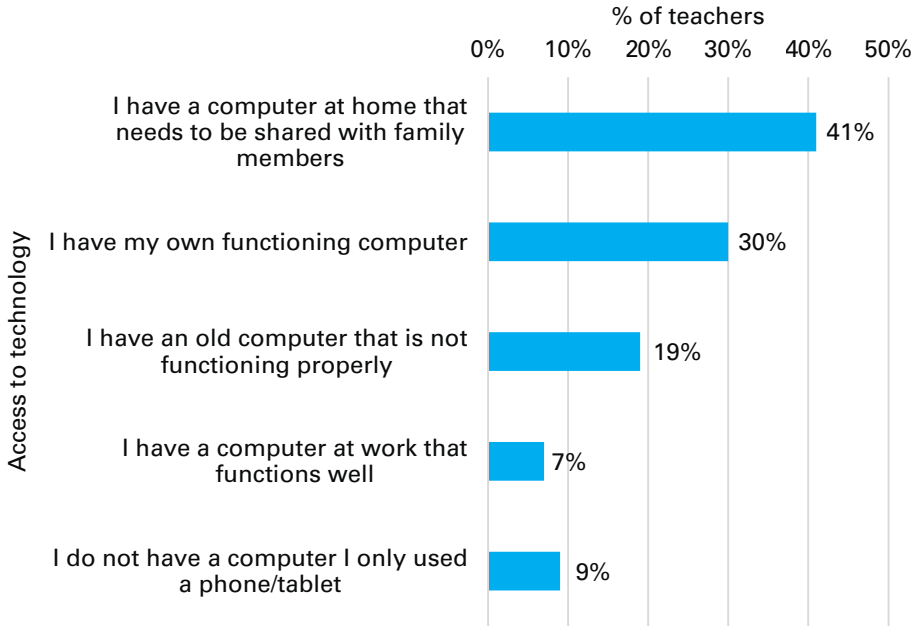
The Government also decided to open the preschools, while the provision of paid parental leave for children up to 10 years old during the pandemic stopped at the beginning of September 2020. Special protocols for the preschools were adopted, and the number of children capped at 15 children per group (for children aged 2-10 years) and 12 children per group (for children up to 2 years of age).

5.1. Access to education during COVID-19 pandemic

One of the most important aspects of supporting schoolchildren and enabling learning is providing access to education. Given that inequalities in access to educational and early learning resources were observed prior to and in the early stages of the pandemic (UNICEF/ Finance Think, 2020), it is important to understand what obstacles children faced during the pandemic. Access to education is a multi-faceted issue that includes access to technology and educational resources conducive to learning for all pupils and teachers, as one of the aspects of access to education alongside conducive learning environment, quality of learning and other individual and environmental variables. Therefore, this analysis looks at the availability of internet, technology and other educational resources for both teachers and pupils during the pandemic, as well as methods and modalities of learning and ways of helping children learn during the pandemic.

A number of studies pointed out the access to education issues faced by schools, teachers and pupils. MoES, UNICEF, UKAid and Reactor (2020) surveyed a large sample of teachers (6,362) school principals (209), parents (3394) and a small sample of pupils (122). Principals stated that a small number of school-teachers had difficulties in access to internet/computer, and this was more of an issue for rural schools (reported by 76 percent of principals) than for urban schools (68 percent). Some teachers did not have access to the needed equipment (e.g., computers) to successfully organize distance learning, and the same issue existed among the families of the pupils attending school. This is corroborated with the findings, presented in Figure 19, which show that the majority of teachers had to share a computer with other family members, or had an old dysfunctional computer. About a tenth of the teachers reported not having a computer at all and only using a tablet or phone to interact with the pupils. In addition, a large share of teachers (42 percent) had problems with unstable or limited internet access.

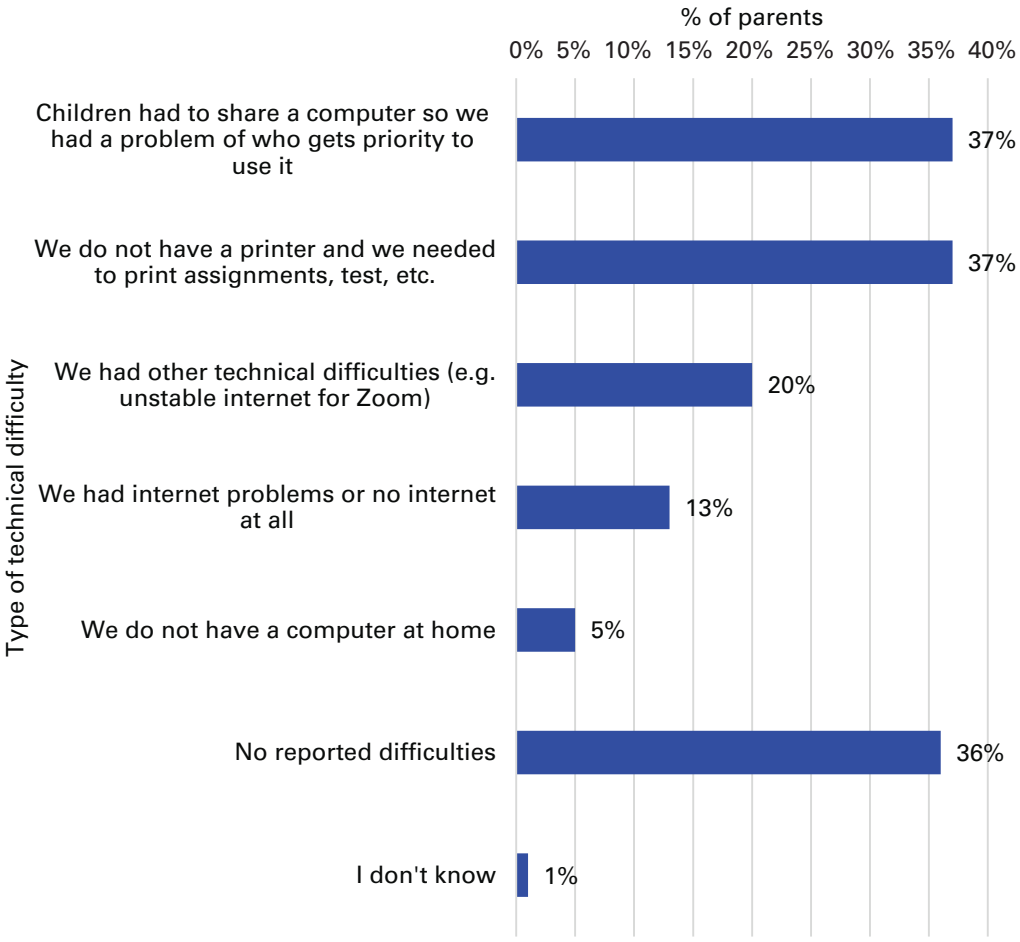
Figure 19: Teachers' access to technology



Source: MoES, UNICEF, UKAid and Reactor (2020).

The majority of teachers stated they faced difficulties in reaching pupils and parents (77 percent), with a third of them not being able to establish contact at all and 44 percent having difficulties at the beginning and then establishing some form of contact. According to the teachers, an important problem for pupils was the sharing of the computer with siblings (37 percent in secondary and 45 percent in primary school). Parents pointed out the same problem with the sharing of equipment (Figure 20), yet revealing that it was only a part of a palette of problems: lack of printer needed for the assignments, internet connectivity issues and lack of computer. The issue of access to education was particularly prevalent among Roma pupils and pupils from low-income families that did not have the equipment to follow distance learning. Pupils with disability also faced access problems due to lack of assistive technology at home or having a disability that stopped them from spending too much time in front of a screen.

Figure 20: Technical difficulties as reported by parents



Source: MoES, UNICEF, UKAid and Reactor (2020).

Another survey (Metamorphosis, 2020) of teachers, principals and professional support staff (750 participants in total) also points out that the educational process was severely impacted by the inadequate access to technology. Namely, almost half of the teachers stated they used their own laptops within the school premises for school duties, a third stated that the school did not have internet connectivity and they had to use their own mobile phone internet access, and another third reported that internet access was only available in one room within the school.

These findings are corroborated by a study of school principals of 48 schools from 10 municipalities. Schools in the rural municipalities, particularly, face issues with technical infrastructure: 77 percent of their computers were dysfunctional and the last investment in such infrastructure was done in the period 2006–2012 (Mitevski et al. 2020). A study done by MoES (2020) with regard to distance learning concluded that the schools' technical equipment and internet access might not be adequate for distance learning. Hence, schools may need assistance

to create the necessary physical and technical conditions to provide support to teachers and pupils in distance learning. At the beginning of the school year (October 2020), MoES enabled schools and municipalities to sign contracts with the best local provider of internet access (instead of one centralized provider) to remedy the situation with internet speed at schools.

Few studies drew attention to the lack of electronic materials that can be used during distance learning. Metamorphosis (2020) highlighted lack of electronic materials on the languages of the smaller ethnic communities. Dzigal (2020) suggests that the country has underutilized electronic platform for textbooks that can serve as resources for distance learning, but that it was not optimized for searching and that parts of textbooks were missing, so it is not completely functional as a distance learning resource.[24] Indeed, more than half or school principals (58 per cent) and a majority of teachers (64 per cent) accentuated the need for online content of the material covered in the syllabus, as well as for digital textbooks (56 per cent of the teachers) (MoES, UNICEF, UKAid and Reactor, 2020). EduIno platform is, thus, a valuable national resource for digital materials. The platform is being constantly updated with new materials and contains video lessons for preschool, primary and secondary schools, resources for teachers aimed at enhancing the teachers' skills and capacities for the distance learning process (video tutorials with different guidelines and webinars). In March 2021 it contains 3,003 videos for primary schools and 456 videos for secondary schools. There have been 8,140 lessons presented in the TV Classroom as part of the efforts of the platform to support the distance learning process. The YouTube channels connected to the platform have 12,701 subscribers for the primary school channel and 446 subscribers for the secondary school channel. There are over 19 million impressions for the primary school videos (with 3.7 million views), and 396 thousand impressions (with over 48,000 views) for secondary education. The platform prompted a high number of teachers to get involved in preparing video lectures: 1,381 teachers from primary and 225 teachers from secondary schools responded to the 5 open calls for developing video lectures.[25]

This makes the platform a very rich resource supporting the learning of primary and secondary education pupils. However, it has to be noted that the materials are predominantly in Macedonian and Albanian, hence leaving pupils with other languages of instruction with unequal access to learning materials. In addition, the materials have limited accessibility and functionality for children with special needs.

To remedy the situation with access to technology for the teachers, MoES regulated that teachers will have to deliver lectures in the school premises and delegated the task of ensuring internet coverage in all classrooms to school principals. Exceptions to teaching on the school premises were allowed to: schools with very poor internet connection; schools that would register a COVID-19 case; areas exhibiting a very serious epidemiological condition. Teachers needed written approval by the principal to teach from home.

[24] https://www.e-ucebnici.mon.gov.mk/

[25] Internal data of SmartUP-Social Innovation Lab for the EduIno platform (3 March 2021).

To alleviate the financial burden of buying school supplies, the Government provided one-off financial assistance to secondary school pupils older than 16 years of age from low-income households in June 2020, in the amount of MKD3,000.[26]

In addition, various organizations, companies and individuals donated computer equipment and internet access to schoolchildren; e.g., the Foundation Open Society Macedonia donated laptops and internet access cards to 350 pupils from low-income families and technical equipment (computers, speakers, cameras, etc.) to 10 schools where the majority of pupils are from the smaller ethnic communities.[27] Help also came from individuals organizing donations of old computers and laptops through various channels and social media.[28] There were also donations of assistive technology and computers for children with disability. [29]

According to MoES data, about 35 percent of the primary-school children attended schools and around 60 percent were able to access the distance learning platform. Around 8,000 primary-school children without access to technology and internet could still follow lectures on the TV Classroom on the national TV channel and were supposed to receive printed instructions and assignments. Although the special schools were given permission for physical presence teaching, access to education for pupils with disabilities in regular schools is still questionable, as there are no data about special assistive technology being readily available at home. About 95 percent of the upper-secondary-school pupils attend distance learning. The remaining 5 percent may be at risk of a large learning loss as they do not have the alternative to follow lessons via TV (there is no TV Classroom for secondary education).

5.2. The impact of COVID-19 on education

COVID-19 has had a profound impact on the educational process in the country beyond access to education. The fast switch to distance learning without much standardization led to a number of issues arising by the end of the 2020 spring term. On the one hand, the majority of principals considered the distance learning guidelines provided by MoES, State Educational Inspectorate (SEI) and Bureau for the Development of Education (BDE) to be clear or very clear (MoES, UNICEF, UKAid and Reactor, 2020). However, over a third of them were not given any guidelines or the guidelines were not specific enough, leaving a number of decisions to be made by the principals and teachers. On the other hand, the majority of the teachers stated they did not receive clear guidelines from MoES, BDE and SEI, while just over half of them received guidelines from their professional support staff (54 percent). The qualitative data uncovered the frustration of teachers by the lack of guidance, which at times created not only difficulties, but plain confusion. Around a fifth of the principals stated that the school could not adhere to the class schedule and, although most of them stated that teachers had guidelines on the available platforms (78 percent) in most schools (56 percent), there was a diversity of platforms used by the teachers.

[26] Decree for students from public high schools: link

[27] FOSM with support for crisis management and implementation of online teaching: link

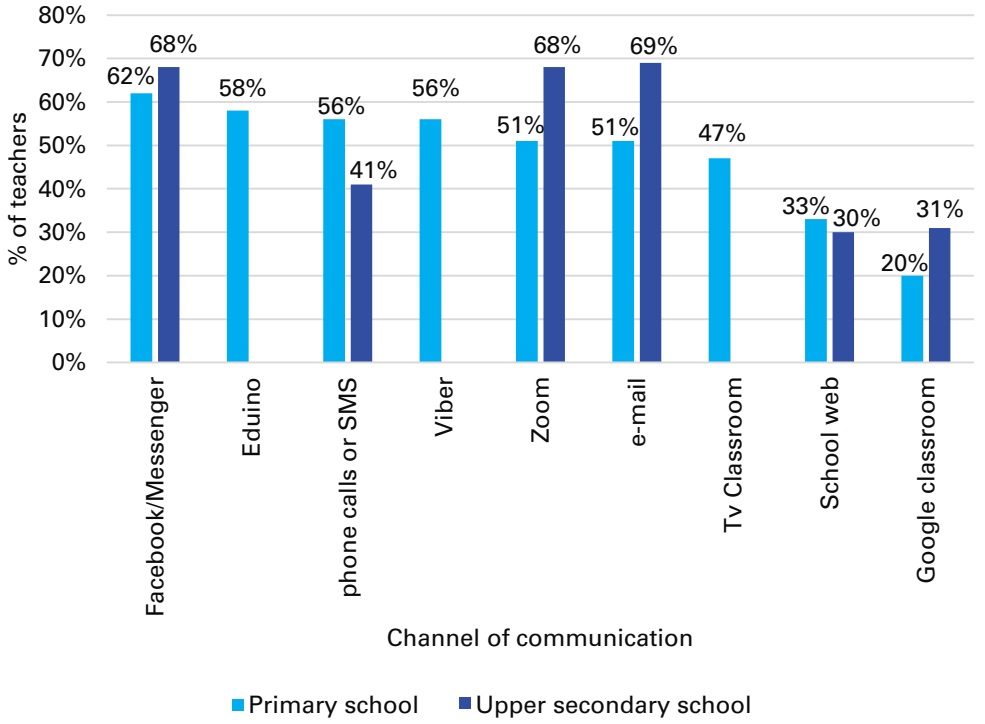
[28] For example: https://donirajkompjuter.mk/; Carovska: Over 90 percent of students successfully attend online classes:link; The heroes of the new age give away computers and school supplies: link

[29] Provided 56 tablets and 14 computers for students with special needs: link

According to the teachers, there were disruptions in the school schedule without clear boundaries between schoolwork and free time (42 percent in secondary and 33 percent in primary schools). Most pupils said teachers did not adhere to the class schedule (77 percent). This has led certain stakeholders to perceive distance learning as chaotic and the majority stressed the need for a unified national platform for distance learning. Experiences of parents varied from one school to another, and 16 per cent of them with more than one child reported a distinct experience with each of their children. Another study (Metamorphosis, 2020) found that 41 percent of teachers were not prepared for distance learning. This may suggest that more attention needs to be paid to teacher training for distance learning.

The lack of standardization and guidelines in the spring term of 2020 resulted in teachers' using a variety of communication channels (Figure 21). About two thirds of teachers in both primary and secondary schools prepared power-point presentations and sent them to their pupils, as well as information on various websites with learning content. In primary schools, teachers mainly relied on sending the parents/pupils information about pages of the books that needed to be covered (57 per cent versus 36 per cent in secondary schools); in secondary schools, teachers used videoconferencing more often (57 per cent versus 44 per cent in primary schools). Teachers found difficult to motivate pupils, complained they did not take the learning assignments seriously, were cheating on tests, were not connecting to live lectures and were having difficulties in understanding the material (MoES, UNICEF, UKAid and Reactor, 2020).

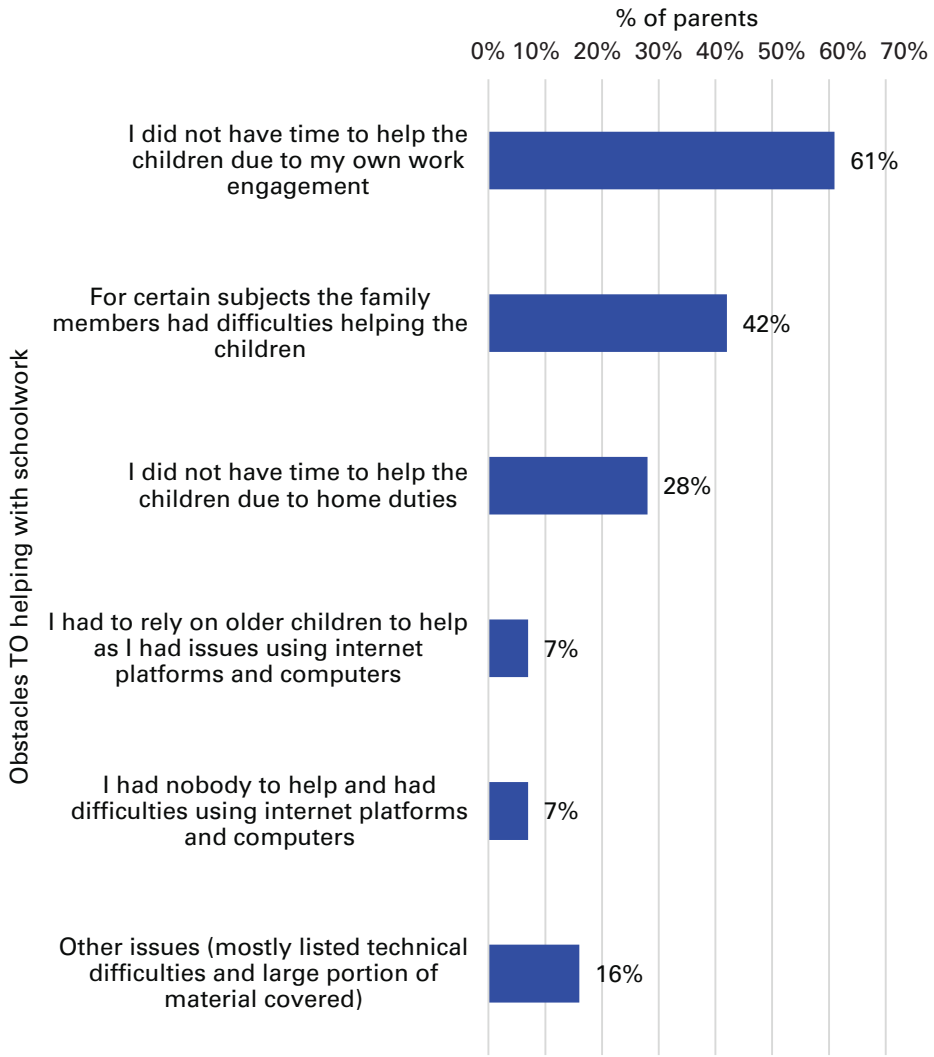
Figure 21: Communication channels used by teachers



Source: MoES, UNICEF, UKAid and Reactor (2020).

The lack of interaction, need for parental help and problems in understanding parts of the teaching material may have intensified learning losses among pupils. As shown in Figure 22, parents faced difficulties in helping their children with schoolwork as they had to deal with other chores, had difficulties using ICT or were unable to deal with the vast teaching material being covered). Mothers found themselves having to juggle work and helping their children, and problems have been greater for single parents and for health workers that dealt with COVID-19.

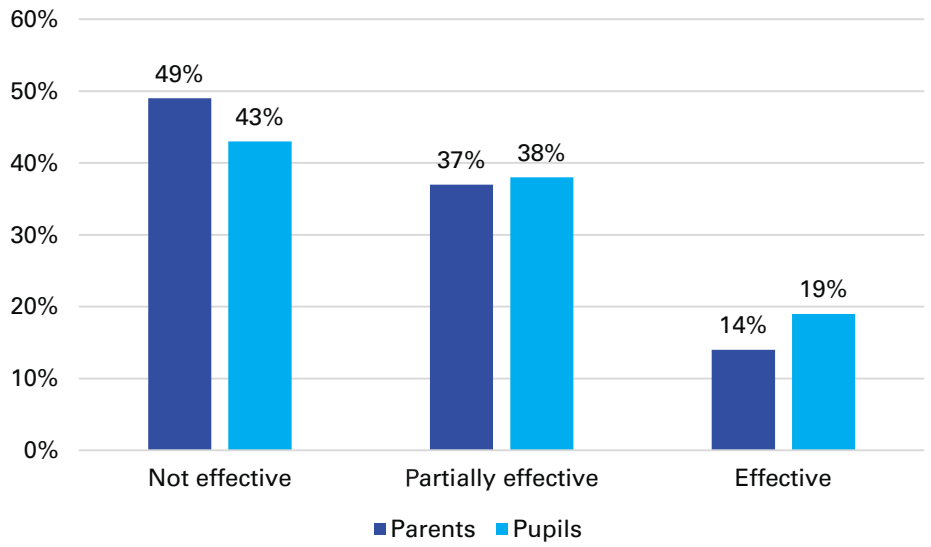
Figure 22: Obstacles to providing help with schoolwork



Source: MoES, UNICEF, UKAid and Reactor (2020).

As a result, the majority of both parents and pupils found distance learning not effective or partially effective (Figure 23). 62 percent of pupils deemed that the number of pupils with difficulties in understanding the material increased.

Figure 23: Appraisal of the effectiveness of distance learning



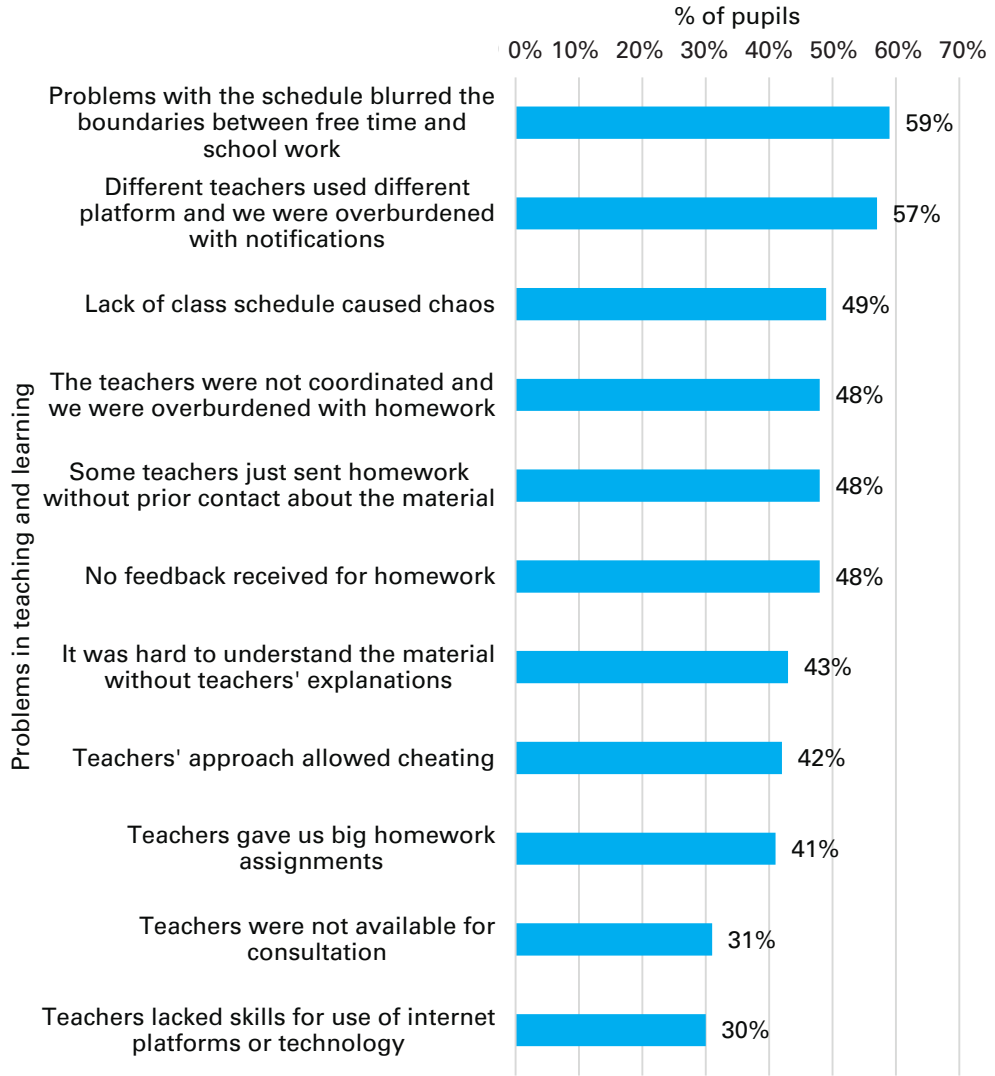
Source: MoES, UNICEF, UKAid and Reactor (2020).

Pupils mostly complained that their experience with distance learning lacked coherence and was somewhat chaotic due to the use of several platforms, lack of coordination between teachers, being overburdened with homework, lack of feedback and lack of help by teachers, as well as increased risk of cheating. It is interesting to note that about a third of the pupils also noted the lack of skills of the teachers for the use of digital learning platforms (Figure 24). Therefore, training teachers to use digital platforms as well as adapt their planning, teaching methods and appraisal methods is needed.

It is worrying that children with disability did not receive the individualized approach outlined in their personal educational plans and stopped receiving help from pedagogical assistants. According to parents, teachers are not prepared to work with such pupils and pedagogical assistants are not paid enough and not motivated to keep their jobs. The specific situation of such children was such that parents had to spend more time with them, with more dedication, and they were at risk of social isolation as they did not use social networks as much as their peers. Many Roma children were not only denied access to education due to the lack of technical equipment at home, but also lack of parental help (Roma parents in interviews accentuated that they lacked knowledge and skills to help their children as some have very low educational attainment themselves) (MoES, UNICEF, UKAid and Reactor, 2020).

Teachers noticed increased anxiety and stress among pupils (25 per cent in secondary schools and 18 per cent in primary schools) (MoES, UNICEF, UKAid and Reactor, 2020). Even more worrying, almost all the parents (91 percent) reported not having been contacted by the school professional support staff to check whether their child faced problems like anxiety or needed psychosocial support. At the same time, the majority of pupils were not informed on how to get the needed help (58 percent). In more than half of the schools, there were pupils in need of psychosocial help for various reasons (Petreski et al. 2020). Hence, the need to train school psychologists on how best to offer help to pupils faced with challenges as part of the operation of the Safe Spaces. Details on the proposal for Safe Spaces, including its cost, is provided in Section 7.

Figure 24: Challenges and problems with distance learning faced by the pupils



Source: MoES, UNICEF, UKAid and Reactor (2020).

5.3. Promising practices

MoES prepared Plans and Protocols for teaching and learning with physical presence in the schools as well as distance learning. Likewise, BDE prepared guidelines for the delivery of the shortened curriculum and for pupils' assessment.[30] A protocol was prepared for the special schools. VET centers prepared guidelines for vocational schools for the conduct of distance learning and physical presence for specific courses, for practical training and company internships, and didactical guidelines for teaching and pupil assessment.

The National Platform for distance learning was created and launched in September 2021 (https://schools.mk/). It combines data from the ESARU system (electronic system for administrative work of schools – containing data on pupils in public primary and upper secondary schools) with E-registry (platform for keeping classes and individual records), with Microsoft Teams and Moodle platforms. The platform allows for synchronous learning and adhering to the school schedule, as well as sharing materials with pupils and their assessment. The platform is functional in all five teaching languages in the country. It contains guidance for teachers, parents and pupils on various functionalities. MoES carried out a form of cascade training with initial preparation of 30 national trainers, who then continued training another 1,600 school trainers. The school trainers then were tasked to train their colleagues on the functionalities and use of the platform. Another round of training was organized in November 2020 for advanced use of the Microsoft Teams platform.[31] However, it has to be noted that the use of the platform was fraught with a number of technical difficulties from the beginning. One study done on a representative sample of 763 secondary education pupils and 390 teachers from secondary schools, as well as 20 qualitative interviews, found that the National Platform was rarely used in the teaching and learning process (only 9% of the teachers used it) and that most of the synchronous teaching was done using Microsoft Teams (67% of the teachers used it). The teachers stated that the National Platform was a good idea as it offers integration of different modalities of teaching and learning, but it had many technical difficulties, which made the use difficult and led to most of them using just Microsoft Teams and other communication channels (Jovanov and Stankovski, 2021). The preliminary results from the evaluation of the fall term of 2020/2021 academic year (MoES, UNICEF, UKAid and Reactor, 2021) also corroborates the finding that Microsoft Teams is a leading platform for communication with the pupils used by the school principals and teachers (93 percent of principals and 91 percent of teachers). The second most used channel of communication was the National Platform (64 percent of school principals and 56 percent of teachers). The other two teaching tools continued to operate. EduIno and TV Classroom still serve as valuable resources to teachers, parents and pupils. Their evaluation for the spring term 2020 (MoES, UNICEF, UKAid and Reactor, 2020) showed that around half of teachers used EduIno either constantly or occasionally and 73 percent followed and recommended TV Classroom to their pupils.

[30] Guidelines for teacher support for planning, organization and implementation of teaching in the upcoming school year: link

[31] Information provided by MoES

The usage of the EduIno platform stayed at the 2020/2021 level with half of the principals and teachers mentioning it as a communication channel and teaching resource in distance learning (MoES, UNICEF, UKAid and Reactor, 2021). However, for the spring term 2020 (MoES, UNICEF, UKAid and Reactor, 2020), parents reported that very few pupils followed the TV Classroom and most had given it up, typically after finding the content boring (45 percent) or unrelated to school material (41 percent). A third of the parents stated that their child did not use the EduIno platform at all, the main reason being lack of information about it. Parents were slightly more satisfied with EduIno than with TV Classroom, but a third gave neutral rating to both.

Various studies highlight the need to train teachers in specific competency areas to ensure quality of the distance learning process.[32] In 2020 teachers felt that radical changes in the teaching practices were needed (88.9 percent), half of survey respondents reporting a need for training on using different digital tools and on the pedagogy of online teaching (more specifically, keeping pupils motivated and engaged; interaction; communication with pupils and parents; and discipline) (Metamorphosis, 2020). In MoES, UNICEF, UKAid and Reactor (2020), the majority of principals accentuated the need for training on pupils' assessment platforms (68 percent) and teaching skills in digital learning (63 percent). Most of teachers stated they needed training in using digital platforms (58 percent), and training on using platforms for knowledge assessment (54 percent).

EduIno platform can serve as a valuable resource for enhancing the skills and knowledge of the teachers as well. The platform has supported 17 webinars (with 24,376 life views and 73,738 overall views on YouTube) and is hosting 94 video tutorials aimed at enhancing teachers' preparedness for distance learning.[33] In addition, to enhance the engagement of teachers, the platform has promoted 23 EduIno Ambassadors (teachers with over 15 recorded videos or over 10 activities for stimulating learning and development at home).

Another bilingual platform that operates in the country – Open Educational Resources – held a competition for the Best Open Resource Teacher, publicized enrichment materials and held a number of webinars for teachers.[34] Social Entrepreneurship competition on ideas for dealing with COVID-19 for pupils aged 13–19 was organized in the second half of 2020 by UNICEF. [35] Regarding support to pupils with disability, the online service continued to be provided by the Open the Windows association with financial help from UNICEF. [36]

In has to be mentioned that there has been an effort to support the mental health of the pupils as well in videos and activities hosted on the EduIno platform. In total there are 35 videos and activities for emotional development and dealing with emotional issues among children and youth.

[32]Metamorphosis (2020); MoES, UNICEF, UKAid and Reactor (2020).
[33]Internal data of SmartUP-Social Innovation Lab for the EduIno platform (date 3 March 2021).
[34]Open Educational Resources, http://oer.mk/
[35]https://www.upshiftmk.org/
[36]https://otw.assistive.mk/
[37]http://www.eduino.gov.mk/nastava/resursi-licen-rast-i-razvoj/

5.4. The impact of COVID-19 on pre-school care and learning

In May 2020 UNICEF was of the opinion that it was important to reopen preschools, and published proposals on how to protect children and staff from the spread of the coronavirus.[38] In September 2020, preschools opened and have remained operational to this day. However, their capacity is limited due to the preventive measures to limit the risk of spreading the virus, and there is lack of data on children who do not attend. The situation is somewhat remedied by the activities on the EduIno platform that offers resources for early learning. As of March 20201 the platform hosts 303 videos for preschools and 220 educational activities for home use. The videos have 1,4 million impressions and 288,000 views, and there are 1437 subscribers to the preschool channel on Youtube.[39] In November 2020 the platform also held an event that stimulated parents of children aged 3–10 to engage in a number of developmental and early learning activities with their children as part of the "Igraton" creative game challenge.[40] The event stimulated the interest of 160 families that participated in it, and 230 educational activities were registered.[41]

To help parents of children with disabilities stimulate development and early learning of their children, an e-platform Early Intervention with advice and a possibility for individualized help by special educators was established.[42] Another platform launched by Open the Windows and UNICEF also offers support for parents and children with special needs.[43] Using the platform parents can reach out to special educators who can prepare individualized plans for online classes. However, there is no systematic help and support offered to parents by the state officials.

[38]Guidance for Re-opening preschools post Covid19: link
[39]Internal data of SmartUP-Social Innovation Lab for the EduIno platform (3 March 2021).
[40]EDUINO Playaton - a creative challenge for parents and children: link
[41]Internal data of SmartUP-Social Innovation Lab for the EduIno platform (date 3 March 2021).
[42]Early Intervention, https://ranaintervencija.mk/
[43]Online support service from Open the Window: https://otw.assistive.mk/

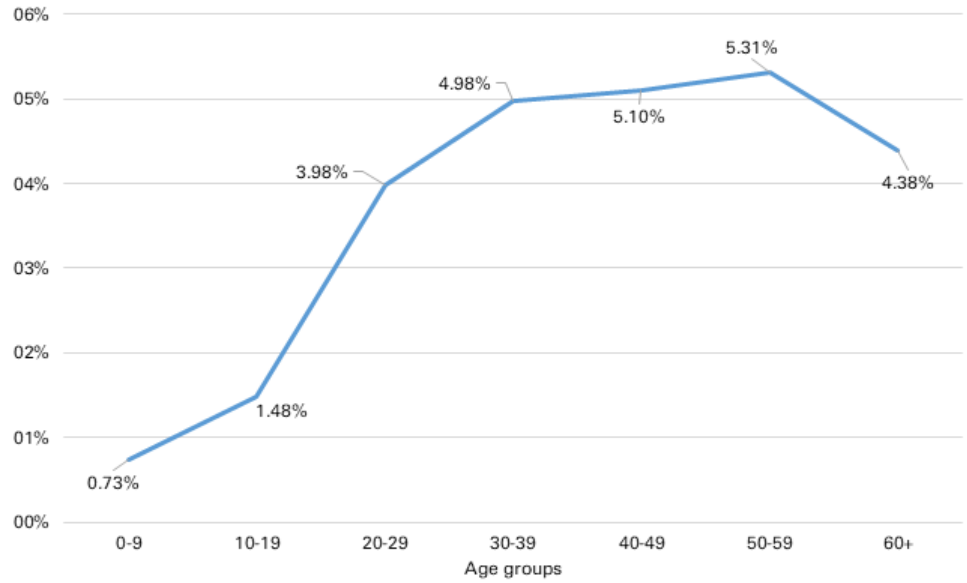
6. COVID-19 HEALTH RISKS FOR CHILDREN

6.1. Disease trends in children compared to adults

Children in North Macedonia have contracted COVID-19 less frequently than older age groups. Children rarely develop severe illness or die from the infection. Figure 25 documents that since the first COVID-19 case was registered in North Macedonia, the share of people contracting the illness has been considerably lower for children than for adults: 0.7 percent for 0-9 children, 1.5 percent for the 10-19 age group and rising to an average of 5 percent thereafter. Therefore, about 1 per cent of children have been reported as COVID-19 cases, representing 5.4 percent of all cases. The literature reports the infection rate among children to range between 2.1 and 7.8 percent globally (Ladhani et al. 2020), suggesting that children in North Macedonia do not contract the disease more often than elsewhere.

Jiang et al. (2020) suggest that the low share among children may be due to the manifestation of milder symptoms as compared to adults, or being asymptomatic, which leads to under-diagnosis and under-testing. Such observation has been also shared by a children disease specialist from the Children's Clinic in Skopje. Yet, children are increasingly recognized as playing a role in the community spread of COVID-19. A recent study (Goldstein et al. 2020) found that adolescents and children above 10 transmit the virus more often than children under 10. No COVID-19 deaths among children have been reported in North Macedonia. Zero childhood case-fatality rate is reassuring and consistent with the global trends (Dong et al. 2020).

Figure 25: Share of COVID-19 cases in total population, by age categories



Source: Institute of Public Health of North Macedonia.
Note: Data refer to the period February 23 – January 7, 2020.

However, the global literature also warns that illness progression and severe morbidity and mortality in children are likely associated with existing co-morbidities and vulnerabilities – particularly obesity and other forms of malnutrition among children. Such risk is further aggravated when combined with poverty, household overcrowding, hygiene deficiencies and other underlying health conditions (Mofenson et al. 2020). While it is too early to observe such confluences in North Macedonia – inter alia because no rapid datasets are available to capture them – they will represent topics for more thorough understanding once the pandemic subsides.

6.2. Provision of pediatric health services during pandemic

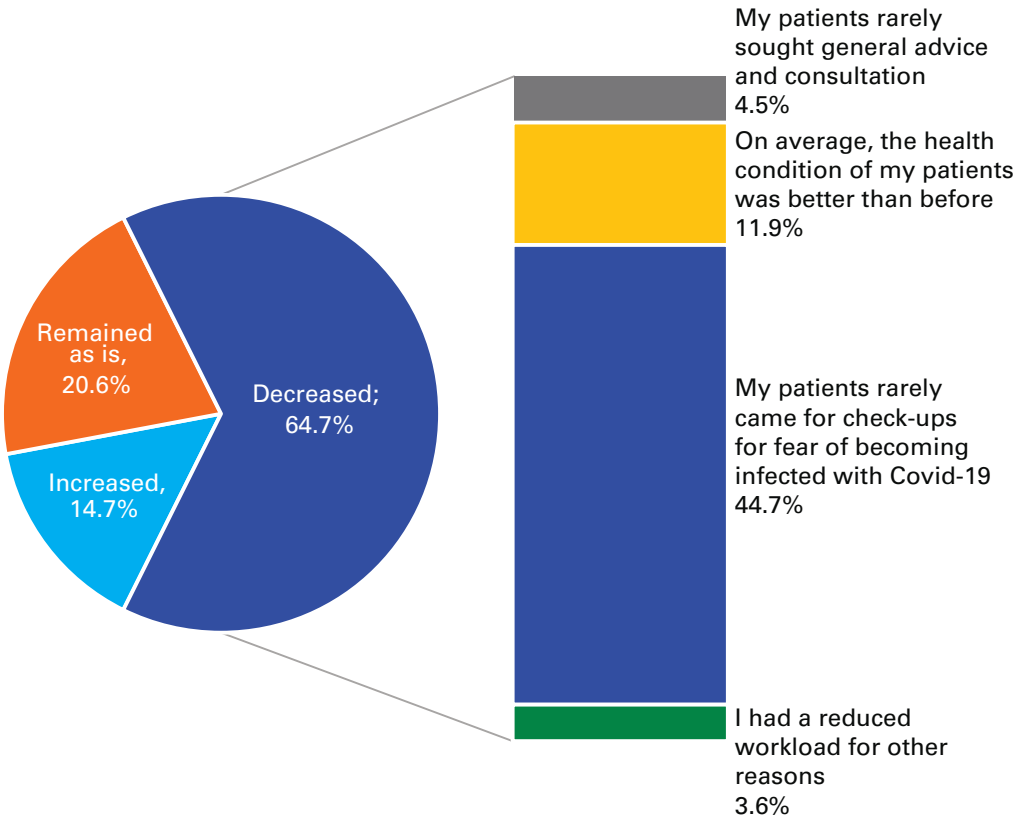
The pandemic changed the authorities' and the patients' attitudes towards pediatric services. To shed light on this, we conducted a survey of pediatricians.[44] The survey was conducted online between 1 and 10 February 2021, and 64 pediatricians responded, representing a response rate of 25.3 percent.[45] However, due to the risk of self-selection bias, the survey findings presented below are of indicative nature only. National lockdowns and "Stay at Home" messaging have unintentionally discouraged parents from seeking pediatric medical help. The fear for contracting COVID-19 in a hospital reinforces this behavior. Figure 26 demonstrates that nearly two thirds of the pediatricians participating in the survey experienced a decline of the workload in their institutions by the end of 2020. Parents' fear of contracting COVID-19 during a visit to their pediatric practices was named as a reason for the decline by 69 percent of respondents who experienced a decline of workload. At the same time, those who recorded an increase of the workload (14.7 percent), reported that the most frequent reason for increased contacts with patients (49.7 percent) was that their patients more often sought general advice and consultations, although there was no real deterioration in their health.

[44] Family medicine specialists and their services were not considered.

The entire sample of active pediatricians (incl. trainee pediatricians) was provided by the Pediatric Association, with a total of 429 doctors. Of them, 277 had an active e-mail address on record, which was the only way to conduct the survey given the narrow time frame of this follow-up study. Therefore, in first instance, readers should be aware of the potential attrition bias, particularly given that the non-provision of e-mail address may be correlated with some demographic characteristics of the pediatricians, most notably, age and geographic settlement (working in urban or rural area). Then, in the second instance, of the 277 invitations to respond to the survey, 70 were completed, giving us a margin of error of 9.98 percent at the 95 percent level of confidence. This implies that any difference between two categories within an answer that is within the interval of ±9.98 percent of the point estimate is statistically insignificant.

[45] We weighted the responses having classified the population of pediatricians in four categories: primary private healthcare; primary public healthcare; secondary healthcare; tertiary healthcare. With the weighting procedure, we elevate the results at the level of population, by a reflection to the notion that patients' behavior and pediatricians' responses may have differed when observed through this four-category classification.

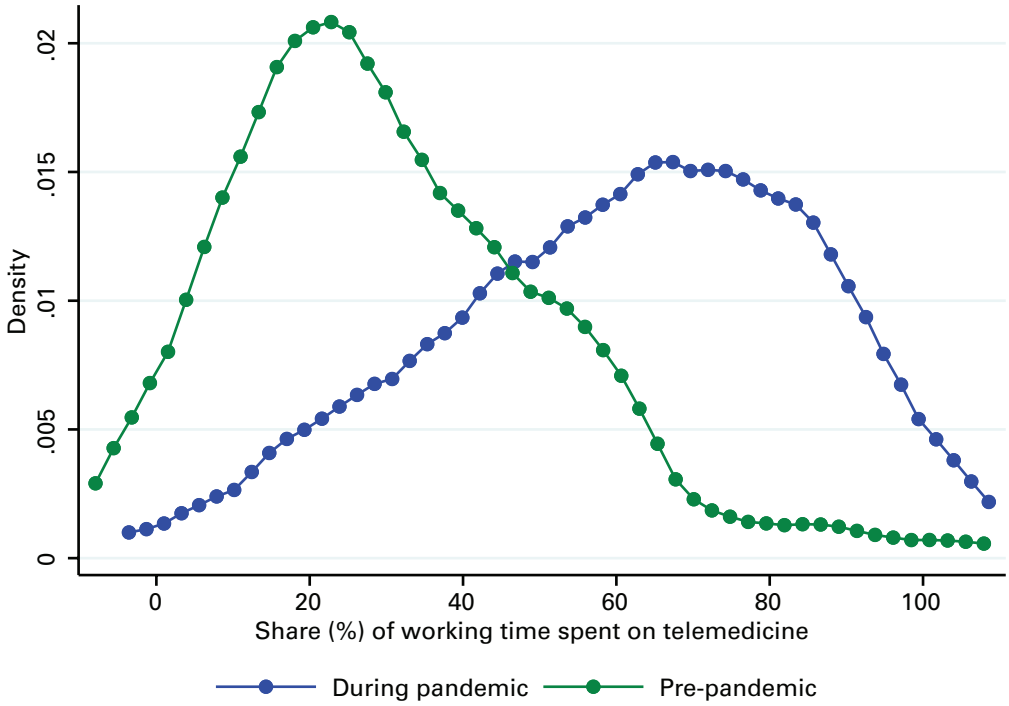
Figure 26: How has the workload in your medical practice changed since the onset of the pandemic?



Source: Pediatric Survey 2021.

The pandemic of COVID-19 reduced the number of in-person visits of children and parents to pediatricians but increased the reliance on telemedicine. Figure 27 documents the distribution of the pediatricians' answers on the share of their working time spent on telemedicine, where the red line refers to the pre-pandemic period, and the blue to the pandemic period. Clearly, most of the pediatricians used to spend about 20 percent of their time before the pandemic on telemedicine, which then shifted right – to about 75 percent – during the pandemic (a percentage almost unseen before the pandemic). However, the number of pediatricians who continued with a pre-pandemic load of telemedicine is not negligible. This is corroborated by the fact that close to half of the pediatricians reported that their patients to some extent abided by the recommendations to rely on telemedicine when possible instead of an in-person visits to pediatric practices, i.e., half of the respondents continued to receive regular in-person visits.

Figure 27: Pediatricians' time spent on telemedicine



Source: Pediatric Survey 2021.

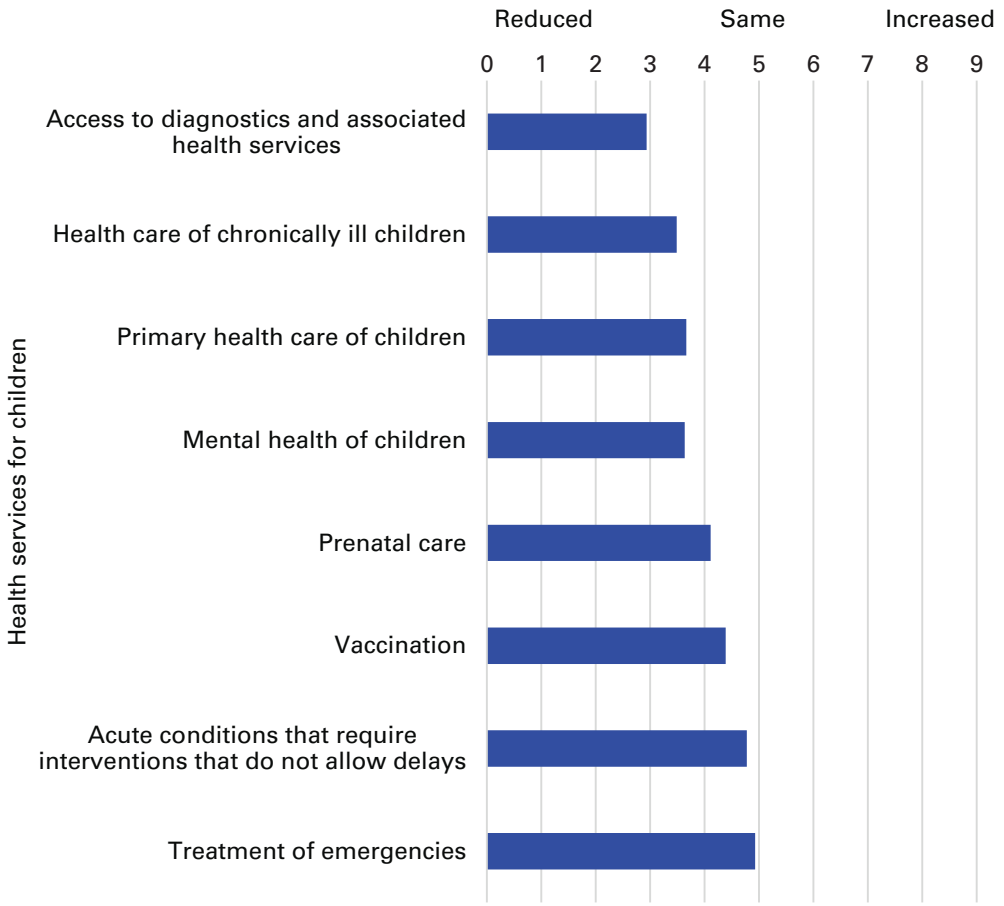
Moreover, pediatricians remain skeptical that the level of reliance on telemedicine will be maintained after the pandemic. Half of the respondents expect that telemedicine will reduce to a minimum after the pandemic since it cannot replace medicine based on a physical contact between a doctor and a child; while 45 percent expect that it will remain important though will diminish compared to the pandemic times. And only a small minority believes that the level of telemedicine will remain at the level seen during the pandemic.

While children appear to have been largely spared from the direct mortality impacts of COVID-19, the indirect effects stemming from strained health systems and disruptions to life-saving health services, can result in devastating increases in child deaths. According to a study on 118 low- and middle-income countries (Robertson et al. 2020), an additional 2 million under-five deaths could occur in just twelve months due to reductions in routine health service coverage levels and an increase in child wasting.

We asked pediatricians to assess the load of delivered healthcare services to children during the pandemic on the scale of 1 to 9, where 1 means significantly reduced, 5 – remained as before the pandemic, and 9 – significantly increased. Figure 28 presents the results. Four of the eight examined health services stand out as having suffered a significant reduction during the pandemic: diagnostics, chronic diseases treatment, primary healthcare and mental health of children.

Such reductions in service delivery to children corroborate the finding that workload in pediatricians' practices predominantly declined and this decline is likely at the expense of chronic-diseases diagnostic and treatment within the primary healthcare. On the other side of the spectrum, the treatment of emergencies and acute diseases remained largely intact. Prenatal care and vaccination, likewise, remained unaffected to a large extent.

Figure 28: The scale of healthcare services delivered to children

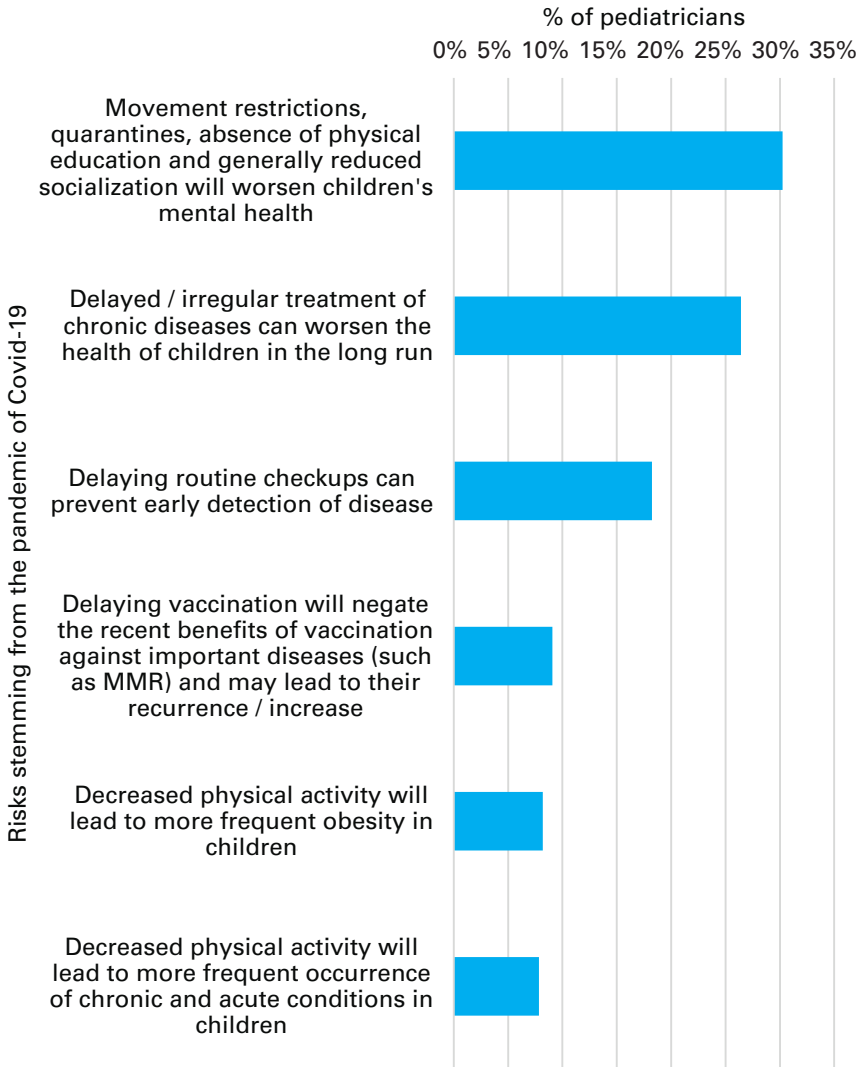


Source: Pediatric Survey 2021.

However, it is notable (Figure 28) that all pediatric services, except the treatment of emergencies, received average grades below 5 (signifying remaining at pre-pandemic level), so that pediatricians altogether leaned to respond to a reduction in healthcare services to children during the pandemic. Nationwide lockdowns and school closures have had a negative impact on child and adolescent mental health globally (Singh et al. 2020).

Pediatricians referred to the effects of movement restrictions, absence of physical education and reduced socialization on mental health as being the most important risk that children in North Macedonia (will) face (Figure 29). The second important risk is the neglect of chronic diseases – including their diagnostics and treatment – which may endanger long-term health outcomes among children.

Figure 29: Key risks for children's health stemming from the pandemic



Source: Pediatric Survey 2021.

Authorities and relevant stakeholders recognized the negative effects the pandemic may have on child health. A number of workshops were conducted to aid the mental health of young people and to advise on how to take care of the individual mental health during the pandemic.[46] The COVID-19 helpline for children and parents that was established by the Government continued to operate.[47]

[46]How teenagers can protect their mental health during coronavirus (COVID-19): link
[47]Seek psychological support: link

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