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Prioritizing Children:

THE CASE FOR INVESTMENT IN
EARLY CHILDHOOD DEVELOPMENT

BRČKO DISTRICT



**INVESTMENT CASE
FOR CHILDREN**

March 2023

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ABBREVIATIONS

TABLE 1: LIST OF ABBREVIATIONS

BCG	Bacille Calmette-Guerin vaccine
BCR	Benefit-Cost Ratio
BD	Brčko District
BiH	Bosnia and Herzegovina
CBA	Cost-Benefit Analysis
CEA	Cost-Effectiveness Analysis
CwD	Children with Disabilities
DALY	Disability-Adjusted Life Year
DHS	Demographic and Health Survey
DPT	Diphtheria, Pertussis and Tetanus vaccine
ECD	Early Childhood Development
ECDI	Early Childhood Development Index
ECEC	Early Childhood Education and Care
EU	European Union
GDP	Gross Domestic Product
HDI	Human Development Index
IBCR	Incremental Benefit-Cost Ratio
ICER	Incremental Cost-Effectiveness Ratio
ILO	International Labour Organization
LAY	Learning-Adjusted Year

LiST	Lives Saved Tool
MICS	Multiple Indicator Cluster Survey
NPV	Net Present Value
ODA	Official Development Assistance
OHT	One Health Tool
ORS	Oral Rehydration Solution
SDGs	Sustainable Development Goals
VAT	Value-Added Tax
YLD	Years of Life with Disability
YLL	Years of Life Lost

INTRODUCTION

Extensive research shows that the early years of a child's life really matter. A vast body of evidence has emerged in recent years arguing that investments in early childhood have the greatest return of any human capital intervention. Longitudinal studies from a wide range of case studies show that children who participate in quality early childhood programmes experience multiple benefits, improved test scores and graduation rates, decreased social exclusion and multi-dimensional poverty, crime and delinquency rates, and improved long-term income.¹ Importantly, investment in early childhood development (ECD) can drive progress within the Sustainable Development Goals (SDGs) and be central to meet basic child rights enshrined in the Convention on the Rights of the Child (CRC).

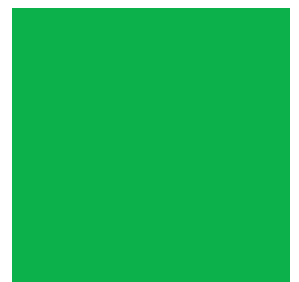
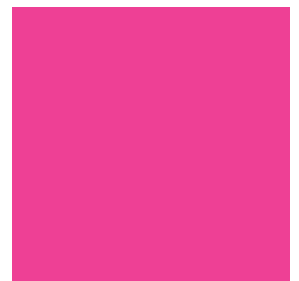
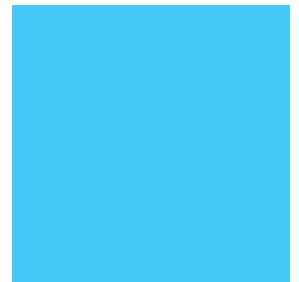
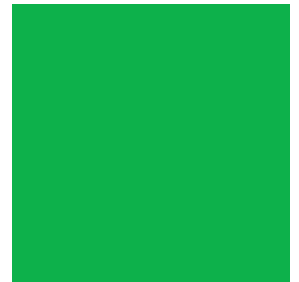
In Brčko District (BD) the importance of ECD cannot be understated. BD is faced with an ageing and shrinking population, which presents a concerted threat to the district's economic and social development.² In 2020, around 3,565 children below the age of seven lived in BD, a figure set to decline to around 2,530 by 2050.³ ECD is particularly important given this demographic context. With fewer children and limited resources, BD must cultivate a skilled, productive young work force in order to sustain and improve economic and social conditions. Over the past fifteen years, progress has been made towards a conducive policy environment for the ECD ecosystem. This includes the *Framework Law on Preschool Education and Upbringing* (2007), the *BD Law on Preschool Education and Care* (2007), and the *BD Law on Child Protection* (2018).

However, there are clear untapped opportunities to invest in BD's younger generations. The conditions needed for the BD's young children to survive, thrive, and meet their full potential are not in place. Inadequate and poor-quality investments in social sector services have created a situation where young children and their families do not have universal access to the quality health, education, and social protection services that they need. Budget allocations in ECD are either insufficient or challenging to monitor, and even in the case of adequate funding, the outcomes for children are below targets. These figures hide significant inequities in outcome between groups of young children, with Roma children, children with disabilities (CWD), children from rural or low-income backgrounds, and migrant/refugee children all facing additional challenges.

1 P. Engle *et al.* (2011). 'Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries', *Lancet*, 378:9799, 1339-53.

2 UNICEF (2020). *Situation Analysis of Children in Bosnia and Herzegovina*, (UNICEF: Sarajevo, Bosnia and Herzegovina).

3 Based on World Population Prospects estimates for 2020 and 2050.



i. The Study

Within this context, this Investment Case has been designed to promote better investment in young children from conception to the age of six in BD. It is part of a broader United Nations Joint Programme '*Towards the SDGs Financing Ecosystem in BiH*'. Within the framework of the SDGs, achieving strong ECD is seen as a prerequisite, particularly in the fight against poverty, inequality, and social exclusion, and for the promotion of peace and security. An investment in early childhood thus lays a strong foundation for development, increases the effectiveness of the education and health systems, improves the chances of economic productivity and growth, and contributes to a society of equal opportunities that leaves no one behind.

This Investment Case seeks to serve a tool for advocacy and decision-making for child-focused stakeholders in BD, and, ultimately, to support improved outcomes for young children. The ambition of this report is to support BD in implementing a long-term evidence-based programming of social spending. A proactive investment in human capital development will provide the best possible conditions for childhood development, and ultimately foster an environment that nurtures the future leaders of BD to spearhead positive change in the country. Child-focused stakeholders should draw on its language of both economic returns and child rights to motivate for improved investments in children. Further, they should use the evidence generated in this study to highlight the foundational role ECD plays in economic and social development. A failure to invest in young children should be positioned as having the potential to undermine other investments: without a well-educated, healthy and productive workforce, economic development will be stilted.

The Investment Case is based on a series of cost-benefit and cost-of-inaction analyses in three sectors most important to ECD – namely, health and nutrition, education, and social protection. A package of interventions based on the *Nurturing Care Framework* was selected in each of these sectors. The short-, medium- and long-term costs and benefits associated with scaling up coverage of these interventions were then identified, quantified as far as possible, and monetized. Analysis was conducted on a range of tools and results are presented for each sector separately. The analysis evaluated the difference in costs and benefits between a baseline ('do nothing') scenario and two Scale-up Scenarios:

Scale-up Scenario A (fast scale-up):

target coverage rates hit in 2030 and then maintained until 2052,

Scale-up Scenario B (slow scale-up):

target coverage rates hit in 2052.

ii. Health and Nutrition

A critical part of ECD is the provision of essential maternal and infant health care, nutritious feeding, and positive parenting. These interventions can protect children from life-threatening illnesses, support their long-term health, and improve physical, cognitive, and psycho-social development. Across BD, massive improvements in maternal and child healthcare have been witnessed in recent years. Maternal and child healthcare services are delivered mainly through the public primary healthcare system, free of charge. Nearly 91% of pregnant women receive at least four antenatal care visits, whilst 100% deliver in health facilities.⁴ Provision of this care has seen outcomes, such as infant and child mortality rates, improve. Meanwhile, important indicators of child development are also promising, with just 3% of children being recorded as malnourished and 1.4% stunted.⁵

Access to maternal and child health care remains below an adequate level in BD. Whilst antenatal care coverage has increased, 10% of pregnant women are still not receiving a basic level of care and, even those who do receive antenatal care provide worrying reports on the quality of care.⁶ Patronage visits, which are critical to support women in breastfeeding and monitoring their child's growth are only offered once (and, in many cases, do not happen at all). Further, some health issues which can have serious long-term implications on mothers and children alike, such as perinatal depression, remain

largely neglected. Socio-cultural attitudes and policies are also hindering better child health and nutrition outcomes. Breastfeeding rates in BD are concerningly low, with exclusive breastfeeding up to four months sitting at just 18.5% according to the latest data.⁷ These attitudes, combined with distrust of the health system, have led to a dramatic and highly concerning fall in child immunization rates. Such issues are of particular concern for vulnerable groups, including the Roma.

Brčko District has a relatively extensive array of policies and programmes seeking to improve the health and nutrition of young children and their mothers. While these policies and programmes have been developed to improve child and maternal health, they remain insufficient to guarantee access to high-quality care. An important contributing factor is an overburdened and under-funded public health system. In Brčko District, the share of the annual budget allocated to the Department of Health and Other Services amounts to 22.14%, which translates to approximately 5.4% of GDP in 2023,⁸ which compares poorly to the EU average of 9.92%.⁹ Further, the current health expenditure per capita in BD amounts to just 756.20 BAM, or around US \$421.17,¹⁰ almost just 12% the average of US \$3,476.¹¹ Importantly, the Department

4 UNICEF (2012). *Bosnia and Herzegovina 2011-12 Multiple Indicator Cluster Survey (MICS)*, (UNICEF Office for Bosnia and Herzegovina: Sarajevo, Bosnia and Herzegovina).

5 UNICEF (2012). *Multiple Indicator Cluster Survey*

6 Ibid.

7 UNICEF (2012). *Multiple Indicator Cluster Survey*

8 Budget of the Brčko District of Bosnia and Herzegovina for 2023

9 World Bank (2019). *Current health expenditure (% of GDP)*. Available at: <https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS?locations=BA-EU>

10 Ibid.

11 World Bank (2019). *Current health expenditure per capita (current US\$)*. Available at: <https://data.worldbank.org/indicator/SH.XPD.CHEX.PC.CD?locations=BA-EU>

of Health and Other Services encompasses the Sub-Department of Social Protection, to which nearly half of the funds are allocated. This implies that the actual funds allocated to healthcare expenditures in 2023 amounts to 11.2% of the total BD budget, or 3.0% of GDP.¹²

There are also concerns about the quality of expenditure in the public health sector. Public health funds are mostly used for capital investments and certain public health and prevention programmes. This seems to indicate that there is a lack of cost-effectiveness in decision-making about the use of health resources. Further, the public health system has consistently generated fiscal deficits, owing to high expectations from the population and insufficient resource mobilization. Out-of-pocket (OOP) payments for health remain an important source of financing for the sector; however, they can contribute to inequities and impoverishment. These high levels of OOP payments are concerning, usually resulting in the poorest households delaying and avoiding treatment due to their inability to afford the OOP costs.¹³ High rates of OOP are problematic for the accessibility of ECD services, as families may avoid seeking health advice or care if they are unable to afford the cost of these services. This can result in late detection of developmental delays or disabilities, as well as a lack of knowledge among parents of best practices in terms of child health. Alternatively, but equally as worryingly, families may choose to take on costs but then be unable to pay for nutrition or educational services.

FINDINGS

Scaling up coverage of essential maternal and child health and nutrition interventions was found to have impressive benefits. Table 1 presents the impact of these interventions on child deaths and disability-adjusted life years (DALYs) lost. Both Scale-up Scenarios have a significant impact on averting maternal and child morbidity and mortality; however, Scale-up Scenario A has greater benefits, as target coverage rates are met quicker. Up to 6 child deaths could be averted in BD over the next thirty years, if this package of health and nutrition interventions were scaled up.

When monetised, these improved health outcomes have an economic value far higher than the costs incurred to achieve them. The health benefits displayed in Table 1 were transformed into monetary benefits by converting DALYs into a productivity contribution to society following standard practises in the literature. Table 2 presents the results of this monetisation, alongside the estimated costs incurred in scaling up these interventions, and the cost-of-inaction. In total, over the next thirty years, more than 7 million BAM could be returned to BD in socio-economic gains if Scale-up Scenario A was implemented. This is slightly lower in Scale-up Scenario B at just under 5 million BAM. The costs of scaling up these interventions was also estimated and is far lower than these anticipated benefits. In the fastest Scale-up Scenario (A), a cost of 3.5 million BAM would accrue by 2052, compared to almost 2 million BAM in the slower Scale-up Scenario (B). Whilst these costs are significant, they are far outweighed by

TABLE 1: ADDITIONAL CHILD DEATHS AND DALYS LOST AVERTED FOR SCALE-UP SCENARIO A AND B.

	Scale-up Scenario A		Scale-up Scenario B	
	2023 - 2032	2023 - 2052	2023 - 2032	2023 - 2052
Child Deaths Averted	0	6	0	4
DALYs Lost Averted in Children	0	181	0	121
DALYs Lost Averted in Mothers	26	99	8	60

¹² Ibid.

¹³ Ibid.

anticipated economic benefits. When comparing these costs and benefits, the subsequent cost-of-inaction (in other words, the opportunity cost of failing to scale-up) is significant:

- For **Scale-up Scenario A**, the **cost of inaction** sits at nearly **3.9 million BAM** when studied until **2052**.
- The **Scale-up Scenario B** reflected **slightly lower costs of inaction**, at **over 3 million BAM**.

Investments in ECD were also found to have a strong rate of return, especially over the long-term:

- In **Scale-up Scenario A**, for **every 1 BAM** invested, **2 BAM** are expected to be returned to the economy between 2023-2052.
- In **Scale-up Scenario B**, the BCR is even higher. Across the full study time horizon, for **every 1 BAM invested**, **3 BAM** are expected to be returned in socio-economic benefits.

TABLE 2: ECONOMIC BENEFITS, COSTS, AND THE COST-OF-INACTION FOR SCALE-UP SCENARIOS A AND B. EXPRESSED IN BAM, ADJUSTED FOR INFLATION AND DISCOUNTED AT A RATE OF 3%.

	Scale-up Scenario A		Scale-up Scenario B	
	2023 - 2042	2023 - 2052	2023 - 2042	2023 - 2052
Total Additional Economic Benefits	4,769,296	7,431,974	2,388,032	4,944,556
Total Additional Costs	2,803,118	3,534,165	1,300,526	1,913,094
Cost of Inaction	1,966,178	3,897,808	1,087,506	3,031,462

iii. Education

Enrolment in ECEC has been improving in BD in recent years, but remains concerningly low.¹⁴ In 2005, when the Strategy for Preschool Education was adopted, just 8% of the total preschool-age children in BiH were enrolled.¹⁵ Today, in the Brčko District, a total of 719 children between 3 and 6 years of age are enrolled in full-day or half day preschool programmes in 2022/2023. Given that the total population for this group is estimated to be around 2,639 in 2022, this equates to an ECEC coverage rate of 27.2%, ranging between an estimated 26.7% among 3- to 4-year-olds, 28.7% for 4- to 5-year-olds, and 26.2% for 5- to 6-year-olds. Accounting for the preparatory programmes for children in the year prior to school entry, however, BD has reached almost universal coverage, with enrolment rates sitting at over 92% for the age group 5 to 6, and to 51% for children aged 3 to 6.

The private sector has fuelled growth in the ECEC sector, growing its share of the total number of facilities and children enrolled. In BD, there is one public institution, with six facilities under it (and an additional two others under construction). Together, these facilities cater for around 150 children annually. However, long waiting lists (over 500 children) for public institutions has led to a burgeoning private sector emerging to meet demand. Private preschools have been supported by recent government policies, which have seen subsidization of parent/caregiver fees. There are also significant inequities in coverage. Children from poorer and or more vulnerable backgrounds are less likely to gain access to these vital educational and developmental services owing to higher access

barriers, thus threatening to entrench inter-generational cycles of poverty.

The Department of Education (DoE) has been particularly successful in implementing the 2007 Framework Law.

The DoE provides the funding and services for a three-month (150 hour) programme for children in the year before primary school which stakeholders report now has near universal coverage. However, it is difficult to monitor the actual coverage rates given the lack of up-to-date population data, as well as a lack of follow-up, monitoring, or enforcement mechanisms to ensure parents/caregivers send their children to the programme. Further, this programme is not comprehensive enough to provide young children with the full benefits associated with ECEC.

Public financing of ECEC comes from the DoE in BD.

Public expenditure on pre-primary education has a three-fold structure. The first is direct budgetary support to public preschools which has enabled fees for parents/caregivers to be kept low, at around 170 BAM per month for children of ECEC age. Secondly, the DoE also offers complete funding of the three-month mandatory programme which is provided free-of-charge to parents and caregivers. Finally, the DoE also provides subsidies to parents/caregivers of children enrolled in private facilities, designed in response to the growing demand for ECEC services and the inability of the public sector to commensurately expand capacity.

Total spending on preschool education in BD accounts for only 1.38% of the 2023 budget, which translates to 0.37% of GDP.¹⁶ Despite almost doubling from 0.21% of GDP in 2021 (or 0.73% of BD budget),¹⁷ this is still less than half the average public spending on ECEC in OECD countries,

¹⁴ Preschool programmes vary, with facilities offering half- and full-day options, as well as being divided between child care services (six months to three years) and ECEC services (three to six years). This study focuses solely on ECEC services for children three to six years of age.

¹⁵ Platform for the Development of Preschool Education in Bosnia and Herzegovina for the period 2017-2022

¹⁶ Ibid.

¹⁷ Ibid.

of just over 0.8% of GDP.¹⁸ The share of total BD budget allocated to the DoE is 18.23%, equating to 4.90% of GDP.¹⁹ Overall spending on education is higher than neighbouring Western Balkan nations such as Serbia and Croatia, whose education spending stand at 3.6% and 3.9% of GDP respectively.²⁰ However, while only 7.6% of the BD's education budget goes to ECEC in 2023 (increasing from 4.8% in 2021), a much greater proportion is targeted at primary and secondary levels, amounting to 57.2% and 29.4% respectively.²¹ Notably, public expenditure on ECEC is not ring-fenced or enshrined in legislation or policy and is instead highly dependent on current political will and budgetary room.

FINDINGS

Scaling up ECEC for BD's children could have significant benefits. Two pathways have been identified and monetised: the benefits of improved educational outcomes, and the increase in female labour force participation.



As high-quality ECEC is associated with improved child development and school readiness outcomes, children who are exposed to this intervention are more likely to stay in school for longer, experience a **better learning experience**, and **graduate from secondary school**²².

18 OECD countries spend on average just over 0.8% of GDP on early childhood education and care, with large variations across countries. Countries spend more on pre-primary education than child-care, up to approximately 1% vs 0.5%. Source: OECD Family Database (2023). Public spending on childcare and early education. Available at: https://www.oecd.org/els/soc/PF3_1_Public_spending_on_childcare_and_early_education.pdf

19 Budget of the Brčko District of Bosnia and Herzegovina for 2023

20 World Bank (2019). Government expenditure on education, total (% of GDP). Available at: <https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?locations=RS-ME-HR>

21 Budget of the Brčko District of Bosnia and Herzegovina for 2023

22 A. Muroga, H. T. Zaw, S. Mizunoya et al. (2020). 'COVID-19: A Reason to Double Down on Investments in Pre-Primary Education', Innocenti Working Paper WP-2020-11, (UNICEF Office of Research: Florence, Italy). | P. Gertler, J. Heckman and R. Pinto et al. (2021). 'Effect of the Jamaica Early Childhood Simulation Intervention on Labour Market Outcomes at age 31', World Bank Policy Research Working Paper, 9787. | N. Angrist, D. K. Evans, D. Filmer, R. Glennerster, F. Halsey Rogets and S. Sabarwal (2020). 'How to Improve Education Outcomes Most Efficiently? A comparison of 150 interventions using the new Learning-Adjusted Years of Schooling Metric', Center for Global Development, Working Paper 558

In this study, the impact of ECEC on **years of schooling** and **Learning-Adjusted Years of Schooling (LAYS)** are quantified. The impact of these improved educational outcomes is then monetized by estimating their contribution towards better lifelong productivity and earning potential.



The economic benefits of increased **labour market participation of women**, as fewer women will have to stay at home for **child-care responsibilities** if more young children are enrolled in preschool.

The impact of scaling up ECEC services is impressive. Whilst under the Baseline Scenario, the expected years of schooling would remain at 11.7 years per child, this could increase to 12.7 years by 2052. Across the time horizon, this would mean that an additional 17,500 years of schooling would be realised in Scale-up Scenario A and just under 10,000 in Scale-up Scenario B. Importantly, women also stand to particularly benefit from these time savings for caregivers associated with improved ECEC coverage. Studies show that women shoulder the majority of unpaid care work, including care for young children.²³ For this reason, women stand to benefit disproportionately from improved access to ECEC services, including in improving their ability to participate in income-generating activities. Analysis suggests that increasing ECEC enrolment could result in a 0.5 percentage point increase in the female labour force participation rate. This would result in an additional 85 women on average per year in the labour force in Scale-up Scenario A (2022-2052 average), or 49 women on average per year in Scale-up Scenario B.

When monetised, these benefits for children and female caregivers exceed the anticipated costs of scaling up ECEC services in BD. The majority of these benefits stem from the high rate of return associated with increased years of schooling. Under Scale-up Scenario A, the economic benefits of increasing years of schooling attained amount to an huge 722 million BAM across the study time horizon. Comparatively, Scale-up Scenario B has lower, but still enormous, economic benefits, at 398 million BAM. Further, increasing female labour force participation also

23 L. Addati, U. Cattaneo and E. Pozzan (2022). *Care at Work: Investing in Care Leave and Services for a More Gender Equal World of Work*, (Geneva, ILO). | G. Azcona, A. Bhatt, W. Cole, R. Gammarano and S. Kapsos (2020). *The Impact of Marriage and Children on Labour Market Participation*, (Geneva: ILO and UN Women).

TABLE 3: ECONOMIC BENEFITS, COSTS, AND THE COST-OF-INACTION FOR SCALE-UP SCENARIOS A AND B, ACROSS DIFFERENT TIME HORIZONS IN MILLIONS OF BAM AND DISCOUNTED AT 3%.

	Scale-up Scenario A		Scale-up Scenario B	
	2023 - 2032	2023 - 2052	2023 - 2032	2023 - 2052
Total Additional Economic Benefits	215	732	61	404
Total Additional Costs	36	125	12	73
Cost of Inaction	180	608	49	331

translates into significant economic returns. Scale-up Scenario A sees a greater incidence of economic benefit, at 10 million BAM across the study time horizon, this compares to over 5.5 million BAM in Scale-up Scenario B. Combined, these economic benefits are greater than the projected costs (Table 3). As a result, there is a very high cost-of-inaction of ECEC not being scaled up:

- In the fast **Scale-up Scenario A**, the COI estimated here suggests that **not investing in ECEC** could **cost** Brčko District **over 608 million BAM** when studied until **2052**.
- The slow **Scale-up Scenario B** reflected **slightly lower costs of inaction**: it is estimated that not investing in

ECEC could **cost** Brčko District over **331 million BAM** in the longest time horizon (to **2052**).

Ultimately, therefore, investments in ECEC have a strong, positive return on investment – a rate that is even larger over the long-term.

- Under **Scale-up Scenario A**, for **every 1 BAM** invested in ECEC, **5.9 BAM** would be expected to be returned in socio-economic benefits by 2052.
- Under **Scale-up Scenario B**, this would be a little lower at **5.5 BAM** in return.

iv. Social Protection

Poverty can be damaging to child development and is associated with poorer health, nutrition, and education outcomes for those exposed to it. In BD, the absolute poverty rate for children aged 0–14 was concerningly high, sitting at 42%,²⁴ and the situation has likely worsened due to the impact of COVID19, inflation and economic crises. Children in BD are particularly vulnerable to poverty, with a rate (42%) significantly higher than the overall poverty rate of children aged 0–14 in BiH, which sits at 34%.²⁵ The absolute poverty rate of children is also consistently higher than older population sub-groups within BD, where 30% of youth aged 15–24 lived in absolute poverty, and 26% for the general BD population.²⁶ This is particularly concerning also considering that in BD, in 2021, only 3,306 beneficiaries exercised their right to the child allowance,²⁷ which translates to just 26% of the under-15 population. The number of both child allowance beneficiaries and corresponding children has also been drastically falling since 2017, and decreased from 4,292 and 7,660 to 3,306 and 6,100 respectively.²⁸

Inequities are strongly correlated with the socio-economic status of households. Some groups, including those in rural areas, Roma communities, and households with CwD, have a heightened risk of experiencing poverty and deprivation.

It is estimated that having a disability increases the probability of becoming poor by 18% in BiH,²⁹ and that almost 80% of Roma children live in poverty.³⁰ Child poverty is a particularly important issue to tackle in BD, as the effects can last well into adulthood.³¹ This is because factors such as poor health, nutrition, and lack of education can contribute to toxic stress, setting these individuals behind their peers, therefore making it challenging to improve their material standing and to break the intergenerational cycle of poverty and exclusion.

The BD Law on Child Protection gives caregivers across BD the right to a child allowance, maternity allowance, reimbursement of maternity benefits and half-time work for children with disabilities.³² Households are eligible for the child allowance if there is a child up to the age of 15 (who attends school regularly) and if the household's monthly income sits below 15% of the minimum salary of the previous year in BD. It is also available for children with developmental delays or disabilities. Whilst this is an important milestone in advancing social protection in BD, the population coverage and adequacy of the transfer remain too limited to resolve poverty in early childhood.

Promisingly, 28.6% of the 2023 budget of the BD Sub-Department of Social Protection is allocated to the child allowance.³³ However, this translates to only 0.84% of GDP.³⁴ This is because the total budget of the Social Protection Sub-Department constitutes less than half

24 Brčko District of Bosnia and Herzegovina Social Inclusion Strategy for 2021–2027. Sarajevo, December 2020. Publication produced by Social Inclusion Foundation in BiH and the Initiative for Better and Humane Inclusion, with financial support from the European Union and UNICEF. The absolute poverty analysis is based on the Household Budget Survey 2015 data.

25 Ibid.

26 Ibid.

27 Agency for Statistics of Bosnia and Herzegovina (2022). Social Protection in Brčko District from 2017 to 2021. Available at: https://bhas.gov.ba/data/Publikacije/Bilteni/2022/BRC_03_2021_TB_1_BS.pdf

28 Ibid.

29 Initiative for Better and Humane Inclusion, 2016

30 UN Committee on the Rights of the Child (2019). Bosnia and Herzegovina Country Report

31 UNICEF (nd). Social Protection. Available at: <https://www.unicef.org/bih/en/node/501>

32 Ibid.

33 Budget of the Brčko District of Bosnia and Herzegovina for 2023

34 Ibid.

of its reference Dept. of Health and Other Services: the total social protection expenditure in BD amounts to only 10.96% of the total BD budget in 2023, or 2.95% of GDP, reduced from 3.10% of GDP in 2021.³⁵ The allocated amount is much lower than the BiH overall social protection expenditure, which sits at 22.5% of GDP in 2020.³⁶ However, when looking further into child-focused spending within social protection in BiH, there are less promising trends. Although total expenditure is in line with western Balkan neighbours Croatia and Serbia, who spent 24.3% and 21.9% respectively, this is far lower than the EU average of 31.8%.³⁷ Given that children are particularly vulnerable to poverty, these spending patterns show a worrying status quo where insufficient funding is dedicated to the upliftment and support of children and families

FINDINGS

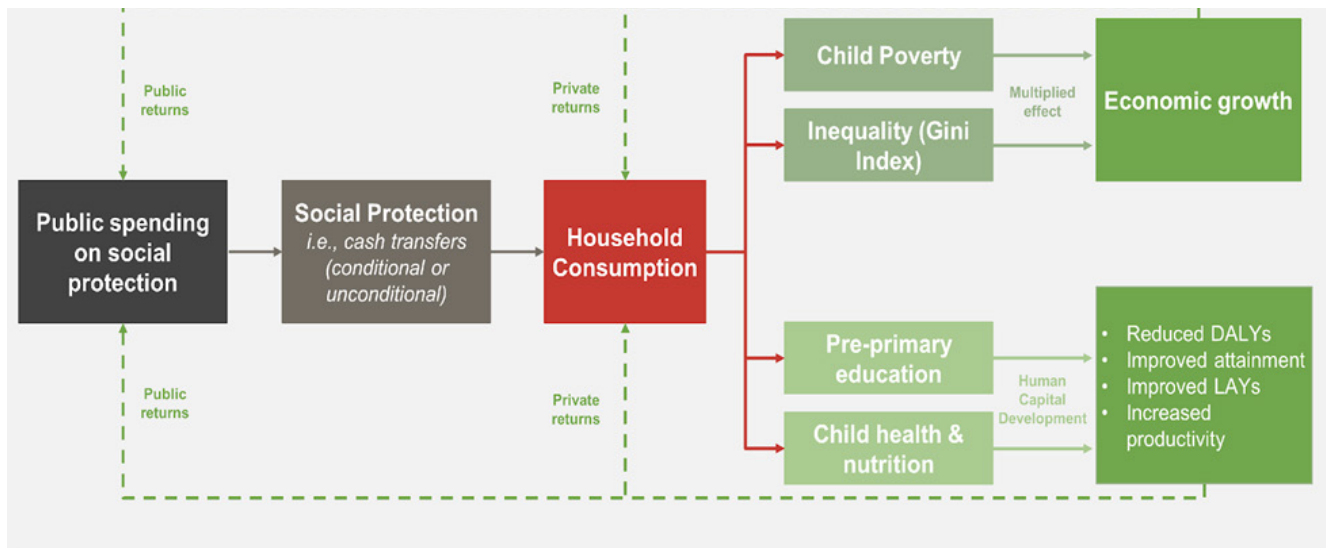
Five cash transfers interventions were analysed, guided by BD’s Child Protection Law and a universal cash transfer model. These interventions each have two aspects – the families eligible for the grant, and the size of the cash transfer itself. Four interventions (Scenarios A-D) are based on the Child Protection Law. The fifth intervention (Scenario E) is based on a universal child allowances, given to all families with children younger than seven.

The study reports on the results of the modelling for each of these interventions (Scenarios A to E); however, for simplicity in this Executive Summary, only those of Scenario E (the universal child allowance) are presented.

The effects of the implementation of the new cash transfer for children, were analyzed using a life cycle approach. These pathways include both direct and indirect channels, spanning health, education and labour market outcomes: increased household consumption reduces child poverty and inequality, and has a multiplier effect on economic growth, while the transfer tends to also increase access to pre-primary education, and health services, thus contributing to human capital development and overall increased productivity.

Scaling up cash transfers for households with young children is anticipated to have major positive impacts. Table 4 summarises the benefits associated with Scenario E and is divided between impacts related to health and nutrition, and those related to education. Clearly, scaling up social protection measures for young children will have an important multi-sectoral impact, creating a strong enabling environment for good health, adequate nutrition, and early learning opportunities. By 2052, 123 child deaths and over 1 700 stunting cases could be averted in BD. Further, an additional 1,700 children would be expected to complete secondary school.

FIGURE 1: SOCIAL PROTECTION IMPACT PATHWAYS



35 Ibid.

36 Agency for Statistics of Bosnia and Herzegovina (2023). Demography and Social Statistics

37 EuroStat European Statistics database – Social protection expenditure (indicator code SPR_EXP_SUM). Last accessed 15 November 2022 at <https://ec.europa.eu/eurostat/data/database>

TABLE 4: BENEFITS ASSOCIATED WITH SCENARIO E (UNIVERSAL CHILD ALLOWANCE), 2023-2032 AND 2023-2052. 2023-2032. | 2023-2052.

	2023 - 2032	2023 - 2032
Child Deaths Averted	40	123
DALYs Lost Averted	1,770	4,948
Stunting Cases Averted	640	1,775
Secondary School Completion	610	1,703

When monetised, these benefits could have a substantial impact on BD's economy. Significantly, this social protection intervention is associated with a reduction in income inequality. Further, BD stands to gain over 137 million BAM over a thirty-year period through the implementation of a universal child allowance. This compares to the additional costs, associated with providing the cash transfer, which are expected to amount to around 23 million BAM in the same period. Taken together, therefore:

In the **universal Scale-up Scenario E**, the cost of inaction would amount over **137 million BAM** until **2052**.

The rate of return for Scenario E was the highest for any of the social protection interventions considered:

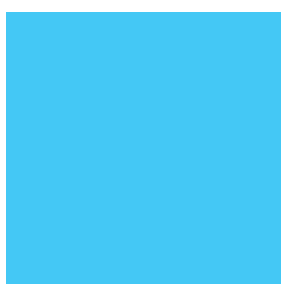
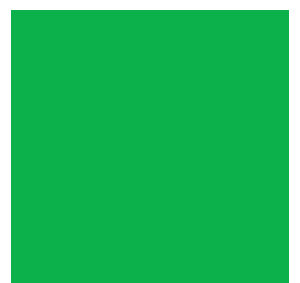
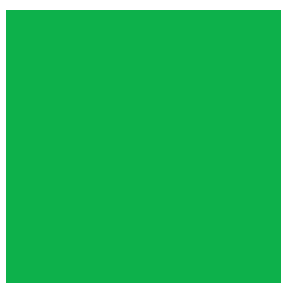
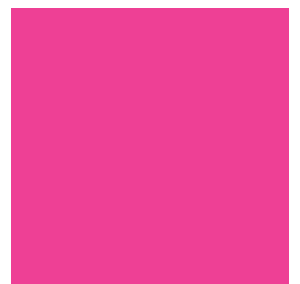
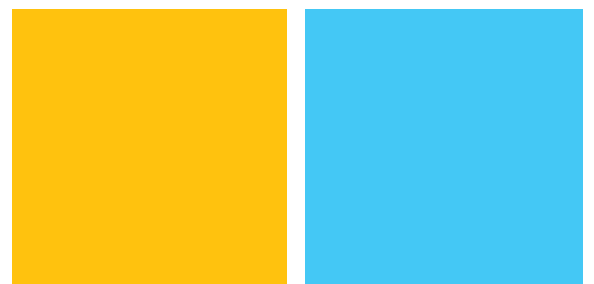
For every **1 BAM invested** between **2023 and 2052** scaling up a universal child allowance in BD, **6.9 BAM** are returned to the economy.

TABLE 5: ECONOMIC BENEFITS, COSTS, AND THE COST-OF-INACTION OF SCENARIO E, ACROSS DIFFERENT TIME HORIZONS IN MILLIONS OF BAM AND DISCOUNTED AT 3%.

	2023 - 2032	2023 - 2032
Total Additional Economic Benefits	58,243,877	161,317,139
Total Additional Costs	10,872,985	23,472,935
Cost of Inaction	47,370,891	137,844,204

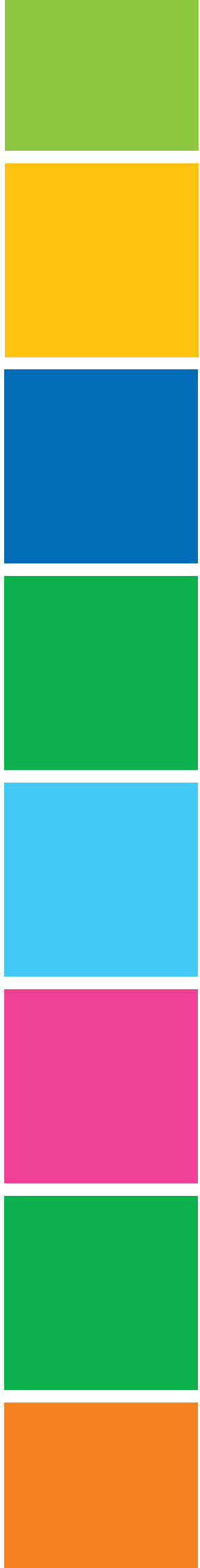
v. Conclusion and recommendations

This study presents the most solid evidence collated to date to justify investment in ECD in BD. Its findings echo those reported in the global literature on the strong rate of return associated with ECD investments. In the context of pressing demographic challenges, the impetus for BD to scale-up services for its young children is now more important than ever. Capitalizing on opportunities presented by ECD will require intensive, coordinated efforts. A set of policy recommendations has been developed to guide these efforts and maximize the potential for success. In summary, these recommendations are:



STRENGTHEN AND HARMONISE POLICY AND LEGAL STRUCTURES	Enforce the harmonisation and implementation of existing policies.
	Close the remaining legal and policy gaps which hinder ECD.
	Support human capital capacities and infrastructure to implement legislation and policies.
OPTIMISE THE USE OF PUBLIC BUDGETS FOR HUMAN CAPITAL DEVELOPMENT	Conduct a child-focussed public expenditure review.
	Undertake a fiscal space analysis for ECD.
	Reallocate existing budgets towards young children and protect child-focussed spending from budget cuts.
	Prioritise public investment by (cost-)effectiveness.
	Maximise technical efficiency, by reducing costs without jeopardizing quality
DEVELOP STRONG PARTNERSHIPS WITH THE PRIVATE SECTOR	Set up a district-wide ECD Working Group with public and private sector stakeholders
	Craft policies designed to ensure adequate support for both public and private providers of ECEC services.
	Create a multi-year operational and financial plan for children to support the link between policy and implementation.
	Bodies monitoring and regulating service provision need to be strengthened.
	Monitoring services need to link closely with practical support to improve quality.

<p>MAINSTREAM EQUITY AND INCLUSIVITY</p>	<p>Policy and programme design for young children must be inclusive.</p>
	<p>Stakeholders must strongly advocate and make the economic and rights-based case for the need to tackle inequities in early childhood.</p>
	<p>The financial architecture underpinning the provision of ECD services must be reconsidered.</p>
<p>SUPPORT DATA AND INFORMATION COLLECTION, MANAGEMENT, AND DISSEMINATION</p>	<p>Government stakeholders should set up an ECD Data Working Group, tasked with improving data systems for ECD.</p>
	<p>Data related to a common list of ECD indicators must be routinely collected.</p>
	<p>A central digitized open-access database should be developed to facilitate monitoring and evaluation.</p>
	<p>A government body should be given clear responsibilities in data governance for ECD.</p>
	<p>BD should look to undertake a new Multiple Indicator Cluster Survey (MICS) as soon as possible to improve the accuracy of data for strategic planning in the ECD sector.</p>
	<p>Create an enabling environment for the digital transformation of the public sector.</p>
<p>MOBILISE COMMUNITY ACTION AND DRAW ON INNOVATIVE LOCAL SOLUTIONS</p>	<p>Stimulate grass-root campaigns to demand quality services.</p>
	<p>Development partners should provide funding to innovators in the ECD sector.</p>
	<p>Local governments and stakeholders should create policies within their mandate to support young children.</p>
	<p>Lesson learning and sharing of experiences between entities/district should be encouraged.</p>



INTRODUCTION

OVERVIEW

Bosnia and Herzegovina (BiH) is one of the world's most rapidly ageing and shrinking countries in the world.

Estimates suggest that by 2060, almost a third of the population will be 65 years of age or older.¹ Moreover, the population is shrinking due to high levels of emigration among families and well-educated youth.² This presents a challenge that threatens long-term development, as well as the quality and sustainability of BiH's social service systems. This is particularly the case because the relatively small working-age population ultimately supports the elderly. These trends are expected to slow economic growth and put public finances under pressure (due to the high costs of health care and pensions for the large elderly population) and thus divert public spending away from children.³ Compounding this issue, BiH also has one of the lowest birth rates in the world, with only 8 births per 1000 people in 2020.⁴ These demographic trends make it more important than ever that every young child is nurtured and supported to reach their full potential. Ultimately, the future of BiH rests with them.

Recognizing the importance of BiH's children, BiH has a variety of policies and strategies focused on improving children's well-being. For instance, the Children's Council of Bosnia and Herzegovina and the Committee on the Rights of the Child have been collaborating on implementing the Action Plan for Children of Bosnia and Herzegovina (Action Plan), which contains goals for improving the legislative protections for children, as well as increasing the capacity of child protection bodies to protect children from violence and exploitation. The Action Plan also includes a specific focus on vulnerable groups, such as child refugees, and includes improvement of education and upbringing as key focus areas.⁵

However, the conditions needed for BiH's young children to meet all their rights and develop to their potential are still not in place. In Brčko District (BD), inadequate and poor-quality investments in social sector services have created a situation where young children and their fam-

ilies do not have universal access to the quality health, education, and social protection services that they need. The enrolment rate in early childhood education (ECEC) for 3- to 6-year-olds sits at just 28%⁶, whilst just 54% of children received immunization against measles.⁷ This disappointing coverage of vital early childhood development (ECD) services is a threat to the long-term growth and human capital development of the young people in BD.

This report is designed to promote better investment in young children between the ages of 0 and 6 in Brčko District. It is the result of a detailed study into the potential costs and benefits of investments into ECD services in the district. These services span the health, education and social protection sector. The broad objective of this report is to outline an investment case using findings from a cost-benefit analysis of a multi-sectoral package of ECD interventions. It seeks to serve as a tool to guide advocacy and decision-making for child-focused stakeholders, including the government and UN counterparts, with the ultimate goal of supporting and strengthening ECD in BiH at the state, entity, district, cantonal and municipal/city levels. Reports have been produced for Brčko District, the Federation of Bosnia and Herzegovina, and Republika Srpska, with the specific aims of:

- Generating empirical evidence on the short-, medium-, and long-term costs and benefits resulting from the provision and scale-up of quality interventions in early childhood development,
- Providing decision-makers with a tool that enables informed investments and evidence-based planning and programming,
- Guiding and advocating for the design and/or expansion of quality and inclusive ECD services tailored to the specific contexts,
- Leveraging the existing public funds for children through optimization and strategic re-channeling, and advocating additional resources for children for accelerated SDG achievement.

1 Nurka Pranjić and Maja Racić (2020). *Extended Working Life Policies: Bosnia and Herzegovina*

2 UNICEF (2020). *Situation Analysis of Children in Bosnia and Herzegovina*

3 Ronald Lee and Andrew Mason (2017). *Cost of Aging*. IMF Finance and Development, March 2017: Volume 54

4 World Bank (2020). Birth rate, crude (per 1000 people). Available at: <https://data.worldbank.org/indicator/SP.DYN.CBRT.IN?locations=BA>

5 Council of Ministers of Bosnia and Herzegovina (2015). *Action Plan for Children of Bosnia and Herzegovina 2015–2018*

6 Data provided by the Brčko District's Department of Education.

7 WHO/UNICEF Joint Reporting Form on Immunization (JRF) 2020. Data refers to Brčko District-specific immunization rate.

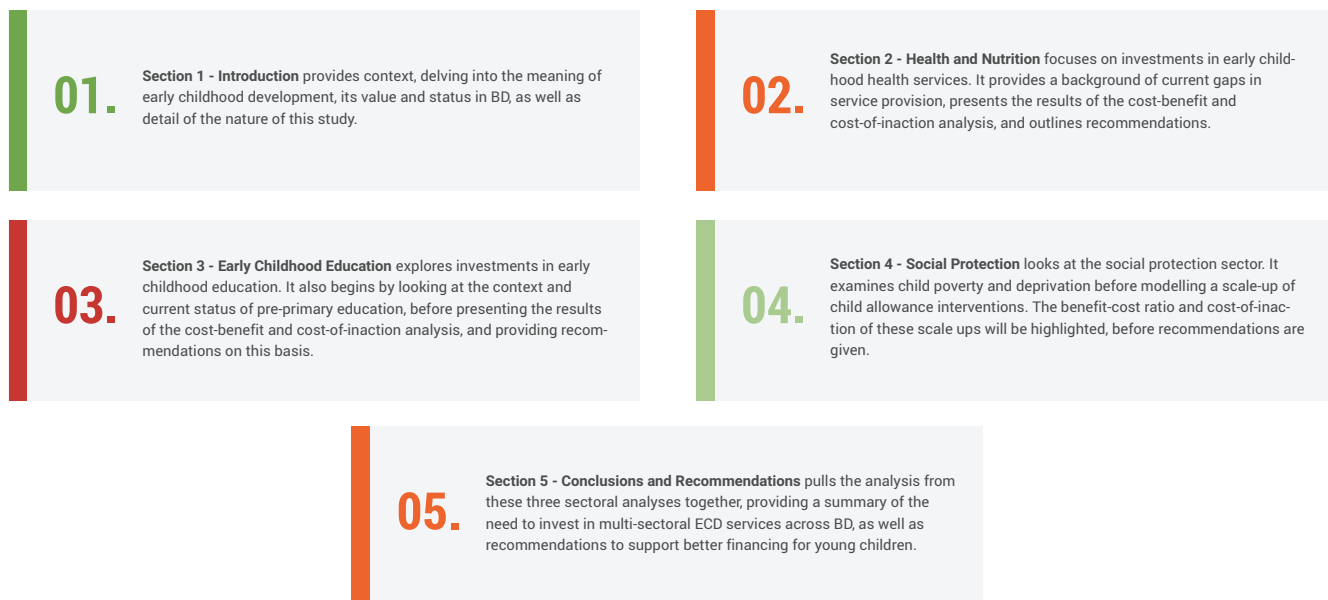
The ambition of this report is to support Brčko District in implementing a long-term, evidence-based programming of social spending to achieve proactive investment in human capital development.

The Investment Cases are produced with the support of the Joint SDG Fund. Together with the UN Country Team in Bosnia and Herzegovina, the Joint SDG Fund supports authorities in the country in accelerating progress towards the Sustainable Development Goals (SDGs) and to deliver on the commitment of the 2030 Agenda to leave no one behind. The reports are part of a broader UN Joint Programme (JP) "Towards the Sustainable Development Goals Financing Ecosystem in Bosnia and Herzegovina". The JP focuses on implementation of Agenda 2030 and, by combining the expertise of UNICEF, UNDP, UN Women, ILO and WHO, it aims to foster dialogue, and to support the governments in establishing an integrated ecosystem that allows for systemic financing of the SDGs, thus enabling informed and targeted investment of public funds, as well as the mobilization of additional financing for sustainable development. Moreover, this proactive spending focus will align more strongly with BiH's Sustainable Development Goal Financing Framework (SDG-FF), as the analysis will illustrate, as a form of productive investment that will improve BD's public finances in the long run.

Structure of the Investment Case

This Investment Case is structured as follows:

FIGURE 1: REPORT STRUCTURE



CONTEXT

What is early childhood development?

Extensive research shows that the early years of a child's life really matter. Every second of early childhood, millions of neural connections are made. By the age of two, the brain is 80% of its adult size, and by the age of five, brain development hits 90%.⁸ This is the period in which children will acquire physical and motor skills, expand their cognitive capacity, and develop their psycho-emotional behaviours, personalities, and social skills.

Interventions in early childhood can support development and increase the likelihood of long-term wellbeing, productivity, and prosperity (at both an individual and a societal level). For children to reach their full potential, they need a range of interconnected and diverse supports. The Nurturing Care Framework is an internationally recognized framework conceptualizing the approach to helping children to survive and thrive, and to transforming health and human potential in young children (Figure 2). It posits that to maximize early childhood development, young children require nurturing care interventions across five components: good health, adequate nutrition, safety and security, early learning opportunities, and responsive caregiving. This study draws on the components of the Nurturing Care Framework by taking a more holistic approach to ECD. We examine an array of interventions

8 First Things First (2022). 'Why Early Childhood Matters: Brain Development', First Things First, accessed 03 February 2022. Available at <<https://www.firstthingsfirst.org/early-childhood-matters/brain-development/>>.

across the health, education, and social protection sectors. These interventions include antenatal care, vaccination, well-baby visits, increased preschool enrolment, and child allowances.

FIGURE 2: THE NURTURING CARE FRAMEWORK⁹



Why invest in early childhood development?

Early childhood provides an important window of opportunity to define the course of a child's development and form a foundation for their future. Spanning from conception to the age of six, early childhood is a phase where young children undergo rapid development, acquiring physical, cognitive, motor, psycho-emotional, and social skills. Beyond the moral importance of investing in ECD as a human right, investing in ECD is shown to be among the best investments a country can make in its future, yielding huge socio-economic returns not only for the children but for the society as a whole¹⁰. However, despite the recognition of the value of ECD as a policy option, ECD is underfunded globally.

Evidence shows us that by the age of six, we can predict which children are likely to succeed in life. For instance, recent global research suggests that 40% of children with pre-primary education experience display minimum literacy skills by Grade 2, compared to only 18% of children

without any pre-primary education experience.¹¹ Similarly, 63% of Grade 2 pupils with pre-primary education experience display minimum competencies in mathematics, compared to 49% of pupils without pre-primary education experience.¹² At the BiH level, a study conducted in 2022 shows that children who attended pre-primary programmes for two years or more have significantly better educational achievement in mathematics and natural sciences than those children who did not attend, or who did so for less than one year.¹³ Compounding this issue, some children in BiH are also exposed to toxic stress (exposure to strong, frequent and/or prolonged adversity)¹⁴, inadequate nutrition (particularly low rates of breastfeeding and rising obesity), insecure housing arrangements, and lack of parental stimulation or pre-primary education services. These factors have all been found to damage brain architecture, lower future academic achievement, and contribute to poorer outcomes across the life course (including an increased risk of degenerative diseases, such as diabetes, and lowering lifetime earning potentials), thus entrenching a cycle of multi-generational poverty, disadvantage, and inequity.¹⁵ Strikingly, meaningful differences in outcomes between advantaged and disadvantaged children are apparent as early as nine months.¹⁶

Investing in these periods of early childhood, therefore, makes sense. It is the moment in the life course where opportunities for human development are greatest.¹⁷ A vast body of evidence has emerged in recent years arguing that investments in early childhood have the greatest return of any human capital intervention (Figure 3). Longitudinal studies from a wide range of case studies show that children who participate in quality early childhood programmes experience multiple benefits, including improved test scores, graduation rates, decreased crime

9 Nurturing Care (2021). Nurturing Care for Early Childhood Development, published online. Accessed 19.08.21. Available at <https://nurturing-care.org/>

10 Heckman Equation (2021). The Heckman Curve, accessed 19.08.21. Available at <https://heckmanequation.org/resource/the-heckman-curve/>

11 UNICEF (2019). A World Ready to Learn: Global Report on Pre-Primary Education, (UNICEF: New York, United States of America).

12 Ibid.

13 Agency for Preschool, Primary and Secondary Education (2022). Preschool Education and Care as a Determinant of Student Achievement in Bosnia and Herzegovina in TIMSS 2019. Available at: <https://aposo.gov.ba/sadrzaj/uploads/%D0%90naliza-zadataka-po-sadrzajmim-i-kognitivnim-domenama-TIMSS.pdf>

14 Toxic stress refers to a child being exposed to strong, frequent, and/or prolonged adversity – this includes physical or emotional abuse, neglect, caregiver illness, exposure to violence, and/or the accumulated burdens of family economic hardship.

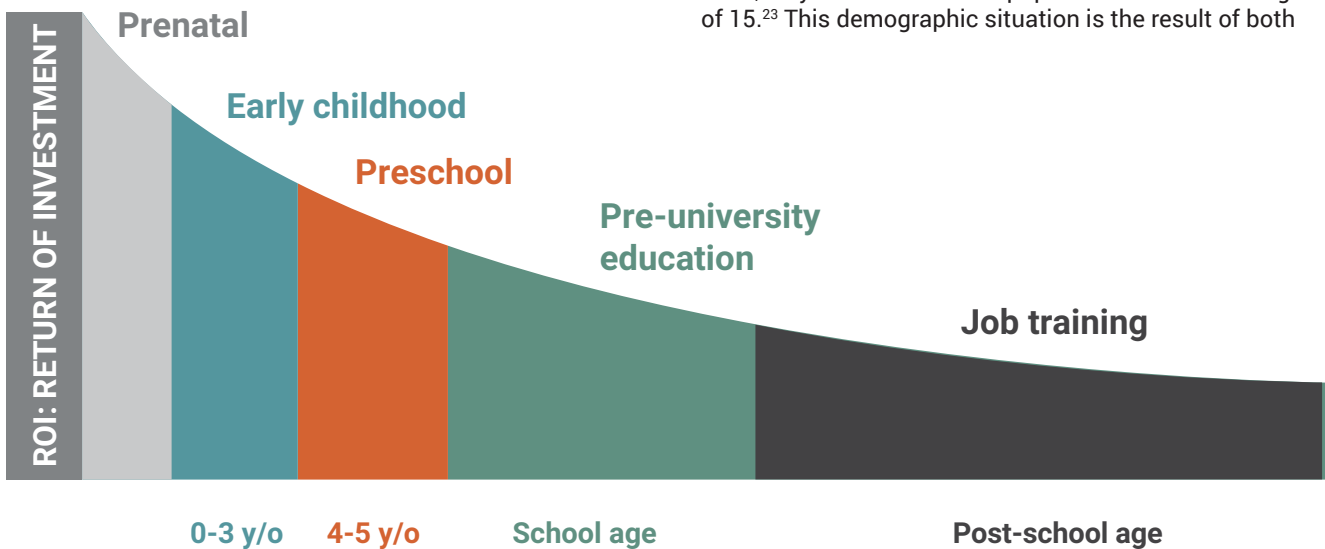
15 B. Morgan (2013). 'Biological embedding of early childhood adversity: Toxic stress and the vicious cycle of poverty in South Africa', Ilifa Labantwana: Research and Policy Brief Series, available at <https://ilifalabantwana.co.za/wp-content/uploads/2017/06/Toxic-stress-and-the-vicious-cycle-of-poverty-in-South-Africa.pdf>

16 Ibid.

17 Heckman Equation (2021). The Heckman Curve, accessed 19.08.21. Available at <https://heckmanequation.org/resource/the-heckman-curve/>

and delinquency rates, and improved long-term income.¹⁸ When these benefits are monetized, the returns on investment can be enormous – with a much-cited estimate suggesting investments in nurturing care interventions can return up to 17 times the initial amount invested.¹⁹ Further, high-quality ECD programmes have been found to reduce multi-dimensional poverty and inequality. A seminal study carried out in Jamaica found that children who were part of an ECD study programme (which worked with growth-stunted children between the ages of 9 and 24 months in a two-year randomized controlled trial) earned 25% more as adults than the disadvantaged children in the control group (who received no intervention) – and they earned as much as their more advantaged peers.²⁰

FIGURE 3: THE HECKMAN CURVE – RETURN ON INVESTMENT: ECONOMIC IMPACT OF INVESTING IN EARLY CHILDHOOD.²¹



Importantly, investment in ECD can, therefore, drive progress within widespread development and the Sustainable Development Goals (SDGs). Within the framework of the SDGs, achieving strong ECD is seen as a prerequisite, particularly in the fight against poverty, inequality, and social exclusion, and in the promotion of peace and security. As the early years are the building blocks for later life, they dictate later academic success, economic productivity, responsible citizenship, lifelong health, strong communities, and the success of the next generation of parents. An investment in early childhood thus lays a strong foundation for development, increases the effectiveness of the education and health systems, improves the chances of economic productivity and growth, and contributes to more equitable societies.

Why is early childhood development important in Brčko District?

BiH's ageing and shrinking population remains a large concern for the Brčko District's economic and social development.²² These changing demographic trends, illustrated in Figure 4 below, are resulting in significant socio-economic and political implications. The total population has been declining every year since 2002, and, as of 2018, only 15.68% of the BD population is below the age of 15.²³ This demographic situation is the result of both

18 P. Engle et al. (2011). 'Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries', *Lancet*, 378:9799, 1339-53

19 Ibid.

20 P. Gertler, J. Heckman, R. Pinto, A. Zanolini, C. Vermeersch, S. Walker, S. M. Chang and S. Grantham-McGregor (2014). 'Labour Market Returns to an Early Stimulation Intervention in Jamaica', *Science*, 344:6187, p. 998-1001

21 Heckman Equation (2021). *The Heckman Curve*, accessed 19.08.21. Available at <https://heckmanequation.org/resource/the-heckman-curve/>

22 UNICEF (2020). *Situation Analysis of Children in Bosnia and Herzegovina*

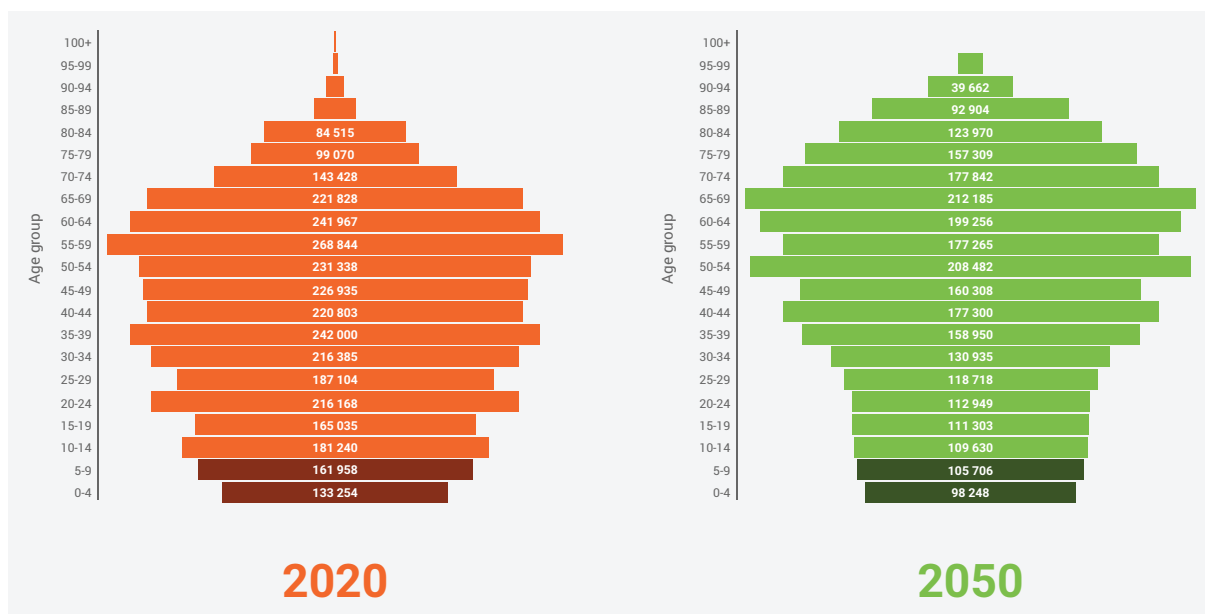
low birth rates and high rates of emigration. Across BiH, 25% of young people are actively looking for work outside of the country, and almost 90% would like to leave the country for a long period or even permanently.²⁴ Emigration is particularly high amongst more educated youth, which is producing a brain drain, thus threatening the quality and sustainability of their health, education, and social protection systems.²⁵

From a socio-economic standpoint, these threats to long-term development should not be understated. BiH, as well as its Brčko District, has faced numerous setbacks, including a recession precipitated by the 2008 Global Financial Crisis, an international growth slowdown in 2012, and flooding in 2014.²⁶ BiH is also a transit destination for many refugees and migrants. Since the beginning of 2018, more than 87,000 arrived in BiH via the Western Balkans route, with the majority moving on to their final destinations following their arrival in BiH and only up to 2,700 refugees and migrants present in reception centres by the end of 2022 (of which more than 700 continue to live in inadequate conditions).²⁷ The country's reception facilities have been overwhelmed by these numbers, something that is likely to be exacerbated by the Ukraine crisis. Furthermore, the war in Ukraine has had further negative impacts on the BiH economy, as many of its trade pathways

are via other European countries which have sanctioned Russia.²⁸ This means that many of its industries that export primarily to Russia, via other European countries, are now facing massive production slowdowns. The many challenges and crises facing the country help to explain why the average BiH standard of living is 32% of the EU-27 average in 2017, despite average GDP growth between 2015 and 2017 sitting at 3%.²⁹

The economy is also faced with internal macro-economic challenges. BiH's consumption rate is over 100% of GDP and favours recurrent spending over investment.³⁰ BD has the lowest unemployment rate in BiH, with a rate of 22.9% in 2019³¹; however, concerningly, unemployment is rising among women – the share of women in the unemployed population rose from 53.3% in 2015 to 58.7% in 2019.³² This indicates a large disadvantage for women within the labour market.³³ Furthermore, gender inequality is still a large concern. Labour force participation in BD is only 17.8% for women, compared to 43.7% for men.³⁴ Thus, there is a clear need to improve human capital outcomes and their equity. This is particularly important for BiH's bid to join the European Union (EU).

FIGURE 4: POPULATION STRUCTURE OF BOSNIA AND HERZEGOVINA, 2020 AND 2050³⁵



23 Brčko District of Bosnia and Herzegovina Social Inclusion Strategy for 2021-2027. Sarajevo, December 2020. Publication produced by Social Inclusion Foundation in BiH and Initiative for Better and Humane Inclusion, with financial support of the European Union and UNICEF.
 24 UNICEF (2020). Situation Analysis of Children in Bosnia and Herzegovina
 25 Ibid.
 26 Ibid.
 27 European Civil Protection and Humanitarian Aid Operations, Bosnia and Herzegovina Factsheet Q4 2022. Available at: https://civil-protection-humanitarian-aid.ec.europa.eu/where/europe/bosnia-and-herzegovina_en
 28 Daria Sito-sucic (2022). Ukraine war fuels Bosnian businesses' growth, instability fears

29 UNICEF (2020). Situation Analysis of Children in Bosnia and Herzegovina
 30 Ibid.
 31 Regional Cooperation Council (2021). Study on Youth Employment in Bosnia and Herzegovina, Annex 2
 32 Brčko District of Bosnia and Herzegovina Social Inclusion Strategy for 2021-2027. Sarajevo, December 2020. Publication produced by Social Inclusion Foundation in BiH and Initiative for Better and Humane Inclusion, with financial support of the European Union and UNICEF.
 33 Ibid.
 34 Brčko District of Bosnia and Herzegovina Social Inclusion Strategy for 2021-2027. Sarajevo, December 2020. Publication produced by Social Inclusion Foundation in BiH and Initiative for Better and Humane Inclusion, with financial support of the European Union and UNICEF.
 35 Based on World Population Prospects estimates for 2020 and 2050.

ECD is particularly important given this demographic and economic context. With fewer children and limited resources, BiH must cultivate a skilled, productive young work force in order to sustain and improve economic and social conditions. In 2020, around 3,565 children below the age of seven lived in BD, a figure set to decline to around 2,530 by 2050.³⁶ They must be the focus of urgent policy and investment attention. The case for investing in ECD is a clear pathway towards economic and social development in Brčko District. Further, it may also encourage families and young people to view life prospects in the country more favourably, assisting in driving down emigration rates, and potentially encouraging the return of those who have already left.³⁷

TABLE 2: PROJECTION OF NUMBER OF CHILDREN IN BRČKO DISTRICT (2020–2050).

Year	Children (0–6 years)
2020	3,565
2025	3,124
2030	2,916
2035	2,831
2040	2,781
2045	2,695
2050.	2 530

TABLE 3: LEGISLATION AND POLICIES RELATED TO ECD IN BD

Legislation	Level	Year	Significance
Framework Law on Preschool Education and Upbringing	BiH	2007	<ul style="list-style-type: none"> Recognizes the integral role of preschool as an agent of upbringing and education, and provides principles and norms for the provision of preschool. Article 16 makes it mandatory for children to be enrolled in preschool in the year before enrolment in primary school. Financing, duration, and programme to be determined by competent education authorities.

³⁶ Based on World Population Prospects estimates for 2020 and 2050.

³⁷ UNDP. (2013). Rural Development in Bosnia and Herzegovina.

Status of early childhood development in Brčko District

Law and Policy

Over the past 15 years, progress has been made towards a conducive policy environment for the ECD ecosystem. cross BD, services for children are influenced by legislation from the state of BiH, as well as BD policies. Legislation of particular importance is laid out in Table 3. Framework laws, such as the *Framework Law on Preschool Education and Upbringing (2007)*, are intended to develop an enabling environment for positive early childhood development, with ministries at all levels obliged to harmonize existing laws in relation to preschool education and upbringing.

Platform for the Development of Preschool Education and Care in BiH	BiH	2017	<ul style="list-style-type: none"> • State-level strategic document to develop preschool education across BiH. • Adopted by the Council of Ministers in 2017 and harmonized with current EU and UN trends and standards in ECEC.
BD BiH Law on Child Protection	BD	2018	<ul style="list-style-type: none"> • Aims to provide each child with equal conditions for healthy physical, intellectual and emotional development in the family • Entitles families in need with children to a child allowance³⁹ • Families in need are those whose total monthly income per family member does not exceed 15% of the average salary in BD, and real estate income per family member in the preceding year does not exceed 3% of the average real estate income per 1 hectare of land⁴⁰.
BD Law on Preschool Education and Care	BD	2007	<ul style="list-style-type: none"> • Regulates the goals and tasks of preschool, work organization, financing, management and supervision in preschool institutions in BDD.⁴¹
Development Strategy 2021–2027	BD	2020	<ul style="list-style-type: none"> • Represents a key strategic planning document which directs the development of BD in the seven-year period and addresses all development areas. • Unites goals, priorities and measures by which BD can improve its position in the domestic and regional environment in the long term and improve the main indicators of growth, quality of life and sustainable development. • Contributes to integration into the European Union, and is aligned with the relevant strategic framework in BiH, as well as with the global framework for sustainable development and the specific EU framework for certain areas.

38 Official Gazette of the Brčko District of Bosnia and Herzegovina, No. 18/2020 – revised text, 29/2020, 41/2020 and 13/2021

39 Brčko District of Bosnia and Herzegovina Social Inclusion Strategy for 2021–2027. Sarajevo, December 2020. Publication produced by Social Inclusion Foundation in BiH and Initiative for Better and Humane Inclusion, with financial support of the European Union and UNICEF.

40 Official Gazette of the Brčko District of Bosnia and Herzegovina, No. 18/2020 – revised text, 29/2020, 41/2020 and 13/2021

41 Official Gazette of the Brčko District of Bosnia and Herzegovina, Nos 13/07, 19/07, 39/08, 21/10, 48/16, 22/16, 24/20 and 13/21

However, building a conducive environment for nurturing care has been challenged by the decentralized institutional structures in BiH. It has produced a disproportionately large public sector, with 160 ministries and 145 local administrations.⁴² This makes alignment across different administrative units, as well as between sectors, particularly difficult and leads to prolonged, arduous decision-making processes. The primary state-level body coordinating interventions relating to early childhood is the Council for Children of BiH, which is chaired by the Ministry of Human Rights and Refugees.⁴³ However, due to BiH's complex governance structure, decision-making and service delivery is largely decentralized to the administrative unit. This has resulted in poor coordination on child rights across the country, leading to inadequate implementation of services.⁴⁴ These arrangements have hindered efforts to develop further legislation or to ensure consistent implementation. This indicates a need for consistent implementation, monitoring and evaluation, as well as costing frameworks across all administrative units in BiH.⁴⁵ The Action Plan, for example, does not specify state budget allocations.

Opportunities to improve the quality of the legal and governance structures for ECD have emerged alongside BiH's bid to join the EU. In May 2019, the EU Commission provided an opinion that concluded that BiH did not yet sufficiently fulfil their criteria, specifically referencing the quality of institutions/democracy, the rule of law, human rights, and respect for the protection of minorities.⁴⁶ This is particularly concerning for children. Naturally, if minorities and human rights are not respected, this inequitable treatment extends to children, resulting in fewer opportunities early in life. Furthermore, weak institutions result in a challenging environment for early childhood development interventions to thrive. This is because the sector relies on multisectoral interventions – and if the health, education and social protection institutions are weak, it is unlikely that they are providing accessible and adequate services for early childhood development, and it is unlikely that they are able to sufficiently coordinate their efforts to ensure the holistic development of children.

The European Council granted BiH Candidate status in December 2022, following the European Commission's recommendation on the understanding that a number of steps are being taken towards the fulfilment of 14 key priorities.⁴⁷ The EU is the largest provider of financial assistance to Bosnia and Herzegovina, supporting the socio-econom-

ic development and reforms in the enlargement region, including BiH, with financial and technical assistance through the Instrument for Pre-accession Assistance (IPA).⁴⁸ Therefore, it is promising that BiH continues to improve their institutions to increase their chances of joining the EU. The continued efforts to join the EU are an opportunity for the advancement of child rights in BiH, particularly as the need to adopt improved ECD legislation was cited in the EU's latest review of BiH.⁴⁹ As will be seen through the evidence presented in this report, many of the opportunities offered by the bid to join the EU can be grasped by investing in children, especially through early childhood interventions.

Financing

Budget allocations for children in social sectors are either insufficient or challenging to monitor, and even in the case of adequate funding, the outcomes for children are below targets. Looking at the case for health, education, and social protection targeting children under the age of six specifically, we see that:

- **The share of the annual BD budget allocated to the Department of Health and Other Services amounts to 22.14%, which translates to approximately 5.4% of GDP in 2023.**⁵⁰ This is lower than the EU average of 9.92%.⁵¹ Further, the current health expenditure per capita in BD amounts to just 756.20 BAM, or around US \$421.17.⁵² Compared to the EU average of US \$3,476.43,⁵³ therefore, BD's per-capita health expenditure is less than 12% of the EU's. Importantly, the Department of Health and Other Services encompasses the Sub-Department of Social Protection, to which nearly half of the funds are allocated. This implies that the actual funds allocated to healthcare expenditures in 2023 amounts to 11.2% of the total BD budget, or 3.0% of GDP.⁵⁴ Of this, only 1.30% of the budget goes to the Sub-Department of Public Health, which translates to 0.35% of GDP.⁵⁵

48 For 2021–2027, IPA III funding for the whole enlargement region is 14,162 billion EUR, according to 5 thematic priorities: Rule of Law, Good Governance, Inclusive Growth, Green Agenda, and Cross-border Cooperation. For 2014–2020, IPA II funding allocated for BiH amounted to 539.6 million EUR. In 2021, Bosnia and Herzegovina benefited from 73 million EUR under the IPA III, and the Annual Action Plan 2022 adopted for BiH includes 45.5 million EUR. Source: EU NEAR, December 2022. Bosnia and Herzegovina on its European path, Available at: ec.europa.eu/neighbourhood-enlargement

49 European Commission (2021). Commission Staff Working Document: Bosnia and Herzegovina 2021 Report. Strasbourg

50 Budget of the Brčko District of Bosnia and Herzegovina for 2023

51 World Bank (2019). Current health expenditure (% of GDP). Available at: <https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS?locations=BA-EU>

52 Budget of the Brčko District of Bosnia and Herzegovina for 2023

53 World Bank (2019). Current health expenditure per capita (current US\$). Available at: <https://data.worldbank.org/indicator/SH.XPD.CHEX.PC.CD?locations=BA-EU>

54 Budget of the Brčko District of Bosnia and Herzegovina for 2023

55 Ibid.

42 UNICEF (2020). Situation Analysis of Children in Bosnia and Herzegovina

43 Ibid.

44 Ibid.

45 UNICEF (2020). Situation Analysis of Children in Bosnia and Herzegovina

46 Ibid.

47 EU NEAR, December 2022. Bosnia and Herzegovina on its European path, Available at: ec.europa.eu/neighbourhood-enlargement

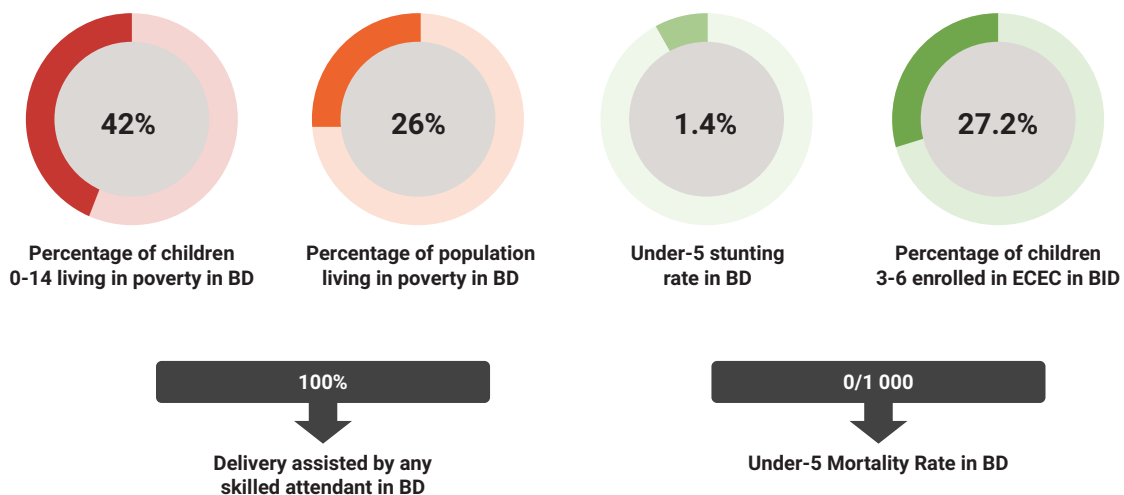
- Total spending on preschool education in BD accounts for only 1.38% of the 2023 budget, or 0.37% of GDP⁵⁶** Despite almost doubling from 0.21% of GDP in 2021 (0.73% of BD budget),⁵⁷ this is still less than half the average public spending on ECEC in OECD countries, of just over 0.8% of GDP.⁵⁸ The share of total BD budget allocated to the Department of Education is 18.23%, equating to 4.90% of GDP.⁵⁹ Overall spending on education is higher than neighbouring Western Balkan nations such as Serbia and Croatia, whose education spending stand at 3.6% and 3.9% of GDP respectively.⁶⁰ However, while only 7.6% of the BD's education budget goes to ECEC in 2023 (increasing from 4.8% in 2021), a much greater proportion is targeted at primary and secondary levels, amounting to 57.2% and 29.4% respectively.⁶¹
- Promisingly, 28.6% of the 2023 budget of the BD Sub-Department of Social Protection is allocated to the child allowance.⁶²** However, this translates to only 0.84% of GDP.⁶³ This is because the total budget of the Social Protection Sub-Department constitutes less than half of its reference Dept. of Health and

Other Services: the total social protection expenditure in BD amounts to only 10.96% of the total BD budget in 2023, or 2.95% of GDP, and decreased from 3.10% of GDP in 2021.⁶⁴ The allocated amount is much lower than the BiH overall social protection expenditure, which sits at 22.5% of GDP.⁶⁵ Therefore, there is significant progress to be made with regards to BD's social protection financing.

Outcomes

There are clear, significant untapped opportunities to invest in Brčko District's younger generation. BiH's Human Development Index (HDI) in 2019 was 0.78, putting it 73rd out of 189 countries and territories. Montenegro, a comparable Balkan nation, has a similar GDP per capita but a higher HDI of 0.829. BiH's HDI value is also lower than the European average of 0.791. A value of 0.78 indicates that a child born in BiH today is likely to grow up to be only 78% as productive as they could have been. This estimated loss in productivity is the outcome of insufficiently provided human development-enabling factors (health, education and social protection). Specifically:

FIGURE 5: KEY ECD STATISTICS FOR BD ^{69 70 71 72}



56 Ibid.
 57 Ibid.
 58 OECD countries spend on average just over 0.8% of GDP on early childhood education and care, with large variations across countries. Countries spend more on pre-primary education than childcare, up to approximately 1% vs 0.5%. Source: OECD Family Database (2023). Public spending on childcare and early education. Available at: https://www.oecd.org/els/soc/PF3_1_Public_spending_on_childcare_and_early_education.pdf
 59 Budget of the Brčko District of Bosnia and Herzegovina for 2023
 60 World Bank (2019). Government expenditure on education, total (% of GDP). Available at: <https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?locations=RS-ME-HR>
 61 Budget of the Brčko District of Bosnia and Herzegovina for 2023
 62 Ibid.
 63 Ibid.

64 Ibid.
 65 Agency for Statistics of Bosnia and Herzegovina (2023). Demography and Social Statistics
 66 UNDP (2020). Human Development Report 2020: Montenegro
 67 UNDP (2020). Human Development Report 2020: Bosnia and Herzegovina
 68 Ibid.
 69 Brčko District of Bosnia and Herzegovina Social Inclusion Strategy for 2021–2027. Sarajevo, December 2020. Report produced by Social Inclusion Foundation in BiH and Initiative for Better and Humane Inclusion, with financial support from the European Union and UNICEF. The absolute poverty analysis is based on the Household Budget Survey 2015 data.
 70 UNICEF (2012). Multiple Indicator Cluster Survey (MICS)
 71 Enrolment rate is estimated based on the total of 719 children between the ages of three and six years enrolled in ECEC in 2022/23 (Total: 913; Under 3 years 194- Source: Brčko District Education Statistics 2022/2023), and on the estimated total population for this group of around 2,639 in 2022 (Source: calculations based on UN World Population Prospects).
 72 Nina Karadjinovic & Sanela Muharemovic (2019). UNFPA Country Programme Evaluation: Bosnia and Herzegovina (2013–2018)

- **Health and nutrition outcomes for children are stronger in BD than other areas of BiH.** BD's stunting rate is 1.4%, and infant mortality is 0 per 1000 live births, lower than the EU average of 3 deaths per 1000 live births.⁷³ However, breastfeeding and immunization coverage rates are starkly low. Further, according to an analysis of multidimensional poverty and deprivation, almost all children aged 0 to 4 (98%) in BiH are deprived in at least one dimension, and one third (33%) are deprived in four or more dimensions at a time.⁷⁴
- **Opportunities for early learning are being stifled.** BiH has one of the lowest early childhood education enrolment rates in Europe, estimated to be 33.2% for full-day or half-day programme for children aged 3 to 5.⁷⁵ When condensed preparatory programmes are included, this figure rises to 41.6% for the same age group, and 44.1% for children aged 5 to 6 in the pedagogic year 2022/2023.⁷⁶ In BD, when looking at full-day or half-day programmes, the estimated ECEC enrolment rate in 2022/23 for children aged 3 to 6 sits at 27.2%,⁷⁷ ranging between an estimated 26.7% among 3–4-year-olds, 28.7% among 4–5-year-olds, and 26.2% among 5–6-year-olds.⁷⁸ Accounting for the preparatory programmes, however, enrolment rates rise to over 90% for the age group 5 to 6, and to 51% for children aged 3 to 6.⁷⁹ Attitudes towards pre-primary education and care in BD, therefore, tend to under-estimate the significance of a longer duration of preschool education within the life course, which has led to significant under-provision of full-day or half-day programmes
- **Young children are exposed to poverty, deprivation and toxic stressu.** Child development and wellbeing in BD is being compromised by the lack of resources, complex legal and governance structures, and a poor understanding of the importance of investment in ECD.⁸⁰ In BD, according to recent analysis, the absolute poverty rate for children aged 0–14 was concerningly high in 2015, sitting at 42%, compared to 26% for the total BD population,⁸¹ and the situation has likely worsened due to the impact of COVID-19, inflation, and economic crises. This is particularly concerning as in 2021 there were only 3,306 beneficiaries of the child allowance, corresponding to 26% of the under-15 population.⁸²

Further, these figures hide significant inequities in outcome between groups of young children. Children from vulnerable households (such as those with low incomes, single-parent households, households in which one or more parents/caregivers are unemployed, or Roma households), rural communities, and children with disabilities (CwD) are more likely to have poorer outcomes. For instance, having a disability increased the probability of falling into poverty by 18%.⁸³ The status of young Roma children is of particular concern. According to the 2013 census, there were over 12,000 Roma in BiH.⁸⁴ Children from these communities are three times more likely to be in poverty than other children, five times more likely to be underweight, twice as prone to stunting, and their primary school attendance is less than one third of that of the majority.⁸⁵ High birth rates in the Roma population could imply that the population of young children at risk is growing year on year, although official statistics are not available. This means that figures such as the country's HDI of 0.78 are likely much lower for these vulnerable subpopulations, whose children may therefore be far less than 78% as productive as they could have been.

73 UNICEF (2012). Multiple Indicator Cluster Survey (MICS)

74 Lucia Ferrone & Yekaterina Chzhen (2015). National Multiple Overlapping Deprivation Analysis: Child Poverty and Deprivation in Bosnia and Herzegovina. Office of Research Working Paper WP 2015–02

75 UN (2023). Voluntary Review: Implementation of Agenda 2030 and the Sustainable Development Goals in Bosnia and Herzegovina [In press]; data for the pedagogic year 2022/23

76 Ibid.

77 Enrolment rate is estimated based on the total of 719 children between the ages of three and six years enrolled in ECEC in 2022/23 (Total: 913; Under 3 years 194- Source: Brčko District Education Statistics 2022/2023), and on the estimated total population for this group of around 2,639 in 2022 (Source: calculations based on UN World Population Prospects).

78 Agency for Statistics of Bosnia and Herzegovina (2023). Brčko District Education Statistics from the end of 2018/2019 to the beginning 2022/2023 school year. Brčko, 2023. Available at: https://bhas.gov.ba/data/Publikacije/Bilteni/2023/BRC_05_2022_TB_1_BS.pdf

79 Ibid.

80 R. Khan (2021). Op-Ed by Dr. Rownak Khan, UNICEF Representative in BiH

81 Brčko District of Bosnia and Herzegovina Social Inclusion Strategy for 2021–2027. Sarajevo, December 2020. Report produced by Social Inclusion Foundation in BiH and Initiative for Better and Humane Inclusion, with financial support of the European Union and UNICEF. The absolute poverty analysis is based on the Household Budget Survey 2015 data.

82 Agency for Statistics of Bosnia and Herzegovina (2022). Social Protection in Brčko District from 2017 to 2021. Available at: https://bhas.gov.ba/data/Publikacije/Bilteni/2022/BRC_03_2021_TB_1_BS.pdf

83 Amar Numanovic (2020). Performances of Western Balkan economies regarding the European Pillar of Social Rights. European Centre for Social Welfare Policy and Research

84 Municipal data and Roma associations indicate that the real number is between 35,000 and 45,000.

85 UNICEF (2020). Situation Analysis of Children in Bosnia and Herzegovina

Further, there are significant challenges facing CwD.⁸⁶

These include inadequate and outdated skills amongst ECD service providers and the lack of a common definition of disability in BiH.⁸⁷ Rather than making public services and society at large more accessible for CwD, there is a widespread practice of institutionalizing young people with disabilities, something highlighted by the EU as a concern and against international convention.⁸⁸ The isolation of CwD has significant negative effects on overall development, and carries a high risk of abuse. Therefore, another important aspect of ECD reform in BiH is deinstitutionalizing these young people and assisting in their integration into mainstream systems.

Finally, the outlook for child outcomes is being threatened by exogenous events and shocks.

The cost of living, globally, but particularly in Europe, has risen largely due to the war in Ukraine.⁸⁹ Food prices in BiH have risen by 22.7% compared to this time last year, threatening food security.⁹⁰ Higher prices are particularly problematic for the poorest households – with these households across the Balkans spending more than 60% of their budgets on food and energy.⁹¹ Moreover, trade routes carrying BiH goods such as rawhide through Italy into Russia have been disrupted by EU sanctions against Russia following the invasion.⁹² Therefore, slowdowns in production may have further knock-on effects, potentially resulting in unemployment or reduced wages in addition to rising living costs. Further, emerging disasters and climate threats are also putting the future of young children at risk. Changes in the environment have increased the risk of extreme weather events, including flooding and landslides across BiH. Studies suggest that 20% of BiH is now susceptible to flooding. Significantly, 38% of all children live in municipalities/cities that are at high or very high risk of flooding and landslides.⁹³ Such events lead to rises in child poverty and socio-economic downturns, and threaten the provi-

sion of nurturing care for young children, undermining local economies, household incomes, and the provision of vital health, education, and social protection services. These effects are already beginning to materialize. Flooding in 2014 impacted a quarter of the country, with 60,000 children impacted, setting poverty levels back by five years and reducing GDP by 15%.⁹⁴ Therefore, as over one third of children live in areas under high risk of disasters, and as children are particularly vulnerable to poverty, remedies for and the prevention of climate disasters constitute another important component of child welfare.

THE STUDY

This investment case is based on a series of cost-benefit and cost-of-inaction analyses investigating scaling up a multi-sectoral package of ECD interventions. This package includes health and nutrition, education, and social protection interventions. The analysis identifies, quantifies, and adds all the benefits of scaling up this package of interventions; then identifies, quantifies and subtracts all the costs associated. The difference provides valuable information to decision-makers on whether the scale-up has a net benefit and is, therefore, advisable or not.

To allow for comparability, as well as to enable the use of cost-benefit and cost-of-inaction analyses, the costs and benefits are quantified as far as possible and monetized. The monetization of costs and benefits consists of estimating a monetary value using economic valuation techniques. A social discounting rate (SDR) of 3% was used throughout this report.⁹⁵ This is in line with the latest lending rate for BiH and the normative recommendations from international organizations, such as the World Bank and the Bill and Melinda Gates Foundation.⁹⁶

86 Ibid.

87 UNICEF (2020). Situation Analysis of Children in Bosnia and Herzegovina

88 European Commission (2021). Commission Staff Working Document: Bosnia and Herzegovina 2021 Report. Strasbourg

89 Joshua Askew (2022). How is the war in Ukraine affecting the cost of living crisis? Available at: <https://www.euronews.com/my-europe/2022/05/31/how-is-the-war-in-ukraine-affecting-the-cost-of-living-crisis>

90 D. Omanovic (2022). Protesti u Mostaru: Građani iskazali nezadovoljstvo zbog vala poskupljenja u BiH. Available at: <https://www.aa.com.tr/ba/balkan/protesti-u-mostaru-gra%c4%91ani-iskazali-nezadovoljstvo-zbog-vala-poskupljenja-u-bih/2631760#>

91 Richard Record, Sanja Madzarevic-Sujster and Tihomir Stucka (2022). Overlapping crises in the Western Balkans. Available at: <https://www.brookings.edu/blog/future-development/2022/05/23/overlapping-crises-in-the-western-balkans/>

92 Daria Sito-sucic (2022). Ukraine war fuels Bosnian businesses' growth, instability fears

93 Ibid.

94 UNICEF (2020). Situation Analysis of Children in Bosnia and Herzegovina

95 A more conservative SDR of 5–6% has also been modelled to enhance the strength of this study's findings. For clarity, we include only the results from the 3% SDR estimates in this report, with results from the conservative 5–6% SDR included in a separate Excel file.

96 P. L. Engle, L. C. H. Fernald, H. Alderman, J. Behrman, C. O'Gara, A. Yousafzai, M. C. de Mello, M. Hidrobo, N. Ulkuer, I. Ertem, S. Iltus, Global Child Development Steering Group (2011). 'Strategies for reducing inequalities and improving developmental outcomes for young children in low-income and middle-income countries', *The Lancet*, 378:9700, p. 1339–53; J. Hoddinott, H. Alderman, J. R. Behrman, L. Haddad, and S. Horton (2013). 'The economic rationale for investing in stunting reduction', *Maternal and Child Nutrition*, 9:s2, 69–82.

This investment case evaluates the difference in costs and benefits between a baseline ('do-nothing') scenario and various scale-up scenarios. The baseline scenario is a situation in which the current level of investment and service provision is maintained. The most recent high-quality data available on the baseline scenario were pulled from international, state-level, and district-level databases. Two scenarios to scale up the coverage of the health and nutrition, education, and social protection interventions are also modelled. They each assume a linear increase in coverage in line with the following trends:

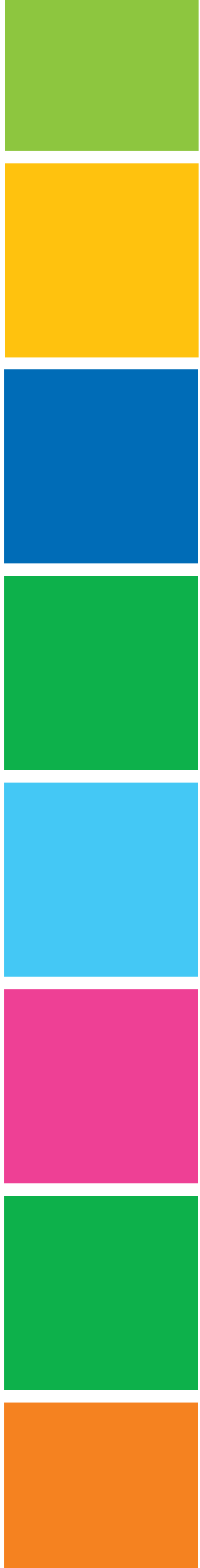
- **Scale-up Scenario A (fast scale-up):** Increase baseline coverage from 2023 until reaching target coverage levels in 2030, after which the coverage level is sustained until 2052.

- **Scale-up Scenario B (slow scale-up):** Increase baseline coverage from 2023 until reaching target coverage levels in 2052.

Modelling of ECD interventions for each of the sub-sectors was done separately. A total of 61 interventions were included across the health and nutrition, education and social protection sub-sectors. Table 4 provides a snapshot of the modelling approach, including the tools used and the outcome measured for each of these sectors. The full methodology for this study, including the list of ECD interventions included, can be found in the accompanying methodological note.

TABLE 4: SUMMARY OF MODELLING METHODS

Sector	Tool	Outcome
Health & Nutrition	One Health Tool	<ul style="list-style-type: none"> • Reduced mortality for children and mothers • Reduced stunting rates • Reduced disability-adjusted life years (DALYs) lost
Education	ECE Accelerator	<ul style="list-style-type: none"> • Improved educational attainment • Increase in learning-adjusted years of schooling (LAYS) • Improved future earnings
Social Protection	Excel	<ul style="list-style-type: none"> • Multiplier effect on the economy (impact on fiscal space through income tax and VAT) • Reduction in child poverty rates • Reduced mortality for children • Reduced stunting rates • Reduced disability-adjusted life years • Improved educational attainment • Improved LAYS • Improved future earnings



**HEALTH
AND
NUTRITION**

CONTEXT

Critical interventions, including basic maternal and infant health care, nutritious feeding, and parenting programmes, can protect children from life-threatening illnesses and support their long-term health. Initiatives to support maternal and child health and nutrition have been found to have a significant impact on lifelong physical and cognitive development. Maternal stress and nutritional deprivation during pregnancy can stimulate permanent changes in fetal tissues, which are associated with abnormal structure, function, and disease in later life. Improving maternal health, therefore, improves delivery outcomes, thus avoiding premature birth and the incidence of low birth weight, and reducing maternal mortality, infant mortality, and lifelong health conditions.⁹⁷ Supporting mothers, as well as the family more broadly, can, therefore, have significant impacts on young child outcomes.

Status

Across BD, massive improvements in maternal and child healthcare have been witnessed in recent years. Maternal and child healthcare services are delivered mainly through the public primary healthcare system, free of charge. 90.6% of pregnant women in BD receive antenatal care from skilled personnel.⁹⁸ Provision of this care has seen outcomes such as infant and child mortality rates improve.⁹⁹ UMeanwhile, important indicators of child development are also promising, with just 3% of children being recorded as malnourished and 1.4% stunted.¹⁰⁰

However, there are a number of challenges in providing adequate maternal and child healthcare services, including an overburdened and underfunded public system. Extensive evidence suggests that the poor quality of public health services is a challenge to the fulfilment of maternal and child rights. Access to maternal and child health care remains below an adequate level. Whilst antenatal care coverage has increased, 10% of pregnant women are still not receiving a basic level of care, and even those who do receive antenatal care provide worrying reports on the quality of care.¹⁰¹ Some evidence suggests that pregnant

women are routinely not being given important support related to their pregnancy, childbirth, or the post-natal period and, in some extreme cases, disrespect by staff has been reported. Health professionals, including gynaecologists and paediatricians, can sometimes fail to give important information to their patients – patients may request information on vaccination or the value of breastfeeding, but this requires patients to know to ask the right questions. Such problems are largely attributable to a weak public health system. The number of medical staff in comparison to the population is significantly lower than the EU average, portraying pressurized human resource capabilities.¹⁰²

The results of this poor public health provision, especially for maternal health care, are numerous. A number of women choose to turn to the private sector for better quality healthcare. Patronage visits, for example, which are critical to support women in breastfeeding and in monitoring their child's growth, are only offered once (and, in many cases, do not happen at all). Further, some health issues that can have serious long-term implications on mothers and children alike, such as perinatal depression, remain largely neglected. For reasons such as these, an unnecessarily high proportion of deaths across BiH among infants in the first 28 days after birth are still being reported. The leading diseases in children under one year are preventable and include acute upper respiratory tract infections, acute bronchitis, bronchiolitis, anaemia due to iron deficiency, and skin and subcutaneous tissue infections and diseases.

Socio-cultural attitudes and policies are also hindering better child health and nutrition outcomes. Breastfeeding rates in BD are concerningly low, with exclusive breastfeeding up to four months sitting at just 18.5% according to the latest data.¹⁰³ Another concern is the lack of data about breastfeeding in BD itself. A lack of information, dominant cultural practices, and a lack of breastfeeding support programmes have led to few women opting to breastfeed, despite the strong positive benefits to the child. Further, routine services on complementary feeding are also lacking. Complementary feeding education is seldom provided, seen instead to be largely the responsibility of mothers. These poor nutritional practices are having long-term implications on child health and wellbeing. Whilst malnutrition rates are low, it is estimated that 17.3% of children between 0 and 5 years of age are overweight.¹⁰⁴ These rates are often linked to poor nutrition in the early years.

97 A. Nandi, S. Bhalotra, A. B. Deolalikar and R. Laxminarayan (2017). 'The Human Capital and Productivity Benefits of Early Childhood Nutritional Interventions', in DAP Bundy et al. (eds.), *Child Adolescent Health and Development*, 3rd edition (The World Bank: Washington, D.C.)

98 UNICEF (2012). Multiple Indicator Cluster Survey

99 UNICEF (2020). Situation Analysis of Children in Bosnia and Herzegovina

100 UNICEF (2012). Multiple Indicator Cluster Survey

101 Ibid.

102 UNICEF (2020). Situation Analysis of Children in Bosnia and Herzegovina

103 UNICEF (2012). Multiple Indicator Cluster Survey

104 Ibid.

These attitudes, combined with distrust of the health system, have led to a dramatic and highly concerning fall in child immunization rates. Whilst it is mandatory for the population to be vaccinated against infectious diseases, basic childhood vaccination rates have fallen in recent years. This is a challenge across BiH, with the country becoming one of only three in Europe that is at high risk of a polio outbreak.¹⁰⁵ In BD, these rates could be the result of a complex set of factors, such as accessibility of vaccines combined with vaccine hesitancy amongst the population.

Such issues are of particular concern for vulnerable groups, including the Roma. For Roma children, health and nutrition outcome indicators are far poorer, highlighting stark inequalities in their access to care and to a supportive enabling environment. Infant and child mortality rates for Roma children, for example, sit above the average, at 24 and 27 per 1,000 live births respectively.¹⁰⁶

Lack of breastfeeding and supplementation with complementary foods is particularly high amongst the Roma population.¹⁰⁷ One of the key factors behind these poor health outcomes is the high poverty rate amongst Roma children, with Roma children being three times more likely to live in poverty than non-Roma.¹⁰⁸ Moreover, health care is inaccessible for many Roma people, as many Roma people do not have health insurance as a result of a lack of full-time employment, and many Roma children were not registered at birth.¹⁰⁹ Other compounding factors reducing Roma access to health care include poverty and difficulty physically accessing health centres.¹¹⁰

Policy and programming

Brčko District has a relatively extensive array of policies and programmes seeking to improve the health and nutrition of young children and their mothers. The policies and programmes of particular note include:

TABLE 5: HEALTH AND NUTRITION – POLICY AND PROGRAMMING

Policies and Programmes	Overview	Challenges
Baby-Friendly Hospital Initiative	<ul style="list-style-type: none"> Hospitals in BD have channels to provide post-birth support to mothers. 	<ul style="list-style-type: none"> Implementation gaps as staff in hospitals are often over-worked.
The Law on Health Care in Brčko District of Bosnia and Herzegovina	<ul style="list-style-type: none"> Prescribes health care insurance, health care, rights and obligations of citizens and patients in the health care system.¹¹¹ Defines health care as the system of social, group and individual measures for improving and preserving health, preventing diseases, early detection, and timely treatment.¹¹² Defines children under 15 and women during pregnancy as groups of special social and medical importance.¹¹³ 	<ul style="list-style-type: none"> Special activities and interventions for the promotion of health among children and pregnant women are not defined in the law

105 UNICEF (2020). Situation Analysis of Children in Bosnia and Herzegovina

106 UNICEF (2012). Multiple Indicator Cluster Survey

107 UN Committee on the Rights of the Child (2019). Bosnia and Herzegovina Country Report

108 Ibid.

109 Regional Cooperation Council (2020). Roma Strategy. Available at: <https://www.rcc.int/romaintegration2020/files/admin/docs/7818b-40fcd72b2b2abc216b9e0de9a08.pdf>

110 Kali Sara – Roma Information Centre (2020). Report on barriers in the implementation of mandatory immunisation programmes for children in FBiH with a focus on Roma Children (Kari Sara and UNICEF. Sarajevo, Bosnia and Herzegovina)

111 Official Gazette of the Brčko District of BiH, Nos 52/2018, 34/2019 and 16/2020

112 Ibid.

113 Ibid.

Health Insurance Law of BD	<ul style="list-style-type: none"> Enforcement of laws and regulations of the responsible authorities in the institutions of BiH and Brčko District in the health sector, as well as other services, are under the supervision and instructions of the mayor 	<ul style="list-style-type: none"> Insufficient funds for financing of healthcare system due to the relatively small size of BD
Framework policy of early growth and development of children in BiH	<ul style="list-style-type: none"> Provides a framework for the activities and interventions associated with promoting early childhood development amongst children 	<ul style="list-style-type: none"> Lack of implementation of the framework Lack of institutionalization of ECD services

While these policies and programmes have been developed to improve child and maternal health, they remain insufficient to guarantee access to high-quality care. The most pressing challenge relates to the implementation of these policies. Policy implementation has been inconsistent, with qualitative research suggesting that overburdened health workers in the public sector are not able to enforce these standards.

Financing

BiH allocates a relatively high proportion of its GDP to the health sector; however, compared to other EU countries, per-capita absolute expenditure is fairly low.¹¹⁴ As of 2019, BiH spent 9.05% of GDP on health expenditure, compared to the EU average of 9.92%.¹¹⁵ However, this translates to a current health expenditure per capita in BiH of just US \$554, compared to the EU average of US \$3,476.¹¹⁶ This means that BiH is spending almost 85% less on health per capita than the rest of Europe.

In Brčko District, the share of the annual budget allocated to the Department of Health and Other Services amounts to 22.14%, which translates to approximately 5.4% of GDP in 2023.¹¹⁷ Further, the current health expenditure per capita in BD amounts to just 756.20 BAM, or around US

\$421.17,¹¹⁸ therefore less than 12% of the EU's. Importantly, the Department of Health and Other Services encompasses the Sub-Department of Social Protection, to which nearly half of the funds are allocated. This implies that the actual funds allocated to healthcare expenditures in 2023 amounts to 11.2% of the total BD budget, or 3.0% of GDP.¹¹⁹ Of this, only 1.30% of the budget goes to the Sub-Department of Public Health, translating to 0.35% of GDP.¹²⁰

The public health system across BiH is financed through the “Bismarck Model”, meaning that access to health services is provided through mandatory health insurance. Despite this, almost one third of the population of BD is uninsured.¹²¹ The primary source of funding for this system is from contributions from the salaries of the employed.¹²² Organization, financing, and provision of health care in BiH are decentralized – leaving healthcare financing as the responsibility of the FBiH cantons, Republika Srpska, and Brčko District. The health care system in BD is decentralized, with a variety of institutions responsible for the provision of health services, ranging from the General Hospital in Brčko District to the Health Centre in Maoča.¹²³ Health financing is conducted through the district-level Health Insurance Fund.

114 Ibid.

115 World Bank (2019). Current health expenditure (% of GDP). Available at: <https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS?locations=BA-EU>

116 World Bank (2019). Current health expenditure per capita (current US\$). Available at: <https://data.worldbank.org/indicator/SH.XPD.CHEX.PC.CD?locations=BA-EU>

117 Budget of the Brčko District of Bosnia and Herzegovina for 2023

118 Ibid.

119 Ibid.

120 Ibid.

121 Seherzada Salihbasic (2011). Development Prospects of Health and Reform of the Fiscal System in Bosnia and Herzegovina. *Mat Soc Med*, 23(4): 221 – 226

122 M. Martić & O. Dukić (2017). Health Care Systems in BiH: Financing Challenges and Reform Options? Friedrich Ebert Stiftung Sarajevo

123 Ibid.

There are concerns about the equity, efficiency, and sustainability of this model. The biggest burden is carried by employers, with 83.6% of public health sector revenues coming from employer contributions. This model also leaves public health financing vulnerable to changes in economic conditions, thus leading to an unstable financial situation. The fragmentation of BiH's healthcare system has created a complicated system that has high management and coordination costs.¹²⁴

There are also concerns about the quality of expenditure in the public health sector. Public health funds are mostly used for capital investments and certain public health and prevention programmes. For example, 58% of health funding is allocated towards inpatient hospital treatment and medical devices for outpatient treatment, while only 1.8% is spent on preventative care.¹²⁵ This seems to indicate that there is a lack of cost-effectiveness in decision-making about the use of health resources. Further, the public health system has consistently generated fiscal deficits, owing to high expectations from the population and insufficient resource mobilization.

Out-of-pocket (OOP) payments for health remain an important source of financing for the sector; however, they can contribute to inequities and impoverishment. In BiH as a whole, the share of private expenditure in total expenditure on health was 29.2% in 2014: double the European average.¹²⁶ Of these private expenses, 96.9% of private expenses consist of OOP expenses being paid directly by households.¹²⁷ These high levels of OOP payments are concerning, usually resulting in the poorest households delaying and avoiding treatment due to their inability to afford the OOP costs.¹²⁸ High rates of OOP are problematic for the accessibility of ECD services, as families may avoid seeking health advice or care if they are unable to afford the cost of these services. This can result in late detection of developmental delays or disabilities, as well as a lack of knowledge among parents of best practices in

terms of child health. Alternatively, but equally as worryingly, families may choose to take on costs but then be unable to pay for nutrition or educational services.

It is also likely that private expenditure on healthcare is higher than that recorded in official statistics. Primary research suggests that informal, under-the-table payments constitute an important part of the costs of accessing healthcare, even for services or population groups that are provided for free. Pregnant women, for example, frequently note that there are expectations of informal payments and gifts in kind if quality patronage services are to be received. Therefore, even supposedly free services may carry large informal costs on parents, which may act as a financial deterrent to seeking health care for young children.

INTERVENTIONS

In light of these challenges, this analysis modelled the improvement of health and nutrition interventions in Brčko District. Table 6 below details each intervention modelled for the health portion of this analysis. Each row specifies the existing baseline rate for the chosen intervention, as well as the target rate for the intervention. The baseline rate draws from the best available data point for each intervention, with priority placed on obtaining recent, district-specific information. However, owing to data scarcity, some rates are proxies (based on international or regional estimates) or draw from older data sources (such as the Multiple Indicator Cluster Survey (MICS), 2011–12). A database outlining the sources for each of these pieces of data is made available alongside this report.

TABLE 6: MODELLED INTERVENTIONS, BASELINE AND TARGET RATES

Intervention	Baseline Rate	Target Rate
Antenatal care (at least 4 visits)	88.3%	100%
Antibiotics for preterm labour	79.1%	100%

¹²⁴ Ibid.

¹²⁵ UNICEF (2020). *Analiza stanja djece u Bosni i Hercegovini*.

¹²⁶ Ibid.

¹²⁷ Ibid.

¹²⁸ Ibid.

Assisted vaginal delivery	44.8%	100%
BCG vaccine	100.0%	100%
Blood transfusion (labour)	21.4%	100%
Caesarean delivery (of women in need of it)	87.7%	100%
Clean birth environment	87.0%	100%
Clean cord care	97.0%	100%
Complementary feeding – education only	85.9%	100%
Diabetes case management (as part of antenatal care coverage)	28.0%	100%
DPT vaccine	74.0%	100%
Early initiation of breastfeeding	7.0%	100%
Ectopic pregnancy case management	71.5%	100%
Exclusive breastfeeding	18.5%	100%
Fetal growth restriction detection and management	84.0%	100%
Health facility delivery	100.0%	100%
Hep B vaccine	66.0%	100%
Hib vaccine	66.0%	100%
Hypertensive disorder case management	25.0%	100%
Immediate drying and additional stimulation	96.0%	100%
Induction of labour (beyond 41 weeks)	11.5%	100%
Kangaroo Mother Care	31.7%	100%
Management of eclampsia (magnesium sulphate)	92.0%	100%
Manual removal of placenta	66.4%	100%
Maternal sepsis management	79.0%	100%
Measles vaccine	54.0%	100%
Neonatal resuscitation	83.0%	100%
Case management of neonatal sepsis/pneumonia	99.7%	100%
Oral antibiotics for pneumonia	76.0%	100%
Treatment of diarrhoea with oral rehydration solution (ORS)	36.3%	100%
Parenteral administration of uterotonics	96.0%	100%

Perinatal psychosocial treatment	10.0%	100%
Pneumococcal vaccine	0.0%	100%
Polio vaccine	74.0%	100%
Rotavirus vaccine	0.0%	100%
Syphilis detection and treatment (as part of antenatal care coverage)	46.2%	100%
Tetanus toxoid vaccination (as part of antenatal care coverage)	0.0%	100%
Thermal Protection	99.6%	100%
Well-baby visits (includes breastfeeding promotion and counselling for responsive caregiving)	94.0%	100%

Benefits

Analysis of the direct health outcomes attributed to the scale-up of these interventions were modelled in the One Health Tool (OHT). Inputs to the tool included coverage levels of the interventions over time, evidence on the effectiveness of the interventions, as well as demographic data. Health outcomes, including child deaths, maternal deaths, and the years of life lived with disability (YLDs) were extracted from the tool and then converted into disability-adjusted life years (DALYs) averted.¹²⁹ For each scale-up scenario, health outcomes were compared to the baseline scenario to determine the additional health benefits accruing from the scale-up. A detailed methodology for this analysis can be found in the accompanying methodological note.



The **DALYs** metric is a measure that calculates the sum of the years of life lost due to premature mortality (YLLs) and years of health life lost due to disability (YLDs) for people living in states of less than good health resulting from a specific cause. One DALY represents the loss of the equivalent of one year of health. In the literature it is common to monetize DALYs to understand the socio-economic cost of a health burden. Every DALY is valued at 1.5 times GDP per capita.¹³¹

Scaling up coverage of these critical maternal and child interventions was found to have impressive benefits, in both monetary and non-monetary terms. Table 7 shows the non-monetary health benefits of implementing this ECD package, in terms of the additional child deaths averted and the DALYs averted in children, mothers and together, each year and in total. It provides these health benefits for both Scale-up Scenario A (fast scenario, where targets are hit in 2032) and Scale-up Scenario B (slow scenario, where targets are hit in 2052). Compared to the baseline scenario, an additional 6 child deaths could be averted by 2052 in Brčko district, and 280 additional DALYs could be averted in children and mothers over the same time horizon (Scale-up Scenario A).

Intuitively, the health benefits of Scale-up Scenario B are smaller than that for Scale-up Scenario A. With targets not hit until 2052 (instead of 2032), a larger proportion of children are left uncovered by these critical health and nutrition interventions during the study's time horizon. Compared to the baseline scenario, a significant number of child deaths and DALYs in mothers and children are still expected to be averted. Indeed, even in this slower scale-up, an additional 4 child deaths and 180 DALYs will be averted by 2052. Therefore, even with a less ambitious plan, the social returns of investing in ECD are evident. However, across the study's time horizon, 50% more child deaths could be averted if the Scale-up Scenario A were implemented instead of Scale-up Scenario B.

¹²⁹ All DALYs were discounted at a rate of 3%.

¹³⁰ World Health Organization (2022). 'Disability-adjusted life years (DALYs)', The Global Health Observatory, available at: <https://www.who.int/data/gho/indicator-metadata-registry/imr-details/158>

¹³¹ Stenberg 2014.

TABLE 7: ADDITIONAL CHILD DEATHS AND DALYS (IN CHILDREN, MOTHERS, AND IN TOTAL) AVERTED FOR SCALE-UP SCENARIOS A AND B, ANNUALLY AND IN TOTAL, 2022–2052.

Year	Scale-up Scenario A (Fast)				Scale-up Scenario B (Slow)			
	Child deaths averted	DALYs averted in children	DALYs averted in mothers	Total DALYs averted	Child deaths averted	DALYs averted in children	DALYs averted in mothers	Total DALYs averted
2023–32	0	0	26	26	0	0	8	8
2033–42	4	121	42	162	2	60	23	84
2043–52	2	60	32	92	2	60	28	88
Total	6	181	99	280	4	121	60	180

Therefore, in summary.

- For **Scale-up Scenario A**, over the shortest time horizon (up to 2032), **0 child deaths are averted** but a total of **26 DALYs are averted**. Over the next 30 years, a total of **6 child deaths are averted** and a total of **280 DALYs are averted** in both mothers and children.
- **Scale-up Scenario B** reflected **fewer child deaths and DALYs averted**. Over the shortest time horizon (up to 2032), **0 child deaths are averted**, but a total of **8 DALYs are averted**. Over the next 30 years, a total of **8 child deaths are averted** and a total of **180 DALYs are averted** in both mothers and children.

A few interventions were particularly effective in improving the health outcomes analyzed. Children were the primary beneficiaries of scaling up these ECD interventions, accruing 67% of all additional DALYs averted across the study time horizon. As aforementioned, across BiH there is an unexpectedly high death rate for neonates (under 28 days old). Therefore, interventions targeting neonates were particularly effective, especially in preventing deaths related to prematurity and congenital abnormalities.

When monetized, these improved health outcomes for children and mothers have a high economic value. In order to get a sense of the economic gains investing in ECD could trigger, the additional health gains were transformed into monetary benefits by converting DALYs into a productivity contribution to society. This conversion followed standard practices in the literature and is detailed in the accompanying methodological note. Analysis suggests that, for Scale-up Scenario A, a total monetary benefit of over 7.4 million BAM would accrue, equivalent to an average annual monetary benefit of nearly 250,000 BAM, owing to the scale-up of these health and nutrition interventions. For Scale-up Scenario B, this figure is slightly lower at just over 4.9 million BAM over the entire time horizon, equating to just under 165,000 BAM annual average. Table 8 displays the projected economic returns in 10-year increments and in total for the study's time horizon.

- For **Scale-up Scenario A** in the shortest time horizon (up to 2032), the total monetized benefit of all health interventions **yields nearly 550,000 BAM**. Benefits increase to **over 4.2 million BAM** between 2033–2042, and to **nearly 2.7 million BAM** between 2043–2052. Therefore, the total benefit owing to the

fast scale-up of these health and nutrition interventions until **2052** accrues **over 7.4 million BAM** (equivalent to **0.85% of GDP in BD in 2020**), producing an **average annual monetary benefit of nearly 250,000 BAM**.

- **Scale-up Scenario B** reflected **lower monetized benefits of the health intervention package**. In the shortest time horizon between **2023–2032**, the total monetized benefits sat at **over 170,000 BAM**. Returns increase to **over 2.2 million BAM** between **2033–2042**, and further increase to **over 2.5 million BAM** between **2043–2052**. In the longest time horizon,

until **2052**, the total economic returns of health and nutrition interventions amount to nearly **5 million BAM** (equivalent to **0.58% of GDP in 2020**) equating to an **average annual monetary benefit of just under 165,000 BAM**.

TABLE 8: MONETIZATION OF BENEFITS FOR SCALE-UP SCENARIO A AND SCALE-UP SCENARIO B, IN 10-YEAR INCREMENTS AND IN TOTAL. EXPRESSED IN BAM, ADJUSTED FOR INFLATION.

Time Horizon	Scale-up Scenario A (fast)	Scale-up Scenario B (slow)
2023–2032	547,546	171,737
2033–2042	4,221,750	2,216,295
2043–2052	2,662,678	2,556,524
Total	7,431,974	4,944,556

Costs

The costs of scaling up coverage of these health and nutrition interventions in line with the different scenarios were estimated. Costing analysis was conducted through the OHT’s Lives Saved Tool (LiST) Costing Module, using validated cost data. Modelling assumed a linear increase in service delivery costs¹³² relative to the increase in coverage, and was also modelled in line with demographic changes. A full exploration of the costing methodology, as well as the input data and sources used, can be found in the accompanying methodological note and database.

Table 9 presents the additional costs, highlighting how costs are anticipated to differ between the scale-up scenarios. Overall, Scale-up Scenario A is anticipated to lead

to higher costs. On average, in the first 10 years of the scale-up, it is anticipated that an additional cost of nearly 1.4 million BAM would be incurred 2023–2032 in Scenario A, compared to 550,000 BAM in Scenario B. This is due to a higher number of beneficiaries and the costs of scale-up being concentrated up-front (owing to the faster scale-up) when they have a higher value in the present than costs that will occur later. This is because costs are discounted at a rate of 3%.

Over time, it is anticipated that the additional average annual cost of the scale-up will increase, both owing to a higher number of beneficiaries, as well as inflation. Interestingly, however, the additional average annual costs in Scenario A and B are projected to fall between 2033–2042 and 2043–2052. This is a result of demographic changes – as the population under the age of six continues to fall, so will demand for ECD services. This drop is more significant in Scenario A compared to Scenario B, where the fall is less dramatic as these demographic shifts are offset by a continuing expansion in the coverage of services (as targets are not hit until 2052). Finally, when viewed in per-capita and per-child terms, costs are low. In

¹³² These costs include drug, supply, labour, and other recurrent costs (programme-specific human resources, training, supervision, monitoring and evaluation, infrastructure, transport, communication, media and outreach, advocacy, general programme management, community health worker training, wastage, logistics), as well as capital costs.

the first 10 years of the scale-up, the additional average annual per-capita cost is expected to be just 0.18 BAM for Scenario A and 0.07 for Scenario B. Meanwhile, when costs are compared to the number of children under the age of six, the additional average annual cost sits at just over 3 BAM for Scenario A and 1 BAM for Scenario B. Costs per intervention were also calculated and recorded in Annex A. In summary:

- For **Scale-up Scenario A**, the average annual cost per period per child under six in the shortest time horizon (up to 2032), sits at **3.21 BAM** (equivalent to just **0.03% of GDP per capita** in 2021). This translates into an average annual cost per period of **0.18 BAM per capita**.
- This cost **rises to 4.49 BAM per child under six, or to 0.21 BAM per capita** when examining the period **2033–2042**, and drastically **falls to 0.13 BAM per capita**, which equates to **3.56 BAM per child under six** between **2043–2052** (equivalent to **0.031% of GDP per capita**).
- **Scale-up Scenario B** reflected **even lower costs per child under six**. In the shortest time horizon, costs per child under six sat at just **1.29 BAM** (equivalent to **0.01% of GDP per capita** in 2021). This equates to an average annual cost per period of **0.07 BAM per capita**.
- Costs increase to **2.34 BAM per child between 2033 and 2042**, and this **rises** once more in the longest time horizon (to 2052) to **2.98 BAM**. However, in **per-capita terms**, the cost **rises between 2033 and 2042 to 0.11 BAM**, and remains constant at **0.11 BAM until 2052**.

TABLE 9: TOTAL ADDITIONAL COSTS FOR SCALE-UP SCENARIO A AND B, ACROSS DIFFERENT TIME HORIZONS. COSTS ARE EXPRESSED IN BAM, ADJUSTED FOR INFLATION, AND DISCOUNTED AT A RATE OF 3%.

	Scale-up Scenario A (fast)			Scale-up Scenario B (slow)		
	2023–2032	2033–2042	2043–2052	2023–2032	2033–2042	2043–2052
Average annual cost per period	137,257	143,054	73,105	55,402	74,651	61,257
Average annual cost per period, per capita	0.18	0.21	0.13	0.07	0.11	0.11
Average annual cost per period, per child under six	3.21	4.49	3.56	1.29	2.34	2.98
Total cost per period	1,372,573	1,430,544	731,048	554,018	746,508	612,567

Cost-Effectiveness

Analysis suggests that scaling up this ECD package is cost-effective in both scale-up scenarios. Using the assessment of monetized health benefits and costs accruing owing to the scale-up of these interventions, incremental cost-effectiveness ratios (ICERs) were calculated. ICERs refer to the ratio of additional costs and additional benefits between the scale-up scenario (A or B) and the baseline scenario. Table 10 records the ICERs calculated for this study, namely the cost per child death averted and the cost per DALY averted, for both scale-up scenarios and

over different time horizons. The World Health Organization (WHO) suggests that an intervention can be deemed cost-effective if the DALY averted costs are less than 1–3 times the gross domestic product (GDP) per capita. In Brčko District, the GDP per capita sat at 10,892 BAM in 2020¹³³, meaning that the threshold for cost-effectiveness sits between 10,892–32,676 BAM per DALY averted. This analysis finds that:

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- For **Scale-up Scenario A**, costs per DALY averted are far below the WHO threshold, making it **cost-effective**. In the shortest time horizon (up to **2032**), the **cost per DALY averted** sits at **52,375 BAM**, but this **falls** to **14,881 BAM per DALY averted** when studied until **2042**, and **further decreases** to **12,609 BAM per DALY averted** until **2052**
- Scale-up Scenario B** reflected **even lower costs per DALY averted**. In the shortest time horizon, costs per DALY averted sat at just **68,119 BAM**, but this **drops** to **14,148 BAM** when studied until **2042**, and **drops even lower** in the longest time horizon (to **2052**) to **10,615 BAM**.

This means that investments in this package of ECD interventions are **cost-effective in the long-term in both scenarios**, as the cost per DALY averted sits far below the threshold over the 20- or 30-year time horizon. These figures can be highly useful for advocacy purposes, as it is possible to compare the cost-effectiveness of ECD in comparison with other packages and interventions.

TABLE 10: COST-EFFECTIVENESS OF SCALING-UP THE ECD PACKAGE FOR SCENARIO A AND SCENARIO B ACROSS DIFFERENT TIME HORIZONS. EXPRESSED IN BAM, ADJUSTED FOR INFLATION AND DISCOUNTED AT 3%.

	Scale-up Scenario A (fast)			Scale-up Scenario B (slow)		
	2023–2032	2023–2042	2023–2052	2023–2032	2023–2042	2023–2052
Cost per child death averted	N/A	700,779	589,028	N/A	650,263	478,273
Cost per DALY averted	52,375	14,881	12,609	68,119	14,148	10,615

COST OF INACTION

Significant economic benefits will be foregone if these investments in early childhood health and nutrition are not made. Analysis of the cost of inaction (COI) indicates that failing to scale up this package of interventions could cost Brčko district's economy nearly 4 million BAM between 2023 and 2052. The COI is calculated by determining the total additional economic benefit of the scale-up scenario (in comparison to the baseline), less the costs of the scale-up. Both scale-up scenarios show a concerning high COI over the medium to long term (2042 or 2052), highlighting that a failure to invest in ECD now would be a large missed opportunity for economic development. Across both scale-up scenarios, the COI is greater over longer time horizons. This is a result of more additional benefits accruing at a much faster rate than costs, translating into a greater lost opportunity over the long term. When comparing the time horizon 2023–2042 compared to 2023–2052 for Scenario B, for example, the

COI is expected to be about three times higher. Further, the COI is also expected to be greater for Scale-up Scenario A, compared to Scenario B. This is a result of the higher additional economic gains associated with the faster scale-up, as more children and mothers benefit from the interventions. Whilst additional costs are also higher for Scale-up Scenario A compared to B, the absolute costs of not investing are still expected to be higher in the faster scenario. In summary:

- For **Scale-up Scenario A**, in the 20-year time horizon (up to **2042**), the **cost of inaction** sits at **over 1.9 million BAM** (equivalent to **0.22% of GDP** in 2020), and **rises** to nearly **3.9 million BAM** when studied until **2052** (equivalent to **0.45% of GDP**).
- Scale-up Scenario B** reflected **slightly lower costs of inaction**. Until **2042**, the cost of inaction sits at over **1 million BAM** (equivalent to **0.12% of GDP** in 2020), and **rises** in the longest time horizon (to **2052**) to **over 3 million BAM**.

TABLE 11: ECONOMIC BENEFITS, COSTS, AND THE COST OF INACTION FOR SCALE-UP SCENARIOS A AND B, ACROSS DIFFERENT TIME HORIZONS.

	Scale-up Scenario A (fast)		Scale-up Scenario B (slow)	
	2023–2042	2023–2052	2023–2042	2023–2052
Total Additional Economic Benefits	4,769,296	7,431,974	2,388,032	4,944,556
Total Additional Costs	2,803,118	3,534,165	1,300,526	1,913,094
Cost of Inaction	1,966,178	3,897,808	1,087,506	3,031,462

BENEFIT-COST RATIO

Investments in ECD will have a strong rate of return, especially over the long term. This analysis of benefits, costs, and cost-effectiveness of scaling up this package of ECD interventions fed into the development of benefit-cost ratios (BCRs). These BCRs compare the total additional monetary benefits accruing from scaling up coverage of these interventions with the total additional costs (all compared to the baseline scenario). Table 12 shows these BCRs for each scale-up scenario; They reflect an impressive case for investment.

- In the fast **Scale-up Scenario A**, for every **1 BAM** invested, **2 BAM** are expected to be returned in socio-economic benefits by **2042**. In the longest time horizon, between **2023 and 2052**, the expected returns for every **1 BAM** invested remains constant at **2 BAM**.
- In the slow **Scale-up Scenario B**, for every **1 BAM** invested, **2 BAM** are anticipated to be returned in socio-economic benefits by **2042**. The full study time horizon reflected an **even higher BCR**: for every **1 BAM** invested, **3 BAM** are expected to be returned between **2023 and 2052**.

The higher BCR for Scale-up Scenario B does not indicate that a slower scale-up has better returns. Instead, it is a reflection of the higher costs associated with Scale-up Scenario A, especially in the short term. Whilst the costs are higher (and the BCR is lower) for Scale-up Scenario A, the returns on investing in a faster scale-up are still worthwhile. As highlighted in Section 2.6, the COI of not investing in these interventions was higher in Scale-up Scenario A compared to B. In Scale-up Scenario A, a greater number of children and mothers will benefit from these interventions. Whilst the rate of return might be lower for Scale-up Scenario A (compared to B), therefore, it is important to note that the net return is far higher.

These results also show that scaling up these interventions is anticipated to yield good returns over different time horizons. However, the return on investment grows over time in both scale-up scenarios as societal benefits continue to be accrued and outweigh the growth in costs.

TABLE 12: BENEFIT-COST RATIOS FOR SCALING UP ECD FOR SCENARIO A AND B, ACROSS DIFFERENT TIME HORIZONS.

	Scale-up Scenario A (fast)			Scale-up Scenario B (slow)		
	2023–2032	2023–2042	2023–2052	2023–2032	2023–2042	2023–2052
Benefit-Cost Ratio	0	2	2	0	2	3

SUMMARY AND RECOMMENDATIONS

Access to quality essential healthcare services is a basic right of all children; however, at present, significant gaps exist in Brčko District's service provision landscape.

Whilst overall indicators of maternal and child health appear strong, delving into the available data shows concerningly high levels of neonatal deaths and low coverage of essential interventions, such as immunizations, diarrhoeal treatments, and postpartum care. Qualitative research reflects a combination of issues contributing towards these outcomes, including a perceived poor quality of care in public facilities, financial access barriers (often related to under-the-table payments). These health system challenges must be urgently addressed. Inadequate access to these services is a threat to basic human and child rights in BD. Without improvements, there is a significant threat to the health and wellbeing of young children and their mothers in the Brčko District, which prevents them from surviving, thriving and meeting their full potential.

The empirical evidence supporting the need to invest in improving the health and nutrition of young children in BD could not be clearer. This study has sought to quantify, in monetary and non-monetary terms, the dramatic impact of these weaknesses in Brčko's health system. The results have been clear.¹³⁴

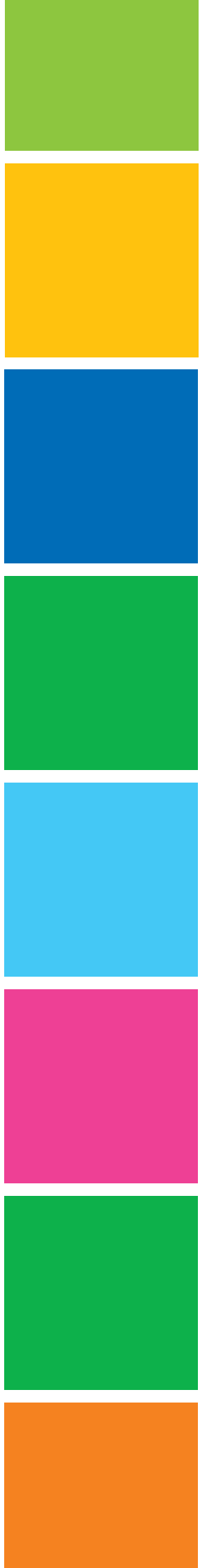
- Scaling up services rapidly, and ensuring that every mother and child has access to a core package of interventions, is projected to have significant positive impacts. Indeed, it is estimated that scaling up services could prevent an **additional 6 child deaths**, allowing each child (and their family) the opportunity to grow up and reach their full potential.
- The impact of these interventions on morbidity are also hugely significant. In the fastest scale-up scenario, **an additional 280 DALYs lost can be averted for mothers and children** – thus vastly improving their quality of life and wellbeing, as well as their long-term productive potential.
- When monetized, these benefits far outweigh the costs of scaling up. The return on investment is a projected factor of up to three across the study's time horizon, meaning that for **every 1 BAM spent**, between **2 and 3 BAM will be returned** in socio-economic benefits.
- The **cost of inaction** (in other words, doing nothing to improve the status quo) will be colossal, having the potential to **cost Brčko District's economy nearly 3.9 million BAM** over the next 30 years.

¹³⁴ All results summarized here are for Scale-up Scenario A.

Realizing these benefits requires concerted efforts from stakeholders across the ECD ecosystem to improve health and nutrition outcomes. The findings of this analysis feed into the wider recommendations of this Investment Case (Section 5); however, some of those most relevant to the health sector include:

- Optimize the use of public budgets for human capital development:** In a context of constrained fiscal space (especially in the light of the COVID-19 pandemic and the Ukraine crisis), mobilizing the additional investments needed is expected to be challenging. Difficult decisions must be made about how, and on whom, public expenditure will be used. For this reason, such econometric evidence on the costs, cost-effectiveness, and long-term returns of spending on young children will be vital in the pursuit of increasing budgetary envelopes. Value for money will also be essential: Investments must be used to maximize their impact. Sources of wastage and leakages should be identified, and analysis, such as that provided in this report on the most effective interventions in the health and nutrition space, should be used as one factor to prioritize spending.
- Enforce the harmonization and implementation of existing policies:** In the health sector, legislation related to young children and mothers is strong; however, implementation is lacking. A few legal and policy gaps remain, which hinders early childhood development. Specifically, better regulatory policies are required to support better infant and childhood nutrition. For example, regulation is needed to inhibit aggressive advertising of breast-milk alternatives, which have been found to reduce the rates of predominant and exclusive breastfeeding. Rates of exclusive breastfeeding up to 6 months are concerningly low in BD currently, sitting at just 18.5%.
- Support data and information collection, management and dissemination:** There is an urgent need to improve data and information services for policy-making and strategic planning. It is of real concern that more up-to-date information on core health indicators, such as antenatal care coverage or postpartum visitations, must be made available to decision-makers. Regular data collection on a core set of ECD indicators across BD must be a priority, as should participation in a new Multiple Indicator Cluster Survey (MICs).

For more information on these considerations, amongst others, please see Section 5 – Conclusions and Recommendations of this report.



**EARLY
CHILDHOOD
EDUCATION
AND CARE**

CONTEXT

Early childhood education and care services are a vital part of human capital investments. ECEC refers to intervention(s) that are intended to promote development in children prior to their entry to primary school. Formal ECEC programmes are most often provided in preschool institutions. Whilst these institutions may offer care to children from the age of 6 months, for the purposes of this study, ECEC only refers to programmes targeting children between the ages of 3 and 6 years. ECEC services are an important input to the provision of nurturing care. They not only offer children opportunities for early learning and responsive caregiving, but can also promote good health, adequate nutrition, and safety and security. Yet, while enrolment has increased globally, many children are still not in early childhood education and care programmes: In 2019, UNICEF estimates that, around the world, over 175 million children aged 3 to 6 were out of school.¹³⁵

ECEC programmes critically stimulate cognitive development, helping children to acquire crucial foundational learning skills later in life. During early childhood, more than one million new neural connections are formed every second. Evidence suggests that children who attend ECEC programmes are twice as likely to show progress in early literacy and numeracy, compared to only 20% among children not attending any ECEC programmes.¹³⁶ Quality ECEC has also been found to be associated with starting primary school at the right age and progressing through the educational system, making it one of the strongest predictors of a child's readiness for school.¹³⁷ This multitude of positive impacts of ECEC are carried into later stages of the life course, and can have a dramatic effect on lifelong socio-economic outcomes in areas including, health, wealth, and the formation of relationships. In recent years, studies from across the globe have tracked the impact that investments in aspects of early childhood can have in later life. One estimate suggests that increasing enrolment in pre-primary education to 50% coverage in low- and medium-income countries could result in lifetime earnings gains of US \$15–34 billion.¹³⁸

Research from BiH bears out the importance of ECEC services. Attendance in high-quality pre-primary programmes has been linked with improvements in child development, with reports of children being better socialized and able to focus upon entry to primary school, as well as learning basic skills that promote life-long learning. Conversely, poor educational outcomes in later years have been associated with low enrolment in ECEC across the country. The Trends in International Mathematics and Science Study (TIMSS), carried out in 2019, found that primary school students in BiH were below average in their achievements on the TIMSS scale, as well as in comparison to neighbouring countries (including Serbia and Croatia). Importantly, children in BiH who had attended two years or more of pre-primary education programmes were found to have notably improved performance in the TIMSS.¹³⁹ In the Programme for International Student Assessment (PISA), which examines 15-year-old students' proficiencies in reading, mathematics and science, fewer than half of students in BiH in 2018 attained the minimum level of proficiency in reading, 42% were at least minimally proficient in mathematics, and only 43% were minimally proficient in science.¹⁴⁰ Therefore, there is still significant progress to be made to improve the basic proficiencies of BiH's children across a variety of academic disciplines.

Status

Enrolment in ECEC has been improving in recent years, but remains concerningly low.¹⁴¹ In 2005, when the BiH Strategy for Preschool Education was adopted by the BiH Council of Ministers, just 8% of the total preschool-age children in BiH were enrolled.¹⁴² In the pedagogic year 2022/23, the enrolment rate of children aged 3 to 5 who attended the full-day or half-day preschool programs has reached 33.2%, steadily increasing from 24.6% in 2020/2021, and 28.5% in 2021/2022.¹⁴³

135 UNICEF (2022). Pre-primary education

136 Nandi et al. (2017).

137 Britto et al. (2017).

138 R. K. Sayre, A. Devercelli, M. Neuman and Q. Wodon (2015). Investing in Early Childhood Development: A Review of the World Bank's Recent Experience, (World Bank: Washington, D.C.). Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/20715/9781464804038.pdf?sequence=1&isAllowed=y>

139 Agency for Preschool, Primary and Secondary Education (2022). Preschool Education and Care as a Determinant of Student Achievement in Bosnia and Herzegovina in TIMSS 2019. Available at: <https://aposo.gov.ba/sadrzaj/uploads/%D0%90naliza-zadanka-po-sadrzajmim-i-kognitivnim-domenama-TIMSS.pdf>

140 OECD (2018). Programme for International Student Assessment (PISA). Results from PISA 2018

141 Preschool programmes vary, with facilities offering half- and full-day options, and condensed preparatory programmes in the year before starting school, as well as being divided between childcare services (six months to three years) and ECEC services (three to six years). This study focuses solely on half- and full-day ECEC services for children three to six years of age.

142 Platform for the Development of Preschool Education in Bosnia and Herzegovina for the period 2017–2022

143 UN (2023). Voluntary Review: Implementation of Agenda 2030 and the Sustainable Development Goals in Bosnia and Herzegovina [In press]

When condensed preparatory programmes are included, this figure rises to 41.6% for the same age group, and 44.1% for children aged 5 to 6 in the pedagogic year 2022/2023,¹⁴⁴ therefore reflecting a more than fivefold increase compared to 2005.¹⁴⁵

In the Brčko District, a total of 719 children between 3 and 6 years of age are enrolled in full-day or half day preschool programmes in 2022/2023.¹⁴⁶ Given that the total population for this group is estimated to be around 2,639 in 2022,¹⁴⁷ this equates to an ECEC coverage rate of 27.2%, ranging between an estimated 26.7% among 3- to 4-year-olds, 28.7% for 4- to 5-year-olds, and 26.2% for 5- to 6-year-olds.¹⁴⁸ Accounting for the preparatory programmes for children in the year prior to school entry, however, BD has reached almost universal coverage, with enrolment rates sitting at over 92% for the age group 5 to 6, and to 51% for children aged 3 to 6.¹⁵⁰

The private sector has fuelled growth in the ECEC sector, growing its share of the total number of facilities and children enrolled. In BD, there is one public institution, with six facilities under it (and an additional two others under construction). Together, these facilities cater for around 150 children annually. However, long waiting lists (over 500 children) for public institutions has led to a burgeoning private sector emerging to meet demand. Private preschools have been supported by recent government policies, which have seen subsidization of parent/caregiver fees.

Enrolment patterns from other parts of BiH show inequalities related to the socio-economic status of the household, as well as location. Children from households where one or both parents/caregivers are unemployed, or

those from peripheral areas, are more likely to struggle to gain access to ECEC. On average in RS, for example, 82% of children enrolled in preschool come from families where both parents are employed, whilst 16% come from families with one parent employed. Children from households where both parents are unemployed constitute just 1% of the preschool population, whilst Roma children have virtually no access to ECEC. While similar figures are not available for BD, only 22% of households in BD regard accessing preschool education services as “easy”, while 75% of households indicate that they do not use preschool services at all.¹⁵¹ This may indicate similar socio-economic barriers as those observed in RS. Whilst similar research has not been conducted in Brčko District, it is likely that these concerning patterns of inequity would apply. Children from poorer and or more vulnerable backgrounds are less likely to gain access to these vital educational and developmental services owing to higher access barriers, thus threatening to entrench inter-generational cycles of poverty.

Policy and programming

Over the past 15 years, progress has been made towards a conducive policy environment for the ECEC ecosystem. At local levels, the ECEC sector is influenced by legislation at the BiH and District levels. Legislation of particular importance is laid out in Table 13. Framework laws, such as the *Framework Law on Preschool Education and Upbringing (2007)*, are intended to develop an enabling environment for positive early childhood development, with ministries at all levels obliged to harmonize existing laws in relation to preschools.

144 Ibid.

145 UNICEF (2020). Situation Analysis of Children

146 Total number of children enrolled in ECEC: 913; Children under 3 years: 194. Source: Brčko District Education Statistics 2022/2023. Available at: https://bhas.gov.ba/data/Publikacije/Bilteni/2023/BRC_05_2022_TB_1_BS.pdf

147 Source: calculations based on UN World Population Prospects, and Institute of Statistics of Bosnia and Herzegovina for Brčko district (2020). Demographic statistics for Brčko district, years 2016–2020

148 Agency for Statistics of BiH (2023). Brčko District Education Statistics from the end of 2018/2019 to the beginning 2022/2023 school year. Brčko, 2023. Available at: https://bhas.gov.ba/data/Publikacije/Bilteni/2023/BRC_05_2022_TB_1_BS.pdf

149 Ministry of Civil Affairs (2016). Informacija o implementaciji Okvirnog zakona o predškolskom odgoju i obrazovanju u Bosni i Hercegovini [Information about the implementation of the Framework law for preschool education and upbringing]

150 Agency for Statistics of BiH (2023). Brčko District Education Statistics from the end of 2018/2019 to the beginning 2022/2023 school year. Brčko, 2023. Available at: https://bhas.gov.ba/data/Publikacije/Bilteni/2023/BRC_05_2022_TB_1_BS.pdf

151 Agency for Statistics of BiH (2015). BiH Household Budget Survey

TABLE 13: LEGISLATION RELATED TO ECEC

Legislation	Level	Year	Significance
Framework Law on Pre-school Education and Upbringing	BiH	2007	<ul style="list-style-type: none"> Recognizes the integral role of preschool as an agent of upbringing and education and provides principles and norms for the provision of preschool. Article 16 makes it mandatory for children to be enrolled in preschool in the year before enrolment to primary school. Financing, duration, and programme to be determined by competent education authorities.
Common Core of the Integral Developmental Programmes for Preschool Education	BiH	2016	<ul style="list-style-type: none"> Developed by the Agency for Preschool, Primary and Secondary Education. Has the aim of creating conditions to promote personal, emotional, social and educational well-being for each child in BiH.
Platform for the Development of Preschool Education and Care in BiH	BiH	2017	<ul style="list-style-type: none"> State-level strategic document to develop preschool education across BiH. Adopted by the Council of Ministers in 2017 and harmonized with current EU and UN trends and standards in ECEC.
BD Law on Preschool Education and Care	BD	2007	<ul style="list-style-type: none"> Regulates the goals and tasks of preschool, work organization, financing, management, and supervision in preschool institutions in BD.¹⁵²

¹⁵² Official Gazette of the Brčko District of Bosnia and Herzegovina, Nos 13/07, 19/07, 39/08, 21/10, 48/16, 22/16, 24/20 and 13/21

The Department of Education (DoE) has been particularly successful in implementing the 2007 Framework Law. The DoE provides the funding and services for a three-month (150-hour) programme for children in the year before primary school, which stakeholders report now has near universal coverage. However, it is difficult to monitor the actual coverage rates given the lack of up-to-date population data, as well as a lack of follow-up, monitoring, or enforcement mechanisms to ensure that parents/caregivers send their children to the programme. Further, stakeholders note that this programme is not comprehensive enough to provide young children with the full benefits associated with ECEC and, in future, hope the programme can be rolled out to cover a full year of ECEC.

Financing

Public financing of ECEC comes primarily from the Department of Education (DoE) within the Brčko District government. Public expenditure on pre-primary education has a threefold structure. The first is direct budgetary support to public preschools, which has enabled fees for parents/caregivers to be kept low, at around 170 BAM per month for children of preschool age. Secondly, the DoE also offers complete funding of the three-month mandatory condensed programme, which is provided free of charge to parents and caregivers. Finally, the DoE also provides subsidies to parents/caregivers of children enrolled in private facilities. The latter form of public financing for ECEC has been a fairly new initiative, designed in response to the growing demand for ECEC services and the inability of the public sector to commensurately expand capacity. Depending on the price levied by service providers in the private sector, parents/caregivers are eligible for a monthly subsidy of up to 100 BAM per child.

Total spending on preschool education in BD accounts for only 1.38% of the 2023 budget, which translates to 0.37% of GDP.¹⁵³ Despite almost doubling from 0.21% of GDP in 2021 (or 0.73% of BD budget),¹⁵⁴ this is still less than half the average public spending on ECEC in OECD countries, of just over 0.8% of GDP.¹⁵⁵ The share of total BD budget allocated to the DoE is 18.23%, equating to

4.90% of GDP.¹⁵⁶ Overall spending on education is higher than neighbouring Western Balkan nations such as Serbia and Croatia, whose education spending stand at 3.6% and 3.9% of GDP respectively.¹⁵⁷ However, while only 7.6% of the BD's education budget goes to ECEC in 2023 (increasing from 4.8% in 2021), a much greater proportion is targeted at primary and secondary levels, amounting to 57.2% and 29.4% respectively.¹⁵⁸

Notably, however, public expenditure on ECEC is not ring-fenced or enshrined in legislation or policy. Instead, public expenditure on ECEC is highly dependent on current political will and budgetary room. The low level of government expenditure is leaving a significant funding gap, which is not being adequately filled by households. Further, there are no policies to provide fee exemptions or subsidies to specifically support children from vulnerable or low-income backgrounds. Indeed, inadequate financing of ECEC was recognized by many stakeholders as being a key reason for poor coverage and inequitable access to services in the district.

INTERVENTIONS

This study estimates the cost and benefits of increasing enrolment in ECEC. Different goals and scale-up scenarios were designed to model this pathway towards increased enrolment. Notably, this included age-specific targets, which disaggregated enrolment of 5-year-olds from that of 3- and 4-year-olds. This was to account for the pre-existing higher rates of enrolment amongst the 5–6-year age category, as well as to align with policies to make ECEC mandatory in the year before primary school. Therefore, the target enrolment for 3- and 4-year-olds was set at 95%, in line with EU targets. The target for 5-year-olds was set slightly higher at 100%, in line with the Platform for Development of ECEC in BiH. Further, two time horizons are considered: one, which saw targets met in 2030 to align with the SDGs, and; the second, where targets are met in 2052 to allow for a slower, less ambitious roll out.

153 Ibid.

154 Ibid.

155 OECD countries spend on average just over 0.8% of GDP on early childhood education and care, with large variations across countries. Countries spend more on pre-primary education than child-care, up to approximately 1% vs 0.5%. Source: OECD Family Database (2023). Public spending on childcare and early education. Available at: https://www.oecd.org/els/soc/PF3_1_Public_spending_on_childcare_and_early_education.pdf

156 Budget of the Brčko District of Bosnia and Herzegovina for 2023

157 World Bank (2019). Government expenditure on education, total (% of GDP). Available at: <https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS?locations=RS-ME-HR>

158 Budget of the Brčko District of Bosnia and Herzegovina for 2023

TABLE 14: ECEC SCALE-UP TARGETS BY AGE GROUP AND SCALE-UP SCENARIOS

	Scale-up Scenario A (fast)			Scale-up Scenario B (slow)	
	Target met in 2030		Maintain	Target met in 2052	
	Target	Year	Maintain until	Target	Year
3- and 4-year-old enrolment	95%	2030	2052	95%	2052
5-year-old enrolment	100%	2030	2052	100%	2052

BENEFITS

Two forms of benefits are calculated, (more detail on their calculations is provided in the accompanying methodological note):



As high-quality ECEC is associated with improved child development and school readiness outcomes, children who are exposed to this intervention are more likely to **stay in school for longer**, have a **better learning experience**, and **graduate from secondary school**.¹⁵⁹

In this study, the impact of ECEC on years of schooling and Learning-Adjusted Years of Schooling (LAYS) are quantified. The impact of these improved educational outcomes is then monetized by estimating their contribution towards better lifelong productivity and earning potential.



The economic benefits of increased **labour market participation of women**, as fewer women will have to stay at home for **child-care responsibilities** if more young children are enrolled in preschool.

The calculations of these benefits were done using the ECE Costing Tool and Excel. A variety of international literature was used to estimate the effects, all of which were adjusted for Brčko District.

159 A. Muroga, H. T. Zaw, S. Mizunoya et al. (2020). 'COVID-19: A Reason to Double Down on Investments in Pre-Primary Education', Innocenti Working Paper WP-2020-11, (UNICEF Office of Research: Florence, Italy). | P. Gertler, J. Heckman and R. Pinto et al. (2021). 'Effect of the Jamaica Early Childhood Simulation Intervention on Labour Market Outcomes at age 31', World Bank Policy Research Working Paper, 9787. | N. Angrist, D. K. Evans, D. Filmer, R. Glennerster, F. Halsey Rogers and S. Sabarwal (2020). 'How to Improve Education Outcomes Most Efficiently? A comparison of 150 interventions using the new Learning-Adjusted Years of Schooling Metric', Center for Global Development, Working Paper 558

The benefits of improved educational outcomes

Universal ECEC is one of the most effective ways to improve learning outcomes for children and is associated with significant socio-economic benefits.¹⁶⁰ Evidence shows that ECEC increases expected years of schooling, as well as Learning-Adjusted Years of Schooling (LAYS). At the BiH level, there is a stark difference between the quantity and quality of education: while the average years of schooling reach 11.7, this figure drops by almost 4 years when adjusted for learning outcomes, as the LAYS sits at only 7.8 years.¹⁶¹ A recent study of 109 developing low- and medium-income countries found that pre-primary education was associated with an increase in the average years of education attained across a cohort.¹⁶² It found that for every 10-percentage-point increase in pre-primary enrolment rates, an additional 0.14-year increase in education would be attained.¹⁶³ Further, a comparison of 150 interventions using the LAYS metric indicated that ECEC had amongst the most significant impacts of any intervention under study on quantity and quality of schooling.¹⁶⁴ It suggests that beyond ECEC increasing the likelihood of children finishing school, it also increases the quality of learning that children experience. Increasing educational attainment can have a significant economic return. Studies show that increasing years of schooling is associated with an increase in productivity and lifetime earning potential.¹⁶⁵ In Bosnia and Herzegovina, it is estimated that each additional year of education is equivalent to an 8% increase in lifetime earnings.¹⁶⁶



The **LAYS** metric, designed by the World Bank in 2020, is a measure that combines quantity (number of years of schooling) and quality of schooling (measured by most recent test scores). As such, the total number of quality years of schooling may be lower than the number of actual years.

The impact of scaling up ECEC services is impressive.¹⁶⁷ Whilst under the Baseline Scenario, the expected years of schooling would remain at 11.7 years per child, this could increase to 12.7 years by 2052. Under the faster Scale-up Scenario (A), an additional 1.0 years of schooling would be achieved by 2030 and then maintained. Meanwhile, under the slower Scale-up Scenario (B), this increase would happen more gradually, with the expected years of schooling hitting 12.0 in 2032, 12.4 in 2042, and 12.7 in 2052 (Figure 6). Across the time horizon, this would mean that an additional 17,459 years of schooling would be realized in Scale-up Scenario A. In Scale-up Scenario B this would be lower at just under 10,000.

160 UNICEF, Education Commission, The LEGO Foundation (2022). *Add Today, Multiply Tomorrow: Building an Investment Case for Early Childhood Education*, (UNICEF: New York, USA)

161 World Bank (2022). *Bosnia and Herzegovina Human Capital Country Brief*. Learning-adjusted years of schooling are calculated by multiplying the estimates of expected years of schooling by the ratio of the most recent harmonized test score to 625, where 625 corresponds to advanced attainment in the TIMSS test.

162 A. Muroga, H. T. Zaw, S. Mizunoya, H. C. Lin, M. Brossard and N. Reuge (2020). 'COVID-19: A Reason to Double Down on Investment in Pre-Primary Education', UNICEF Office of Research – Innocenti Working Paper, WP-2020-11

163 Ibid.

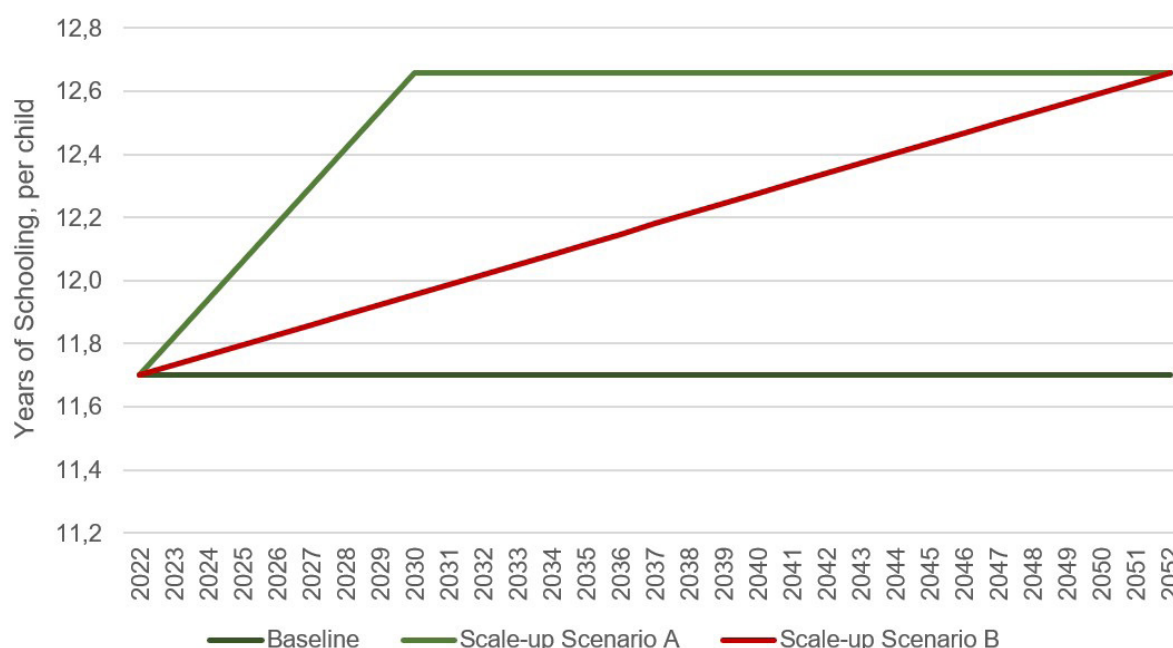
164 N. Angrist, D. K. Evans, D. Filmer, R. Glennerster, F. Halsey Rogets and S. Sabarwal (2020). 'How to Improve Education Outcomes Most Efficiently? A comparison of 150 interventions using the new Learning-Adjusted Years of Schooling Metric', Center for Global Development, Working Paper 558

165 To avoid double counting, only the additional years of schooling has been monetized. To additionally monetize the economic value of LAYS would involve counting the benefits of improving schooling and educational attainment twice, which would distort the subsequent cost-benefit analysis. The decision that additional years of schooling would be chosen for monetization was taken as a result of it being more common practice in the literature. LAYS remain a new metric and, therefore, studies associating them with economic impact remains nascent.

166 Data cited in G. Pscharopoulos and H. A. Patrinos (2018). 'Returns to Investment in Education: A Decennial Review of the Global Literature', *Education Economics*, Vo. 26, No. 5, pp. 1–4

167 This analysis uses the findings of the A. Muroga et al. (2020) study to model the impacts on years of schooling attained.

FIGURE 6: EXPECTED YEARS OF SCHOOLING PER CHILD UNDER THE BASELINE SCENARIO, SCALE-UP SCENARIO A, AND SCALE-UP SCENARIO B



When monetized, the impact of this increase in expected educational attainment is highly impressive. The economic benefit associated is calculated as the additional years of education attained * rate of return of a year's education * lifetime earnings. Table 15 provides the results of these calculations. Under Scale-up Scenario A, the economic benefits of increasing years of schooling attained are exceptionally high – at 722 million BAM across the study time horizon. Comparatively, Scale-up Scenario B has lower economic benefits, at 398 million BAM. These benefits are still very large, and account for the vast majority of all the monetized benefits associated with increasing ECEC enrolment.

Notably, this table also presents the effects in the first 10 years of ECEC scale-up, displaying how the gains evolve over time. In Scale-up Scenario A, benefits begin to accrue quickly, reaching 212 million by 2032 alone. This is a result of the target coverage rate being hit by 2030. In contrast, Scale-up Scenario B sees these benefits accrue more slowly, as the ECEC enrolment rate incrementally increases to its target in 2052. The lower economic benefits realized in Scale-up Scenario B, compared to A, is also a result of the discounting rate. As the benefits of increasing additional years of education are not felt until much later in the study time horizon, they are discounted to create a net present value. It should be noted that, in reality, these benefits for both scale-up scenarios would

be felt much later than indicated in this table – accruing across the life course of children who have benefitted from exposure to ECEC. However, in line with the literature, these benefits are accounted for in the year that the intervention has finished, rather than the year the benefit is expected to be realized. In summary:

- In the fast **Scale-up Scenario A**, the **monetary impacts of the additional years of schooling** estimated here suggest that, by **investing in ECEC**, the Brčko District stands to gain **212 million BAM** in the shortest time horizon (until 2032), and over **722 million BAM** over the next 30 years.
- The benefits would be slightly lower in **Scale-up Scenario B**. It is estimated that investing by in ECEC, BD could stand to gain over **59 million BAM** in the shortest time horizon (until 2032) and **398 million BAM** over the next 30 years.

TABLE 15: MONETIZATION OF ADDITIONAL BENEFITS OF INCREASED YEARS OF SCHOOLING. EXPRESSED IN MILLIONS OF BAM AND DISCOUNTED AT A RATE OF 3%.

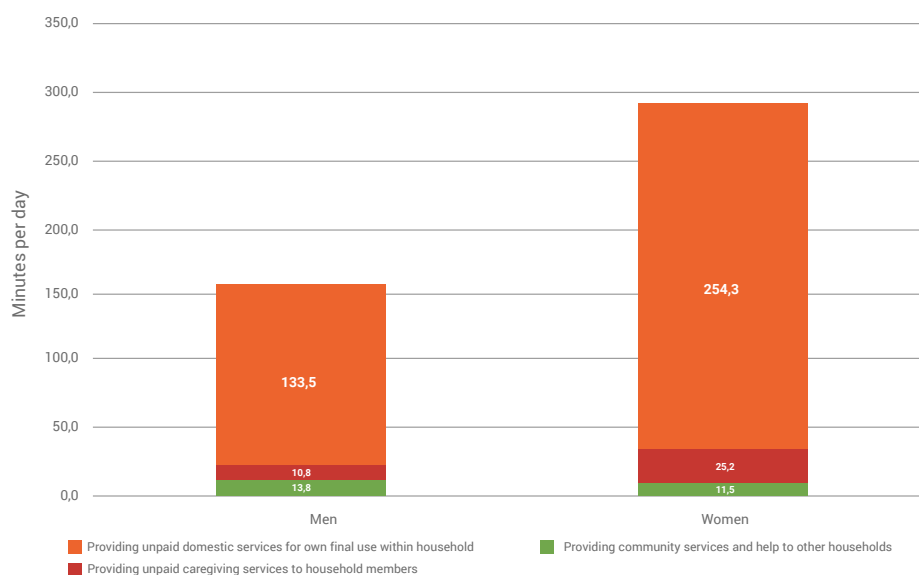
Scale-up Scenario A (fast)		Scale-up Scenario B (slow)	
2023–2032	2023–2052	2023–2032	2023–2052
212	722	59	398

Increased female labour force participation

The provision of ECEC services frees up time for caregivers (usually women). Studies show that this 'freed up' time can be significant and, often, can be put towards income-generating activities.¹⁶⁸ Enrolling children in ECEC would be expected to have a sizeable time-saving impact for caregivers in BD under both scale-up scenarios. Evidence from the International Labour Organization (ILO) suggests that the labour market participation of women with young children is lower than for women without young children.¹⁶⁹ Using data on current female labour market participation in BD,¹⁷⁰ the potential impact of ECEC on labour market participation of women with young children was modelled.

Importantly, women stand to particularly benefit from these time savings for caregivers associated with improved ECEC coverage. Studies show that women shoulder the majority of unpaid care work, including care for young children.¹⁷¹ Analysis of time-use studies in six Eastern European countries¹⁷² indicates that women undertake nearly double the unpaid care work each day that men undertake, equivalent to an additional 2 hours per day (Figure 7).¹⁷³

FIGURE 7: UNPAID CARE WORK UNDERTAKEN BY MEN AND WOMEN IN EASTERN EUROPE, BY TYPE OF UNPAID CARE WORK, IN MINUTES PER 24-HOUR DAY.¹⁷⁴



168 A. Hojman and F. Lopez Boo (2022). 'Public childcare benefits children and mothers: Evidence from a nationwide experiment in a developing country', *Journal of Public Economics*, 212, 104686. | G. Fink, D. C. McCoy, H. I. Hatamleh (2017). 'Economic Implications of Investing in Early Childhood Care and Education in Jordan', Queen Rania Foundation, Working Paper

169 ILO (2021). Supporting Women's Employment through Institutional Collaboration on Early Childhood Care and Education

170 Agency for Statistics of Bosnia and Herzegovina (2022). Labour Force Survey in Brčko district BiH, year 2021. Available at: https://bhas.gov.ba/data/Publikacije/Saopštenja/2022/BRC_13_2021_Y1_1_BS.pdf

171 L. Addati, U. Cattaneo and E. Pozzan (2022). *Care at Work: Investing in Care Leave and Services for a More Gender Equal World of Work*, (Geneva, ILO). | G. Azcona, A. Bhatt, W. Cole, R. Gammarano and S. Kapsos (2020). *The Impact of Marriage and Children on Labour Market Participation*, (Geneva: ILO and UN Women)

172 Romania, Hungary, Belarus, Poland, Bulgaria and Moldova

173 J. Charmes (2019). Unpaid Care Work and the Labour Market: An analysis of time use data based on the latest World Compilation of Time-use Surveys, (Geneva: ILO)

174 Authors. Data from J. Charmes (2019). Unpaid Care Work and the Labour Market: An analysis of time use data based on the latest World Compilation of Time-use Surveys, (Geneva: ILO)

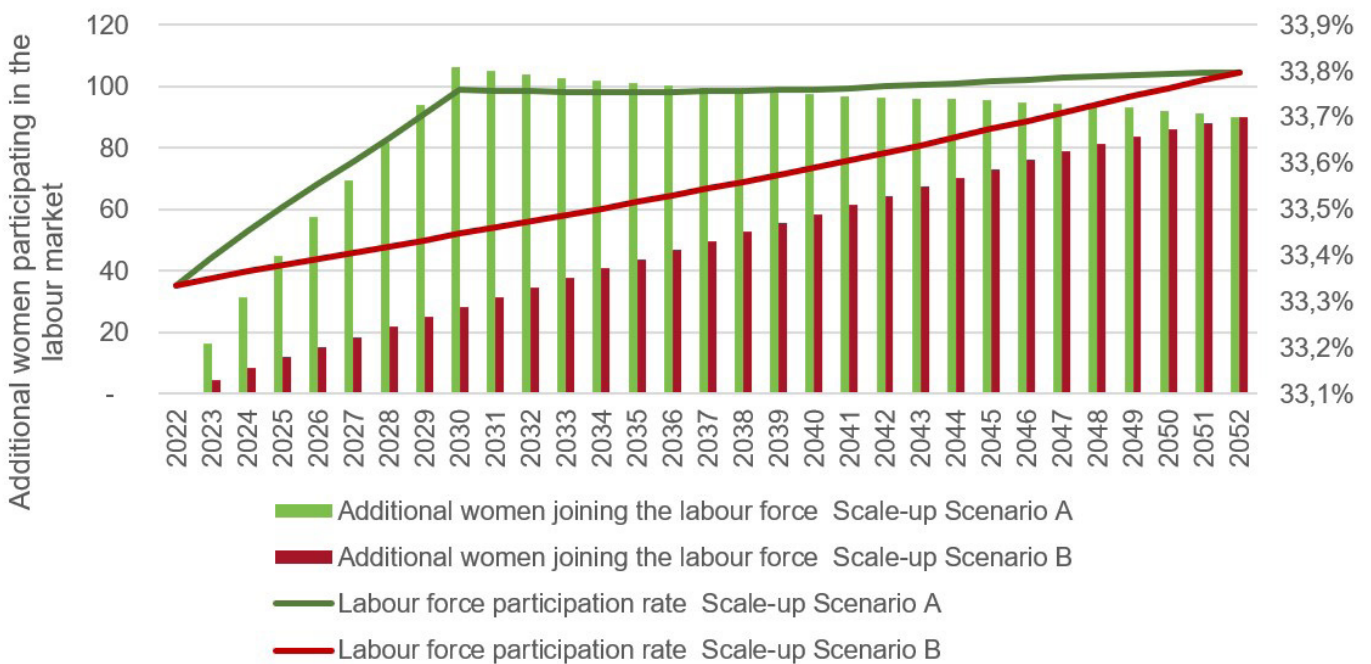
For unpaid care work related to caregiving services to household members (including children), this disparity is even higher, with women spending 90% more time on caregiving within the household in comparison to men. For this reason, women stand to benefit disproportionately from improved access to ECEC services, including in improving their ability to participate in income-generating activities.

Female labour force participation would likely be impacted by caregiver time saved owing to ECEC. Assuming that access to ECEC means that women with children under the age of six are able to participate in the labour force at a rate commensurate with those without, the impact of this intervention could be significant (Figure 8). In Scale-up Scenario A, increasing access to ECEC could result in a 0.5-percentage-point increase in the female labour force participation rate, from 33.3% in 2022 to 33.8% by 2030. In

Scale-up Scenario B, this impact would be felt much later – with the female labour force participation rate increasing to 33.8% in 2052. This would result in an additional 85 women on average per year in the labour force in Scale-up Scenario A (2022–2052 average), or 49 women on average per year in Scale-up Scenario B.

This increased female labour force participation could translate into a significant economic opportunity for caregivers. Assuming a conservative wage-earning estimate for these additional women joining the labour market¹⁷⁵, the economic benefit of expanding ECEC was calculated. The results of these calculations are displayed in Table 16. Scale-up Scenario A sees a greater incidence of economic benefit, at over 10 million BAM across the time horizon of the study, and over 3 million BAM by 2032 alone. In Scale-up Scenario B, these economic benefits are also significant – over 6 million BAM across the study time horizon, and over 890,000 BAM by 2032.

FIGURE 8: ADDITIONAL WOMEN PARTICIPATING IN THE LABOUR MARKET AND LABOUR FORCE PARTICIPATION RATE, ANNUALLY: SCALE-UP SCENARIO A AND SCALE-UP SCENARIO B.



¹⁷⁵ The conservative wage-earning estimate is calculated as 0.4 x GNI per capita. The GNI per capita is used because it is more reflective of wages/salaries than GDP per capita. Studies investigating the long-term impacts of health interventions, for example, use an assumption that 90% of a conservative wage will be realized by children who have been exposed to them (Hoddinott et al. 2013). In this study, half of this is used as an estimate, as it is assumed that caregivers (usually mothers) will more likely take on shorter-term and thus lower-paid work in comparison to the BiH average.

These large benefits are particularly important as they are reaped directly, and immediately, by families and caregivers. The subsequent increase in household incomes as a result further enhance child development – for example, through investing in more nutritious foods and reducing exposure to toxic stress resulting from low household incomes. Further, these additional incomes could also be pivoted towards supporting household contributions towards the provision of ECEC, if these services cannot be fully resourced through public financing. In summary:

- In the fast **Scale-up Scenario A**, the estimated economic benefits of increased female labour force participation suggests that, by **investing in ECEC**, Brčko District stands to gain over **3 million**

BAM by 2032, and nearly **11 million BAM** between **2023–2052**.

- The benefits would be slightly lower in **Scale-up Scenario B**. It is estimated that, by investing in ECEC, Brčko District could stand to gain nearly **900,000 BAM** over the shortest time horizon (up to **2032**), and reach over **6 million BAM over the next 30 years**.

TABLE 16: MONETIZATION OF ADDITIONAL BENEFIT OF INCREASED FEMALE LABOUR FORCE PARTICIPATION IN SCALE-UP SCENARIO A AND SCALE-UP SCENARIO B. EXPRESSED IN BAM AND DISCOUNTED AT A RATE OF 3%.

Scale-up Scenario A (fast)		Scale-up Scenario B (slow)	
2022–2032	2022–2052	2022–2032	2022–2052
3,186,418	10,868,322	895,284	6,015,577

COSTS

The costs of scaling up the provision of ECEC have been estimated. These estimates were developed on UNICEF's ECEC Accelerator tool, which was adapted for Brčko District. The key inputs were baseline enrolment rates, population estimates, the number of teachers and other employees, baseline salary data, and baseline government expenditure data – all of which were sourced at Brčko District level and validated. It should be noted that preschool teacher salaries grow in our projections at a faster rate than inflation. Preschool teacher salaries have been increased to the level of primary school teachers. This modelling decision was taken to reflect the current under-payment and lack of incentives for preschool teachers in the sector. A full exploration of the costing methodology, as well as the input data and sources used, can be found in the accompanying methodological note and database.¹⁷⁶

¹⁷⁶ In addition to the enrolment targets stipulated earlier, a number of other targets were set, namely: working towards a student-teacher ratio of 12 students to an educator, and aiming a better distribution between current and capital spending, in accordance with UNICEF guidelines. Throughout the entities, current spending takes up too large a proportion of total education spending. As such, this modelling activity estimated a redistribution of spending to reach an 80:20 ratio of current spending to capital spending, as per UNICEF guidelines (UNICEF ESARO, 2019. Education budget brief guidelines).

The additional costs of these expansions are presented in the table below, according to the different scale-up scenarios. Overall, Scale-up Scenario A is more expensive. In the first 10 years of scale-up, it is expected that an additional 35 million BAM are required to meet the enrolment targets by 2032. This compares to just over 11 million BAM in the slow scale-up scenario (B), where enrolment targets are only expected to be reached by 2052, and costs are thus spread out more evenly across the next two decades. These large differences are primarily due to the speeds of the scale-up: where the faster scenario (A) has greater immediate costs, which have a higher present value than costs that will be incurred later and will benefit a larger number of children across the study period.

Over time, the annual average cost is expected to grow. This is owing to a larger number of children being enrolled in preschool, and as a result of inflation. Viewed in terms of annual average costs per capita and per child between 3 and 6 years old, cost estimates are more digestible. In the first 10 years of Scale-up Scenario A, 1,599 BAM per child (aged 3–6 years) are needed to meet the targets. In Scale-up Scenario B, this falls to just 529 BAM. By the period 2043–52, this would increase to 1,960 BAM in Scale-up Scenario A, compared to 1,677 BAM in Scale-up Scenario B. These costs can be incurred by both the pub-

lic and private sector, depending on the financing model developed by the government. In summary:

- For **Scale-up Scenario A**, the **average annual costs per period per child (3–6 years)** in the nearest time horizon (up to **2032**), sits at **1,599 BAM**. This is equivalent to **3.5 million BAM per year on average** between 2023–2032 (**0.40% of GDP** of BD in 2020). Costs increase to **2,135 BAM per child** (3–6 years) between **2033–2042**, equivalent to an average of **4.7 million BAM per year** (**0.52% of GDP** of BD), and decrease to **1,960 BAM per child** between **2043–2052** (average of **4.2 million BAM per year**, or less than **0.47% of GDP**).
- **Scale-up Scenario B** reflects **lower costs per child** (3–6 years). In the shortest time horizon, up to **2032**, costs per child aged 3 to 6 sit at **529 BAM**, translating to an **average annual expenditure** of just under **1.2 million BAM** (or **0.13% of GDP** of BD in 2020). This cost **rises to 1,148 BAM per child** (3–6 years) between **2033–2042**, equivalent to an average of **2.5 million BAM per year** (**0.28% of GDP** of BD), and to **1,677 BAM per child** in the longest time horizon (to **2052**), corresponding to an average of **3.5 million BAM per year**, or **0.40% of GDP**.

TABLE 17: TOTAL ADDITIONAL COSTS FOR SCALE-UP SCENARIO A AND B, ACROSS DIFFERENT TIME HORIZONS. COSTS ARE EXPRESSED IN BAM, ADJUSTED FOR INFLATION, AND DISCOUNTED AT A RATE OF 3%.

	Scale-up Scenario A (fast)			Scale-up Scenario B (slow)		
	2023–2032	2033–2042	2043–2052	2023–2032	2033–2042	2043–2052
Average annual cost per period	3,592,222	4,680,563	4,205,651	1,189,321	2,516,860	3,598,888
Average annual cost per period, per child (3 to 6 years old)	1,599	2,135	1,960	529	1,148	1,677
Total incremental discounted cost per period	35,922,218	46,805,631	42,056,508	11,893,208	25,168,602	35,988,879

COST OF INACTION

Should these investments in scaling up ECEC not be made, substantial economic benefits will be foregone.

The cost of inaction (COI) is a metric that enables quantifying the gains foregone from not investing in ECEC, and it is calculated by determining the total additional economic benefit of each scale-up scenario and subtracting the costs of that scale-up.

- In **Scale-up Scenario A**, the COI estimated here suggests that **not investing in ECEC** could **cost** Brčko District **over 180 million BAM** in the shortest time horizon (up to **2032**), rising to **608 million BAM** when studied until **2052**.

- The slow **Scale-up Scenario B** reflected **slightly lower costs of inaction**. It is estimated that not investing in ECEC could **cost** Brčko District over **49 million BAM** until **2032**, and **331 million BAM** in the longest time horizon (to **2052**).

Across all time horizons and both scale-up scenarios, the COI is large and shows that not investing in ECEC would be a significant missed opportunity for development.

Across both scenarios, the COI grows the longer the time horizon considered. This is because additional possible benefits begin to accrue at a faster rate than costs, translating into a greater lost opportunity over the long term. In other words, while costs may be higher in the short term, in the long run, benefits grow at a much larger rate.

TABLE 18: ECONOMIC BENEFITS, COSTS, AND THE COST OF INACTION FOR SCALE-UP SCENARIOS A AND B, ACROSS DIFFERENT TIME HORIZONS IN MILLIONS OF BAM AND DISCOUNTED AT 3%.

	Scale-up Scenario A (fast)		Scale-up Scenario B (slow)	
	2023–2032	2023–2052	2023–2032	2023–2052
Ukupne dodatne ekonomske koristi	216	733	61	405
Ukupni dodatni troškovi	36	125	12	73
Trošak nedostatka akcije	180	608	49	331

BENEFIT-COST RATIO

Investments in ECEC have a strong, positive return on investment – a rate that is even larger over the long term.

The above analysis of benefits and costs of expanding access to ECEC interventions build into the calculation of benefit-cost ratios (BCRs). These BCRs compare the total additional monetary benefits accruing from expanding ECEC coverage with the total additional costs (all compared to the baseline scenario). Table 19 shows these BCRs for each scale-up scenario. Under the short time horizon (2023–2032), returns are lower due to the high up-front costs of expanding access to ECEC. Moreover, Scale-up Scenario B has a lower rate of return on investment, as lower coverage of ECEC is achieved in comparison to Scale-up Scenario A. In summary:

- In **Scale-up Scenario A**, for every **1 BAM** invested in the scale up of ECEC coverage, **5.9 BAM** are expected to be returned in socio-economic benefits between **2023 and 2052**.
- In **Scale-up Scenario B**, for every **1 BAM** invested in ECEC, **5.5 BAM** are expected to be returned in socio-economic benefits by **2052**.

TABLE 19: BENEFIT-COST RATIOS FOR SCALING UP ECEC FOR SCENARIOS A AND B, ACROSS DIFFERENT TIME HORIZONS.

	Scale-up Scenario A (fast)	Scale-up Scenario B (slow)
	2022–2052	2022–2052
Benefit-Cost Ratio	5.9	5.5

SUMMARY AND RECOMMENDATIONS

Investing in expanding access to ECEC is crucial for the long-term development of children, yielding substantial economic gains in the long run. Although expanding access to ECEC is costly in the short term, particularly in Scale-up Scenario A where targets are set for 2030, the long-term gains are significant and outweigh the anticipated costs. Scaling up coverage of ECEC creates economic benefits in terms of increased opportunities for labour market participation of mothers caring for young children, as well as productivity gains, GDP gains, and fiscal gains due to an improved quality of lifelong learning that arises from completing a full cycle of ECEC.

This study advocates for a faster expansion of ECEC.

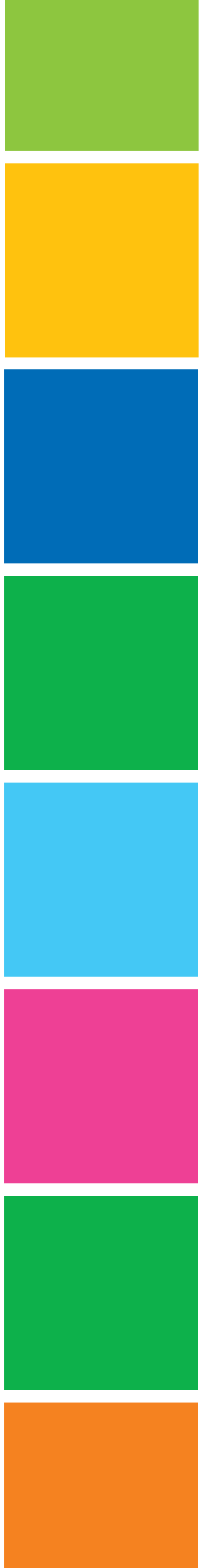
In order to capitalize on possible gains in the long term (and given the demographic trends in the District), it is important that expanding ECEC occur now. It is expected that the gains from expanding ECEC more rapidly (under Scale-up Scenario A) will grow at a rate faster than is seen in Scale-up Scenario B. Thus, whilst the costs are higher, the potential benefits for investing in scaled-up ECEC as quickly as possible will yield the greatest returns on investment. The key findings from this section are as follows:

- Improving coverage of ECEC in Brčko District is likely to increase years of school for children, as well as increasing female labour market participation.
- Over the next 30 years, the monetized benefits of these two outcomes are worth up to 722 million BAM and nearly 11 million BAM respectively.
- Failing to invest in improved ECEC coverage could cost Brčko District over 608 million BAM.
- The monetized benefits of improved ECEC coverage are between 5.5 and 5.9 times greater than the costs, depending on the scale-up scenario and time horizon under study.

In order to achieve these impressive results and mobilize for scaling up coverage of high quality ECEC, a number of recommendations have been developed. These recommendations are provided in detail in Section 5; however, some of the most significant of these include:

- Strengthen and harmonize policy and legal structures:** Whilst policies and legislation do exist in Brčko District to make ECEC universal for children in the year before primary school, the current programme being rolled out is of insufficient length to benefit child development. A core priority should be to expand the length of the programme (to 600 hours) and to ensure all children of Brčko District benefit from this programme. UNICEF BiH has developed the tool for a cost estimate of the increase in number of hours, which can be used for evidence-based policy planning.
- Optimize the use of public budgets for human capital development:** The projected costs associated with ECEC in Brčko District are substantial, and public budgets will need to be optimized if the scale-up is to be facilitated. Efficiency savings could also be made – for example, it is recommended that some primary school premises could be repurposed to accommodate preschool aged children. This avoids large capital expenditures that would arise from constructing separate preschools. Brčko District should place equity at the heart of its scale up of ECEC – prioritizing activities that ensure that the most vulnerable or at-risk children have the best opportunities for early learning.
- Develop strong partnerships with the private sector:** Given the financing gap associated with this ECEC scale-up, it will require significant investment from both public and private actors. Domestic government financing, however, will form the foundation of these investments. Given limited fiscal space, it will be important for government stakeholders in Brčko District to draw up multi-year operational and financial plans to guide these investments. Further, innovative financing approaches (such as social impact bonds or blended finance) can be explored to plug financing gaps.

Recommendations for how to further facilitate this scaled-up access to services can be found in Section 5: Conclusions and Recommendations.



SOCIAL PROTECTION

CONTEXT

Status

In the Brčko District of Bosnia and Herzegovina, the absolute poverty rate for children aged 0–14 was concerningly high, sitting at 42%,¹⁷⁷ and the situation has likely worsened due to the impact of COVID19, inflation and economic crises. Children in BD are particularly vulnerable to poverty, with a rate (42%) significantly higher than the overall poverty rate of children aged 0–14 in BiH, which sits at 34%.¹⁷⁸ The absolute poverty rate of children is also consistently higher than older population sub-groups within BD, where 30% of youth aged 15–24 lived in absolute poverty, and 26% for the general BD population.¹⁷⁹ This is particularly concerning also considering that in BD, in 2021, only 3,306 beneficiaries exercised their right to the child allowance,¹⁸⁰ which translates to just 26% of the under-15 population. The number of both child allowance beneficiaries and corresponding children has also been drastically falling since 2017, and decreased from 4,292 and 7,660 to 3,306 and 6,100 respectively.¹⁸¹ While this reflects the decreasing number of children in the District, it is also important to ensure that this decline is not reflective of stringent requirements on the child allowance inhibiting access. At the BiH level, 98% of children under five are deprived in at least one of the six dimensions – nutrition, health, child development, violent discipline, information access, and housing – and one third of children under five (33%) are deprived in four or more dimensions at a time.¹⁸² However, due to the small population size, only 2% of all poor households in BiH are located in BD.¹⁸³

Inequities are strongly correlated with the socio-economic status of households. Of particular concern in BiH's social protection system are families from rural areas, Roma families, and families with children with disabilities – all of whom are vulnerable across numerous

dimensions, and may struggle to access social protection. In BD, the relative poverty rate in rural areas is more than double that of urban areas, but social benefits and costs of living incentivize living in rural areas. Further, it is estimated that having a disability increases the probability of becoming poor by 18% in BiH,¹⁸⁴ and that almost 80% of Roma children live in poverty.¹⁸⁵ Child poverty is a particularly important issue to tackle in BD, as the effects can last well into adulthood.¹⁸⁶ This is because factors such as poor health, nutrition, and lack of education can contribute to toxic stress, setting these individuals behind their peers, therefore making it challenging to improve their material standing and to break the intergenerational cycle of poverty and exclusion.

Laws and Policies

The BD Law on Child Protection gives parents across BD the right to a child allowance, maternity allowance, reimbursement of maternity benefits, and half-time work for children with disabilities.¹⁸⁷ It aims to provide each child with equal conditions for healthy physical, intellectual and emotional development in the family, and entitles families in need with children to a child allowance. Families in need are defined as those with a monthly income below 15% of the previous year's minimum wage in BD¹⁸⁹ who are entitled to an allowance equivalent to 10% of the average monthly salary in BD.¹⁹⁰

Financing

Promisingly, 28.6% of the 2023 budget of the BD Sub-Department of Social Protection is allocated to the child allowance.¹⁹¹ However, this translates to only 0.84% of GDP.¹⁹²

177 Brčko District of Bosnia and Herzegovina Social Inclusion Strategy for 2021–2027. Sarajevo, December 2020. Publication produced by Social Inclusion Foundation in BiH and the Initiative for Better and Humane Inclusion, with financial support from the European Union and UNICEF. The absolute poverty analysis is based on the Household Budget Survey 2015 data.

178 Ibid.

179 Ibid.

180 Agency for Statistics of Bosnia and Herzegovina (2022). Social Protection in Brčko District from 2017 to 2021. Available at: https://bhas.gov.ba/data/Publikacije/Bilteni/2022/BRC_03_2021_TB_1_BS.pdf

181 Ibid.

182 Lucia Ferrone & Yekaterina Chzhen (2015). National Multiple Overlapping Deprivation Analysis: Child Poverty and Deprivation in Bosnia and Herzegovina. Office of Research Working Paper WP 2015–02.

183 Agency for Statistics of Bosnia and Herzegovina (2018). Household Budget Survey in Bosnia and Herzegovina 2015. TB15

184 Initiative for Better and Humane Inclusion, 2016

185 UN Committee on the Rights of the Child (2019). Bosnia and Herzegovina Country Report

186 UNICEF (nd). Social Protection. Available at: <https://www.unicef.org/bih/en/node/501>

188 UN Committee on the Rights of the Child (2019). Bosnia and Herzegovina Country Report

189 Additionally, real estate income per family member in the preceding year must not exceed 3% of the average real estate income per 1 hectare of land. Source: Official Gazette of the Brčko District of Bosnia and Herzegovina, No. 18/2020 – revised text, 29/2020, 41/2020 and 13/2021

190 Official Gazette of the Brčko District of Bosnia and Herzegovina, No. 18/2020 – revised text, 29/2020, 41/2020 and 13/2021

191 Budget of the Brčko District of Bosnia and Herzegovina for 2023

192 Ibid.

This is because the total budget of the Social Protection Sub-Department constitutes less than half of its reference Dept. of Health and Other Services: the total social protection expenditure in BD amounts to only 10.96% of the total BD budget in 2023, or 2.95% of GDP, reduced from 3.10% of GDP in 2021.¹⁹³ The allocated amount is much lower than the BiH overall social protection expenditure, which sits at 22.5% of GDP in 2020.¹⁹⁴ However, when looking further into child-focused spending within social protection in BiH, there are less promising trends. Although total expenditure is in line with western Balkan neighbours Croatia and Serbia, who spent 24.3% and 21.9% respectively, this is far lower than the EU average of 31.8%.¹⁹⁵ Moreover, at the BiH level, more than 80% of social protection expenditure pertains to contributory social insurance, and more than 3% is spent on administration costs.¹⁹⁶ This implies that less than 3% of GDP is allocated to the non-contributory social assistance system, consisting of social and child welfare schemes and the protection of war veterans.¹⁹⁷ Of this, more than 40% pertains to status-based war veterans, and the Social and Child Welfare scheme only accounts for 1.57% of GDP, or 7% of social protection benefits expenditure in 2020.¹⁹⁸ Family and child benefits make up an even lower proportion, accounting for 4.2% of total social protection spending, equivalent to just 0.95% of GDP.¹⁹⁹ Given that children are particularly vulnerable to poverty, these spending patterns show a worrying status quo where insufficient funding is dedicated to the upliftment and support of children and families.

The existing social protection system is particularly inefficient at targeting social transfers. Estimates suggest that the poorest quintile of the BiH population only receives 17% of non-contributory benefits, while the wealthiest receives 20%.²⁰⁰ At the BiH level, only 1.9% of the total population and 6.2% of the poorest benefit from means-tested social protection, for which a mere 0.5% of GDP is allocated.²⁰¹ Other issues include the fact that decentralization means that the generosity and availability of cash benefits are based on place of residence, rather than level of need, and that in certain areas the eligibility criteria are unnecessarily restrictive. For example, the administrative

procedures are complex and costly, as well as there being stigma around receiving a social transfer.²⁰² The monetary value of social transfers is low and insufficient to fulfil basic needs, and the poor targeting is making their effects on poverty reduction negligible. Thus, there is a clear need to increase spending on social protection in BiH, and BD more specifically, as well as to improve the targeting and the efficiency of spending of the social protection system.

SOCIAL PROTECTION INTERVENTIONS: CHILD ALLOWANCE MODELLING

Five scenarios were analyzed, guided by BD's existing Child Protection Law and a universal cash transfer model.

Each scenario has two aspects – which families are eligible for the grant, and what the transfer amount would be. Scenario A models a situation where all households earning less than 15% of the minimum wage in BD receive the transfer, and the transfer amount per child is 10% of minimum wage. Scenario B models a situation where all households earning less than 22.5% of the minimum wage in BD receive the transfer, and the transfer amount is unchanged. Scenario C models a situation where all households earning less than 15% of the minimum wage in BD receive the transfer, and the transfer amount per child is 15% of minimum wage. Finally, Scenario D models a situation where all households earning less than 22.5% of the minimum wage in BD receive the transfer, and the transfer amount per child is 15% of minimum wage. In each scenario, the coverage of the social transfer is scaled up to reach 100% of the target population by 2025.

193 Ibid.

194 Agency for Statistics of Bosnia and Herzegovina (2023). *Demography and Social Statistics*

195 EuroStat European Statistics database – Social protection expenditure (indicator code SPR_EXP_SUM). Last accessed 15 November 2022 at <https://ec.europa.eu/eurostat/data/database>

196 Agency for Statistics of Bosnia and Herzegovina (2023). *Demography and Social Statistics*

197 Ibid.

198 Ibid.

199 Ibid.

200 UNICEF (2020). *Situation Analysis of Children in Bosnia and Herzegovina*

201 UNICEF (2020). *Situation Analysis of Children in Bosnia and Herzegovina*

202 Ibid.

Scenario E refers to a universal child allowance, given to all families with children younger than seven years of age, regardless of family income, employment status, or other demographic and economic concerns.²⁰³ The universality of this grant is particularly important, as confirmed by interviews with key informants pointing to significant targeting errors²⁰⁴ leading to inefficiencies and insufficient coverage. Including more checks, such as household visits, to detect fraud in a targeted system, comes at a high administrative cost. Furthermore, a means-tested benefit can also act as a disincentive to seeking benefits among families who do not wish to be identified as poor

within their communities. Implementing a universal child allowance removes the stigma as well as the exclusion errors from the system, as well as additional administrative costs, and therefore allows for the poorest families to have better access to the grants that they require.

A breakdown of the differences in these scenarios is displayed in Figure 9 below. Due to modelling limitations, the increase in transfer amount was not able to be modelled, and therefore Scenarios A and C were considered identical, as were Scenarios B and D.

FIGURE 9: DIFFERENCES IN THE SCALE-UP SCENARIOS MODELLED

	Grant amount	Families covered	Summary
Child Protection Law	10% of minimum wage	Households earning less than 15% of minimum wage in BD	Households earning less than 15% of minimum wage in BD
Scenario A	10% of minimum wage	Households earning less than 15% of minimum wage in BD	Identical to the existing law
Scenario B	10% of minimum wage	Households earning less than 22,5% of minimum wage in BD	Increased coverage of the existing law
Scenario C	15% of minimum wage	Households earning less than 15% of minimum wage in BD	Increased transfer amount of the existing law
Scenario D	15% of minimum wage	Households earning less than 22,5% of minimum wage in BD	Increased both coverage and amount of the existing law
Scenario E	20% of BDP per capita	All household with children younger than seven years of age	Universal child transfer

203 UNICEF (2017). Universal Child Benefits in Europe and Central Asia: Regional Social Protection Brief: 4

204 Analysis of the systems in BiH, reported by key informants, noted that targeting was particularly difficult and inefficient. Lack of data, including census data on demographics, and expenditure data from households and families, makes it extremely difficult to accurately identify families in need.

BENEFITS

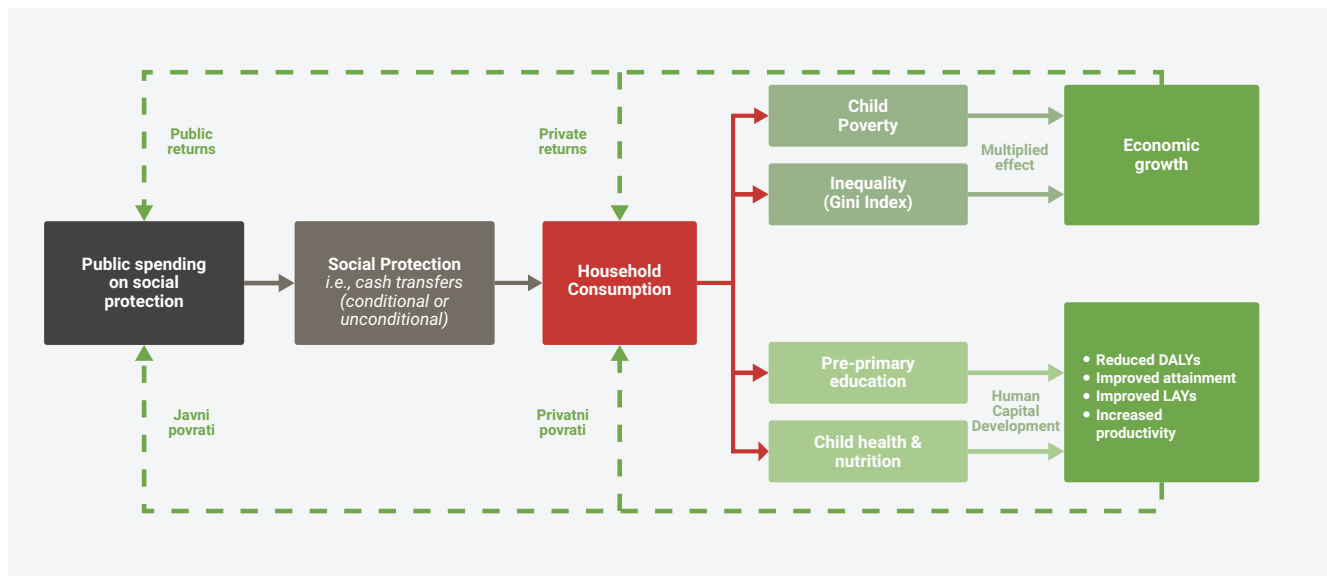
The effects of the implementation of the existing cash transfer for children in BD were analyzed using a life cycle approach – spanning health, education and labour market outcomes. Analysis of the impacts of the new child allowance proposal was done in advanced Excel. Many variables were also obtained through the 2015 Household Budget Survey, analysis of which was done in Stata. Importantly, this analysis was carried out independently from the preceding education and health analysis, in order to isolate the effect of the new child allowance on these indicators.

A review of cash transfer programmes worldwide found that cash transfers consistently increased total household expenditure, as well as food expenditure.²⁰⁵ Hence, besides an overall increase in consumption, we expect child grants to reduce malnutrition and the associated physical effects, such as stunting or obesity among children.²⁰⁶ Receipt of cash transfers was also associated

with increased school attendance, particularly among girls.²⁰⁷ Poverty is also associated with toxic stress, which increases the risk of poor physical and cognitive health later in life²⁰⁸. These life-long effects can be mitigated through cash transfers, providing respite from conditions of extreme scarcity and reducing the stress children experience in their home environment. Therefore, there is clear international evidence that cash transfers greatly improve children's education and health.

Figure 10 illustrates the pathways through which we expect spending on social protection to improve poverty, inequality, education, and health outcomes. There are both direct and indirect channels – increased household consumption reduces child poverty and inequality, and has a multiplier effect on economic growth, while the transfer tends to also increase access to pre-primary education and health services, thus contributing to human capital development and overall increased productivity. More detail on these pathways can be found in the Methodological Note.

FIGURE 10: SOCIAL PROTECTION IMPACT PATHWAYS



205 Francesca Bastagli et al. (2016). Cash transfers: What does the evidence say? A rigorous review of programme impact and of the role of design and implementation features

206 This was further confirmed when looking at the effect of cash transfers on health and nutrition indicators – families were more likely to use health services and to have a varied diet, and saw improvements in the anthropometric measures of their children. However, an important caveat to these results was the importance of complementary interventions such as the provision of nutritional supplements or behavioural change training, which, when provided together with cash transfers, created more consistent nutritional improvements among children.

207 Francesca Bastagli et al. (2016). Cash transfers: What does the evidence say? A rigorous review of programme impact and of the role of design and implementation features

208 Francis et al. (2018). Child Poverty, Toxic Stress, and Social Determinants of Health: Screening and Care Coordination. *Online J Issues Nurs* 23(3):2

Improvements in health and nutrition outcomes

Cash transfers have been associated with improvements in child health outcomes in literature examining cash transfer schemes around the world.²⁰⁹ Thus, two child health indicators were modelled – child deaths (under the age of five) and stunting cases. Data from the MICS conducted in BiH in 2012, and data from the UNFPA's Country Programme Evaluation conducted in 2019, are used to analyze these indicators, as well as to extract years of life lived with disability (YLDs) and DALYs. Table 20 details the health outcomes of the four scale-up scenarios. Scenarios A and C model when the grant is given to households earning less than 15% of minimum wage in BD, as specified in the existing Law on Children Protection in BD. Scenarios B and D increase the eligibility for the child allowance, to include all families earning less than 22.5% of the minimum wage in BD. All scenarios are compared to the baseline under which 52% of children are covered by the existing child allowance in BD.

In Scenarios A and C, an average of 2 child deaths and 31 stunting cases are averted in BD over the 30-year scale-up period, while an average of 63 YLLs (years of life lost due to premature mortality), over 23 YLDs, and 86 DALYs are averted over the same period. The majority of these health impacts can be observed within the first 10 years following the implementation of the new child allowance. Therefore, although health impacts tend to be thought of as longer-term interventions, the pay-off to implementing the new child allowance is relatively high in the short run, and therefore yields very tangible results almost immediately. This translates to a total of 64 child lives saved in Scenarios A and C, and a total of 96 child lives saved in Scenarios B and D. These totals represent the sum of all lives saved annually for the period between 2022 and 2052. Therefore, by increasing coverage of the child allowance to more families, almost 30 more child lives can be saved. However, it is important not to understate the value of the existing child allowance scheme, which will still provide large reductions in child deaths, YLLs, YLDs, DALYs and stunting.

TABLE 20: ADDITIONAL CHILD DEATHS, YLLS, YLDS, DALYS AND STUNTING CASES AVERTED (AVERAGE AND IN TOTAL) FOR SCALE-UP SCENARIOS A-D IN TEN-YEAR INCREMENTS.

	Scale-up Scenarios A & C (normal coverage)					Scale-up Scenarios B & D (high coverage)				
	Child deaths averted	YLLs averted	YLDs averted	DALYs averted	Stunting cases averted	Child deaths averted	YLLs averted	YLDs averted	DALYs averted	Stunting cases averted
2023–32	2	68	24	92	33	3	102	36	138	50
2023–42	2	66	23	89	32	3	98	35	133	48
2023–52	2	63	23	86	31	3	95	34	129	46
Total	64	1,901	676	2,577	924	96	2,851	1,014	3,865	1,387

209 Francesca Bastagli et al. (2016). Novčani transferi: Šta kažu dokazi? Rigorozno preispitivanje uticaja programa i uloge karakteristika dizajna i provedbe.

The benefits accrued in Scenarios A through D are amplified even further under Scenario E, where the child allowance is made universal. A total of 122 child lives are saved, with over 4,000 DALYs averted and over 1,700 stunting cases averted.

Thus, Scenario E allows for 26 child additional child lives saved compared to Scenario B and D, illustrating the value of a universal transfer, not only in terms of the lives saved, but furthermore in the improved livelihoods due to better health.

TABLE 21: ADDITIONAL CHILD DEATHS, YLLS, YLDS, DALYS AND STUNTING CASES AVERTED (AVERAGE AND IN TOTAL) FOR SCENARIO E IN TEN-YEAR INCREMENTS.

	Scale-up Scenario E (universal coverage)				
	Child deaths averted	YLLs averted	YLDs averted	DALYs averted	Stunting cases averted
2023–32	4	131	46	177	64
2023–42	4	126	45	171	61
2023–52	4	122	43	165	59
Total	123	3,651	1,298	4,948	1,775

- For **Scale-up Scenarios A & C**, in the shortest time horizon (up to 2032), on average, **2 child deaths are averted, 92 DALYs are averted, and 33 stunting cases are averted each year**. Across all indicators, when studied until 2052 we see a **consistent impact** with an average of **2 child deaths averted, 86 DALYs averted, and 31 stunting cases averted** per year. Therefore, over the next 30 years, a total of **64 child lives** can be saved, a total of **2,577 DALYs averted, and 924 stunting cases averted** over the normal coverage scenario of the child benefit.
- Scale-up Scenarios B & D** reflected **even larger health benefits**. Up to 2032, an annual average of **3 child deaths are averted, 138 DALYs are averted, and 50 stunting cases are averted**. Across all indicators, until 2052, we see a more or less **consistent impact** with a yearly average of **3 child deaths, 129 DALYs, and 46 stunting cases averted**. This equates to a total, over the next 30 years, of **96 child lives** saved, a total of **3,865 DALYs averted, and 1,387 stunting cases averted** over the high-coverage scenario of the child benefit.
- For **Scenario E**, in the shortest time horizon (up to 2032), **4 child deaths are averted, 177 DALYs are averted, and 64 stunting cases are averted on average each year**. Across all indicators, when studied until 2052, we see a consistent impact with an average of **4 child deaths averted, 165 DALYs averted, and 59 stunting cases averted**. This implies that **universal coverage of child benefits** under Scenario E yields the **greatest benefit** of the studied scenarios to health indicators, with a total of **123 child lives** saved, a total of **4,984 DALYs averted, and 1,775 stunting cases averted** over the next 30 years.

Impact on education, employment, earnings and poverty

Globally, there is significant evidence that cash transfers increase school attendance.²¹⁰ However, the evidence is less clear on whether learning outcomes are improved for children in households that receive a cash transfer. Thus,

210 Francesca Bastagli et al. (2016). Cash transfers: What does the evidence say? A rigorous review of programme impact and of the role of design and implementation features

in order to determine whether the new child allowance is able to make a meaningful impact on a child's learning outcomes, primary school and secondary school completion is modelled, as well as employment, poverty and earnings. "Employment" indicates how many additional children obtain full-time employment compared to the baseline, "out of poverty" indicates how many additional children exit poverty²¹¹ as a result of the educational and employment effects of the child allowance, and "earnings" indicates the increase in earnings compared to the average earnings a child in poverty could have expected to make.

An average of over 100,000 additional children complete primary school over 30 years in Scenarios A and C, while an average of over 150,000 additional children complete primary school over 30 years in Scenarios B and D. An average of 207 additional children complete secondary school over 30 years in Scenarios A and C, compared to an average of 310 under Scenarios B and D. An increase in eligibility for families receiving the child allowance increases the number of children who complete secondary school by over 100 children over the entire scale-up period. There is a clear improvement in educational outcomes as a result of the cash transfer to children.

The results in Table 22 illustrate that an improved child allowance would boost employment, reduce poverty, and increase lifetime earnings. There is no change in employment or poverty under Scenarios A and C, compared to the baseline. This is intuitive, as the existing child allowance scheme in BD already covers a large number of children, thus meaning that any effects in Scenario A and C are already being realized in the baseline scenario. In all scenarios, the largest benefits are realized in the first 10-year scale up period, indicating that many of the benefits in terms of improving both primary and secondary school completion will be realized relatively early as a result of a child allowance, under both the baseline coverage and an improved coverage scenario. In Scenarios B and D, employment increases by an average of 12 people over the 30-year scale-up period. The poverty outcomes are larger, with an average of an additional 29 individuals exiting poverty under Scenarios B and D over the same 30-year period. Despite a lack of change in employment in Scenarios A and C, lifetime earnings increase by over 2 million BAM in the 30-year scale-up period, and by over 3 million BAM in Scenarios B and D. This translates to a total increase in lifetime earnings of over 64 million BAM in Scenarios A and C, and a total increase in lifetime earnings of over 96 million BAM in Scenarios B and D. Therefore, it is clear that an improved child allowance vastly improves both educational and labour market outcomes.

TABLE 22: ADDITIONAL CHILDREN COMPLETING PRIMARY SCHOOL, SECONDARY SCHOOL, ENTERING EMPLOYMENT, EXITING POVERTY AND INCREASED LIFETIME EARNINGS (AVERAGE AND IN TOTAL) FOR SCALE-UP SCENARIOS A–D IN TEN-YEAR INCREMENTS. EARNINGS EXPRESSED IN BAM AND DISCOUNTED AT 3%.

	Scale-up Scenario A & C (normal coverage)					Scale-up Scenarios B & D (high coverage)				
	Primary school completion	Secondary school completion	Earnings	Employment	Out of Poverty	Primary school completion	Secondary school completion	Earnings	Employment	Out of Poverty
2023–2032	15,687	32	2,298,003	0	0	23,531	48	3,452,606	12	31
2023–2042	15,113	31	2,213,859	0	0	22,669	46	3,326,185	12	30
2023–2052	14,611	30	2,140,315	0	0	21,916	44	3,215,691	12	29
Total	438,318	887	64,209,461	0	0	657,477	1,331	96,470,726	348	860

211 For the purposes of this analysis, poverty refers to whether an individual would still qualify for the child allowance grant, based on the level of income they receive, whether it be from full- or part-time employment, or from non-working income sources.

Table 23 illustrates that these education and labour market gains would be even greater under a universal child allowance. In Scenario E, primary school completion in total increases to over 840,000 additional students, compared to Scenarios B and D where there are an additional 650,000 additional primary school finishers. Over 1,700 additional children graduate from secondary school: an increase of almost 400 compared to Scenario B and D. Lifetime earnings increase by over 102 million BAM, lifting over 15,000 children out of poverty, compared to 0 in Scenarios A and C, and 860 in Scenarios B and D. Interestingly, more people are lifted out of poverty than attain employment – with over 4,500 individuals gaining full-time employment in Scenario E. This may reflect the pro-poor power of a universal child transfer, which is allowing individuals to be lifted out of poverty, even if they are not able to attain employment. In summary:

- For **Scale-up Scenarios A & C**, a total of **over 430,000** additional children **complete primary school**, **over 800** additional children **complete secondary school**, and **lifetime earnings increase by 64 million BAM**. There is no change to employment or poverty under these scenarios.
- For **Scale-up Scenarios B & D**, a total of **over 650,000** additional children **complete primary school**, **over 1,300** additional children **complete secondary school**, and **lifetime earnings increase by 96 million BAM**. Through the increased educational attainment, **348** additional individuals are expected to become **employed**, while **860** are expected to be lifted **out of poverty**.
- For **Scale-up Scenario E**, a total of over **840,000** additional children **complete primary school**, **over 1,700** additional children **complete secondary school**, and **lifetime earnings increase by 102 million BAM**. Through increased educational attainment, over **4,500** additional individuals are expected to become **employed**, while nearly **15,500** are expected to be lifted **out of poverty**.

TABLE 23: ADDITIONAL CHILDREN COMPLETING PRIMARY SCHOOL, SECONDARY SCHOOL, ENTERING EMPLOYMENT, EXITING POVERTY AND INCREASED LIFETIME EARNINGS (AVERAGE AND IN TOTAL) FOR SCENARIO E IN TEN-YEAR INCREMENTS. EARNINGS EXPRESSED IN BAM AND DISCOUNTED AT 3%.

	Scale-up Scenario E (universal coverage)				
	Primary school completion	Secondary school completion	Earnings	Employment	Out of Poverty
2023–32	30,126	61	3,671,683	162	554
2023–42	29,023	59	3,537,240	156	533
2023–52	28,058	57	3,419,735	151	516
Total	841,753	1,703	102,592,052	4,521	15,472

Benefits in monetary terms

Table 24 shows that, when monetized, the benefits are impressive, particularly in high-coverage scenarios.

DALYs are monetized by multiplying the productivity gain of the average individual due to averted DALYs by current GDP per capita in BAM, thereby showing the increase in economic productivity as a result of DALYs averted. Similarly, non-stunted children are more productive, and therefore their increased productivity is converted into higher overall lifetime earnings.

Through the increased productivity and higher lifetime earnings, BD's government is able to obtain a twofold fiscal benefit:

- Directly, through greater revenues from income tax due to higher earnings among the population, and
- Indirectly, through indirect taxes such as VAT, as individuals increase their consumption as a result of their greater incomes.

In Scale-up Scenarios A and C, the monetization of these benefits are well into the millions of BAM, with DALYs averted providing over 45 million BAM in economic benefits. In total, BD stands to gain over 81 million BAM in increased productivity and tax revenues as a result of the child allowance. The additional revenue from income tax is 0 due to the stagnant employment figure, as discussed above. These benefits are even higher when increasing coverage of the child allowance in Scenarios B and D. DALYs averted alone yield an economic productivity gain of over 67 million BAM, and all benefits produce a monetary gain of over 122 million BAM.

TABLE 24: MONETIZATION OF BENEFITS FOR SCALE-UP SCENARIOS A–D OVER A 30-YEAR PERIOD. EXPRESSED IN BAM AND DISCOUNTED AT A RATE OF 3%.

	Scale-up Scenarios A & C (normal coverage)	Scale-up Scenarios B & D (high coverage)
DALYs averted	45,094,443	67,641,664
Stunting cases averted	35,264,954	52,897,431
Fiscal benefit (via income tax)	-	355,908
Fiscal benefit (via indirect tax)	1,026,114	1,539,171
Total	81,385,511	122,434,174

The monetized benefits for Scenario E are even larger than that of the means-tested transfers. BD stands to gain over 161 million BAM over a 30-year period through the implementation of a universal child allowance.

DALYs alone contribute 86 million BAM to these benefits: over 20 million BAM more than the amount realized under Scenarios B and D.

TABLE 25: MONETIZATION OF BENEFITS FOR SCALE-UP SCENARIO E OVER A 30-YEAR PERIOD. EXPRESSED IN BAM AND DISCOUNTED AT A RATE OF 3%.

	Scale-up Scenario E (universal coverage)
DALYs averted	86,600,169
Stunting cases averted	67,723,444
Fiscal benefit (via income tax)	5,022,959
Fiscal benefit (via indirect tax)	1,970,567
Total	161,317,139

Therefore, the monetized benefits of each of these scale-up scenarios is large. In summary:

- For **Scale-up Scenarios A & C**, a total of over **81 million BAM** in monetized benefits is realized over a 30-year period, equivalent to **9.35% of BD's GDP** in 2020.
- For **Scale-up Scenarios B & D**, a total of **122 million** in monetized benefits is realized over a 30-year period, equivalent to **14.08% of GDP** in 2020.
- For **Scale-up Scenario E**, a total of over **161 million** in monetized benefits is realized over a 30-year period, equivalent to **18.58% of GDP** in 2020.

Inequity would be significantly reduced with the application of an improved cash transfer for children. Figure 11 depicts the Lorenz curve for income prior to the transfer and after the transfer. The Lorenz curve is a simple way of illustrating the change in inequality, by ranking the population into income deciles and determining what share of total income is captured by each decile. The closer to the dashed, green 45° line, the closer to perfect equality the income distribution is. It is, therefore, clear that the cash transfer reduces income inequality, as the Lorenz curve shifts inwards from the pre-transfer blue line to the post-transfer red line in the figure below. This is confirmed by the Gini coefficient calculated pre- and post-transfer.

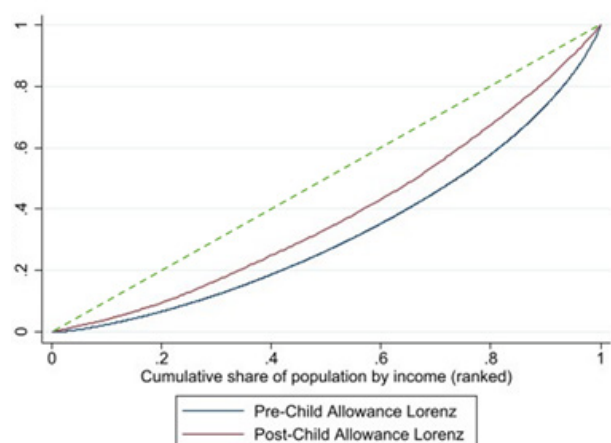


The **Gini coefficient** measures the income distribution across a population. A Gini coefficient of 0 indicates perfect equality, while a Gini coefficient of 1 represents perfect inequality.

The Gini coefficient is often graphically represented through the Lorenz curve. **The Lorenz curve** is depicted in contrast to a 45° line – the line of perfect equality. Therefore, the closer the Lorenz curve is to the 45° line, the closer the society is to perfect equality.

In order to understand the impact of the existing child allowance on inequality, a scenario where no households received any child allowances was modelled using STATA to calculate the “Pre-Child Allowance” Gini coefficient and Lorenz curve. Then, inequality was calculated for a scenario where households who currently receive a child allowance do receive their allowance to calculate the “Post-Child Allowance” Gini coefficient and Lorenz curve. While BD had a Gini coefficient of 0.34 prior to the transfer, it drops to 0.22 in the post-child allowance scenario. As a Gini coefficient closer to 0 indicates a move towards perfect equality, it is clear that the child allowance increases equality in BD. Therefore, it is clear that the existing child allowance policy in BD has allowed for greater equality in the region. It should also be noted that this is a conservative estimate – it does not yet take into account the future increases in income and employment as a result of improved schooling because of the cash transfer. Therefore, the reductions in inequality are likely to be even greater than estimated below, and could be even greater under a universal grant if the reductions in poverty and gains in employment outweigh the potentially regressive effects of the non-targeted nature of the grant.

FIGURE 11: LORENZ CURVE PRE- AND POST-TRANSFER



COSTS

Table 26 presents the additional costs for all scale-up scenarios over 30 years. The costs of the child allowance in BD were estimated, as well as the costs of an allowance covering more children under Scenarios B and D. Costs were primarily based on the size of the proposed transfer, as well as on the average cost of targeting cash transfer schemes. Costs were multiplied by 2.1 in order to account for the child allowance being applied to all eligible children under fifteen, whereas the analysis for the report up until this point was for children between 0 and 6 years of age (inclusive).

The total costs of these interventions will be significant, although viewing costs in per capita and child terms allows for a proportionate understanding of the investment required. For Scenarios A and C, the cost per capita of the child allowance ranges from an average of 97.28 BAM in the first 10 years to 210 BAM in the 30-year period modelled. Scenarios B and D are more expensive due to covering more children in these scenarios, with cost per capita ranging from an average of 145.91 BAM in the first 10 years to 315 BAM over 30 years.

The decreasing annual average costs per child aged 0 to 6 reveal the affordability of this cash transfer. Assuming a constant population, the average cost per child under 7 under Scenarios A and C sits at 167 BAM annually in the first 10 years, and decreases to 120 BAM annually over the 30-year scale-up period. This drop in annual cost per child under 7 illustrates the positive impacts of the child allowance on the lifetime earnings of families, and thus a smaller number of beneficiaries being eligible for this intervention. A similar phenomenon is observed for Scenarios B and D, where the average annual cost in the first 10 years is 251 BAM, dropping to 180 BAM per child in the first 30 years.

TABLE 26: TOTAL ADDITIONAL COSTS FOR SCALE-UP SCENARIOS A–D, ACROSS DIFFERENT TIME HORIZONS. COSTS ARE EXPRESSED IN BAM AND DISCOUNTED AT A RATE OF 3%.

	Scale-up Scenario A & C (normal coverage)			Scale-up Scenario B & D (high coverage)		
	2023–2032	2023–2042	2023–2052	2023–2032	2023–2042	2023–2052
Average cost per capita over time horizons	97	164	210	146	246	315
Average cost per child aged 0–6 (inclusive) over time horizons	1,671	2,815	3,607	2,506	4,223	5,411
Average annual cost per child 0–6 (inclusive)	167.10	140.75	120.23	250.60	211.15	180.37
Total cost per period	5,661,781	9,538,947	12,222,828	8,492,672	14,308,421	18,334,242

The costs of a universal child allowance are higher than the costs under Scenarios A through D. This is as expected, as covering every child in the BD requires more financial outlay than covering only the poorest families. The average cost per capita is also much higher, ranging between 186 BAM in the first 10-year period, and reaching over 400 BAM over the 30-year scale-up period. The cost per child does fall in a similar way to the previous scenarios – the average annual cost of the universal transfer stands at 321 BAM over the first ten years, and falls to an average annual cost of 231 BAM over the full scale-up period, reflecting the savings made when families are lifted out of poverty by the transfer. Therefore, in summary:

- For **Scale-up Scenarios A & C**, average **annual cost per period per child aged 0–6** (inclusive) in the shortest time horizon (up to **2032**), sits at **167.10 BAM** (equivalent to just **1.43% of GDP per capita** in BD in 2020). This cost **falls** to **120.23 BAM child under 7** when studied until **2052** (equivalent to **1.03% of GDP per capita**).
- Scale-up Scenarios B & D** reflected **higher costs per child under aged 0–6** (inclusive) **due to the higher coverage**. In the shortest time horizon, the cost per child under 7 sits at **250.6 BAM** (equivalent to **2.20% of GDP per capita** in BD in 2020), and **falls** in the longest time horizon (to **2052**) to **180.37 BAM** (equivalent to **1.55% of GDP per capita** in 2020).
- The universal Scale-up Scenario E**, as expected, reflected **even higher costs per child**. In the shortest time horizon, annual average costs per child under aged 0 to 6 (inclusive) sit at **320.9 BAM** (equivalent to **2.75% of GDP per capita** in BD in 2020), and **drop** in the longest time horizon (to **2052**) to **230.9 BAM** (equivalent to **1.98% of GDP per capita** in 2020).

TABLE 27: TOTAL ADDITIONAL COSTS FOR SCENARIO E, ACROSS DIFFERENT TIME HORIZONS. COSTS ARE EXPRESSED IN BAM AND DISCOUNTED AT A RATE OF 3%.

	Scale-up Scenario E (universal coverage)		
	2023–2032	2023–2042	2023–2052
Average cost per capita	187	315	403
Average cost per child under seven	3,209	5,406	6,927
Average annual cost per child 0–6 (inclusive)	320.9	270.3	230.9
Total cost per period	10,872,985	18,318,764	23,472,935

COST OF INACTION

The cost-of-inaction analysis illustrates that there will be significant economic costs for BD if the government does not improve child allowance programmes. The COI is calculated by determining the total additional economic benefit of the scale-up scenario (in comparison to the baseline), less the costs of the scale-up. Thus, the COI is able to contextualize the numbers used in the cost and benefit sections above, as it illustrates what the total economic benefit of the programme would be to BD's economy, less the costs of the programme. Table 28 displays the results from the COI analysis. Over 30 years, not implementing the child allowance scheme would cost BD over 69 million BAM. Failure to implement a programme with increased coverage, as modelled in Scenarios B and D, would cost BD 104 million BAM, meaning that the COI is even higher for these two scenarios. The additional cost of inaction when comparing the normal coverage scenarios to the high coverage scenarios is therefore almost 35 million BAM. Therefore, despite the additional costs of covering

more children in Scenario B and D, the economic benefits in terms of DALYs averted, stunting cases averted, and increased fiscal revenue outweigh these costs.

TABLE 28: ECONOMIC BENEFITS, COSTS AND THE COST OF INACTION FOR SCALE-UP SCENARIOS A–D, ACROSS DIFFERENT TIME HORIZONS.

	Scale-up Scenarios A & C (normal coverage)			Scale-up Scenarios B & D (high coverage)		
	2023–2032	2023–2042	2023–2052	2023–2032	2023–2042	2023–2052
Total Additional Economic Benefits	29,387,706	56,390,120	81,385,511	44,209,611	84,831,382	122,434,174
Total Additional Costs	5,661,781	9,538,947	12,222,828	8,492,672	14,308,421	18,334,241
Cost of Inaction	23,725,925	46,851,172	69,162,683	35,716,939	70,522,961	104,099,933

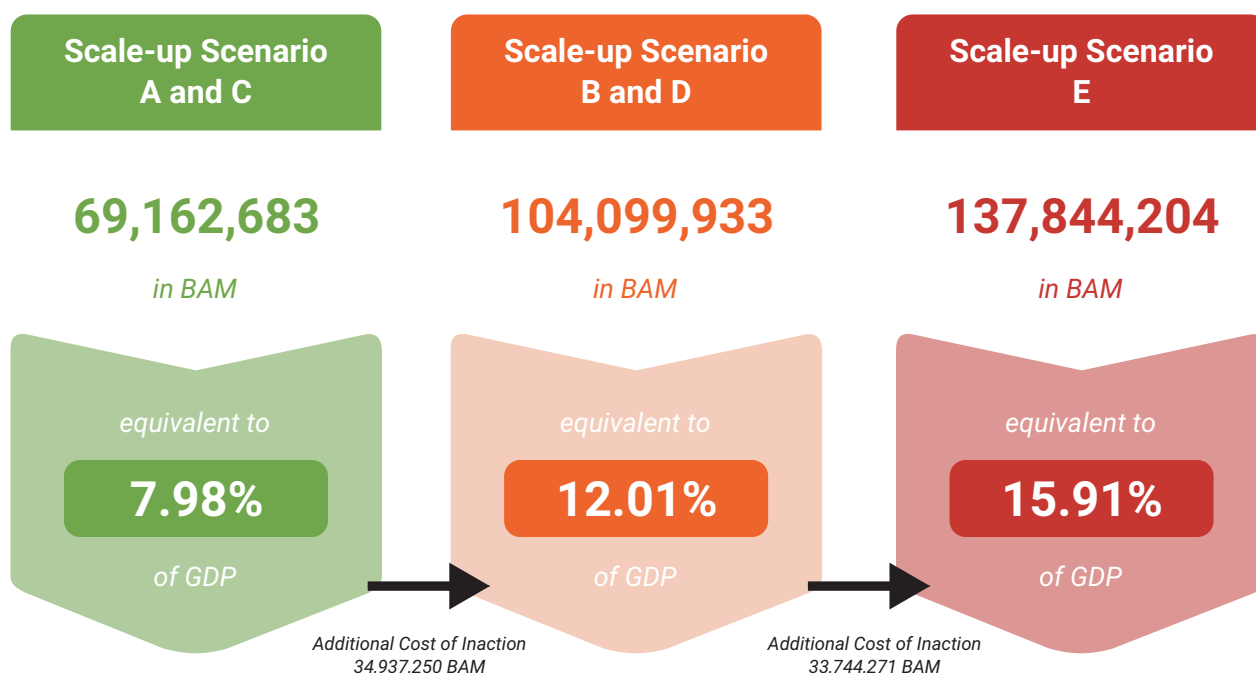
Despite the high costs of a universal child allowance, Table 29 illustrates that the COI is even higher. Over 30 years, not implementing a universal child allowance could cost BD nearly 138 million BAM. This is almost double the

amount that the BD economy would lose as a result of not implementing the Law on Child Protection. This provides strong rationale for advocating for a universal child allowance in BD.

TABLE 29: ECONOMIC BENEFITS, COSTS AND THE COST OF INACTION FOR SCENARIO E, ACROSS DIFFERENT TIME HORIZONS.

	Scale-up Scenario E (universal coverage)		
	2023 - 2032	2023 - 2042	2023 - 2052
Total Additional Economic Benefits	58,243,877	111,767,264	161,317,139
Total Additional Costs	10,872,985	18,318,764	23,472,935
Cost of Inaction	47,370,891	93,448,500	137,844,204

FIGURE 12: SUMMARY – COST OF INACTION 2022–2050 FOR SCALE-UP SCENARIOS A AND C, B AND D, AND E.



The cost of inaction rises for the increased coverage scenarios modelled in Scenarios B & D and Scenario E. In summary:

- For **Scale-up Scenarios A & C**, the cost of inaction in the shortest time horizon (up to 2032), sits at **23 million BAM** (equivalent to **2.65% of GDP** in 2020). This cost **rises** to **nearly 47 million BAM** when studied until 2042, and reaches **69 million BAM** by 2052 (equivalent to **7.98% of GDP** in BD in 2020).
- **Scale-up Scenarios B & D** reflected a **higher cost of inaction**. In the shortest time horizon, the COI stands at **35 million BAM** (equivalent to **4.04% of GDP** in 2020), rises to over **70 million BAM** by 2042 and, in the longest time horizon (to 2052), reaches over **104 million BAM** (equivalent to **12.01% of GDP** in 2020).
- **Scale-up Scenario E** reflected **even higher costs of inaction** than the previous scenarios. In the shortest time horizon, the cost of inaction sits at over **47 million BAM** (equivalent to **5.42% of GDP** in 2020), and this **rises** to over **93 million BAM** by 2042, reaching over **137 million BAM** (equivalent to **15.91% of GDP** in 2020) in the longest time horizon (to 2052).

BENEFIT-COST RATIO

Investment in improved child allowance programmes is projected to reap at least a threefold return over the short and long terms. BCRs compare the total additional monetary benefits of the cash transfer with the total additional costs, compared to the baseline scenario where no children in BD are covered by a sufficient child grant scheme. The ratios represent how many BAM are returned to the economy for every 1 BAM invested in the child allowance scheme. The BCRs are identical for scenarios A through D. For every **1 BAM invested** in child allowance, the **returns to BD economy in socio-economic benefits** amount to:

- **5.2 BAM** between 2023 and 2032,
- **5.9 BAM** between 2023 and 2042, and
- **6.7 BAM** between 2023 and 2052.

It is clear from these BCRs as well as the preceding analysis that an adequate child allowance is not simply an added expense for BD, but an investment in the improved health and productivity of its children.

TABLE 30: BENEFIT-COST RATIOS FOR CHILD ALLOWANCE UNDER SCALE-UP SCENARIOS A–D, ACROSS DIFFERENT TIME HORIZONS.

	Scale-up Scenarios A & C (normal coverage)			Scale-up Scenarios B & D (high coverage)		
	2023–2032	2023–2042	2023–2052	2023–2032	2023–2042	2023–2052
Benefit-Cost Ratio	5.2	5.9	6.7	5.2	5.9	6.7

Table 31 illustrates that marginally greater benefits can be obtained from the implementation of a universal child allowance.

To summarize, for every 1 BAM invested...

- Between 2023 and 2032, 5.4 BAM returned to the economy.
- Between 2023 and 2042, 6.1 BAM returned to the economy.
- Between 2023 and 2052, 6.9 BAM returned to the economy.

Therefore, there is not sufficient evidence that a universal child allowance would result in significantly different results from an allowance that is available to all families earning below 22.5% of the minimum wage in BD.

SUMMARY AND RECOMMENDATIONS

The case for improving child allowance in Brčko District is strong. Empirical evidence generated from this study proves that in both the short and long terms, the positive impacts of scaling up the coverage and size of uncondi-

tional cash transfers far outweigh the costs. Drawing on international and regional evidence, this study has found that improved child allowance models are associated with increased total household expenditure, improved anthropometric measures among children, increased school attendance, and increased usage of health services.²¹² Dominant discourse surrounding social protection measures must pivot, with child allowance not being seen as a form of consumption but as an investment. Indeed, this analysis suggests that the return on investment could be up to four times that invested across the study period, whilst the opportunity cost of not improving child allowance options could extend to a colossal 137 million BAM by 2052.

The non-monetary impacts on children of these measures should also not be understated. These options for improved unconditional cash transfer models have shown dramatic improvements in the realization of the rights of children, including the right to good health, quality education, and a life without poverty. This study has shown that with increased support to families and households with children, Brčko District can expect to see cases of stunting, as well as disability-adjusted life years lost, averted. Further, it was reported that these child allowance options could bring 1,500 children out of poverty and

TABELA 31: OMJER KORISTI I TROŠKOVA ZA DJEČIJI DOPLATAK U OKVIRU SCENARIJA E, U RAZLIČITIM PERIODIMA

	Scale-up Scenario E (universal coverage)		
	2023–2032	2023–2042	2023–2052
Benefit-Cost Ratio	5.4	6.1	6.9

212 Francesca Bastagli et al. (2016). Cash transfers: What does the evidence say? A rigorous review of programme impact and of the role of design and implementation features

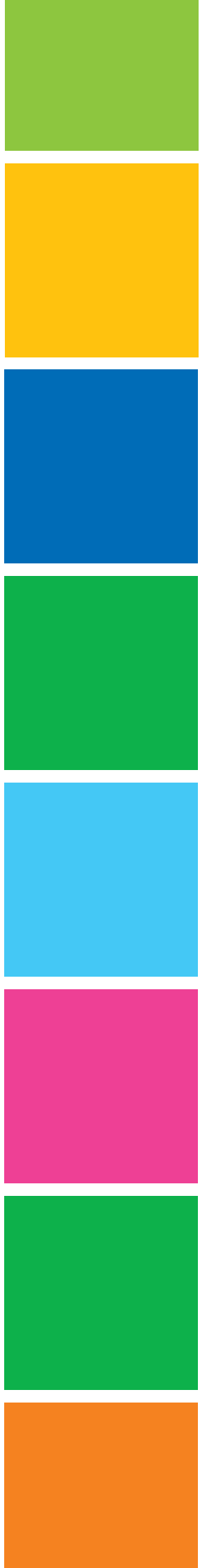
ensure that over 1,600 additional children will graduate from secondary school. It is important to remember that these statistics reflect the lived experience of real children in Brčko District. Each time a child is supported by these social protection measures, their chances to survive and thrive improve, and their basic rights are being upheld. The key findings are as follows:

- Improving child allowance cover could **avert almost 125 child deaths, 5,000 DALYs, and 1,775 stunting cases** over the next 30 years.
- An additional **840,000 children** could **complete primary school**, an additional **1,700** could **complete secondary school**, and an additional **102 million BAM** could be reaped **in lifetime earnings**. The improvement in schooling outcomes could result in up to **4,500 additional employed individuals**, lifting nearly **15,500 out of poverty over the next 30 years**.
- **Over the next 30 years**, the **monetized benefits** of an improved child allowance are equivalent to over **81 million BAM (9.35% of BD's GDP in 2020)** on the low end, and potentially up to **122 million (or 14.08% of GDP)**. These benefits would reach over **161 million (18% of GDP)** with a universal child allowance to all children aged 0 to 6.
- The **cost to BD's economy by 2052** of not improving coverage of their child allowance ranges from **69 million BAM** (equivalent to **7.98% of GDP** in BD in 2020) **to 104 million BAM** (equivalent to **12.01% of GDP** in 2020). By **2052**, the cost of inaction for a universal child allowance to all children aged 0 to 6 reaches **137 million BAM (or 15.91% of GDP)**.
- The **returns on investment for every 1 BAM** invested in child allowance range from being **5 to 7 times greater** than the costs, depending on the scale-up scenario and time horizon under study. Over the next 30 years, the expected **returns on investment** for every **1 BAM** invested in a universal child allowance to all children aged 0 to 6 sit at **6.9 BAM**.

At present, however, the social protection sector is struggling in the Brčko District. Whilst a child allowance programme does exist, there is still a long way to go to recognize the benefits modelled in this study. In order to achieve these impressive results and mobilize for scaling up coverage of social protection, a number of recommendations have been developed. These recommendations are provided in detail in Section 5; however, some of the most significant of these include:

- **Optimize the use of public budgets for human capital development:** Expenditure in social protection remains low in comparison to international benchmarks and, concerningly, only a small proportion of it is channelled towards children and vulnerable groups. Although, promisingly, in BD a large percentage of the budget Sub-Department of Social Protection is allocated to children's allowance, when translated into GDP percentage, the expenditure remains insufficient for the upliftment and support of children and families. A child-focused public expenditure review (PER) would help to better decipher the complicated system of public financing for children and uncover the status of spending on children. With the data which are currently available, it is clear that the benefits of public spending are not focused on children, or equitably felt between them.
- **Strengthen and harmonize policy and legal structures:** There is a need to ensure that the most vulnerable families have better access to social protection services, which entails that social workers be adequately skilled to assess cases brought before them, and that they be equipped to advise on the best course of action for any given case.
- **Support data and information collection, management and dissemination:** Further, data limitations were a significant concern in the modelling of social protection interventions. Despite a commitment to more regular household budgetary surveys, the most recent data available from Household Budget and Expenditure Survey took place in 2015. A new round of HBS in BiH has been conducted in 2020, however, as of April 2023 the data has not yet been made available to the public. This implies that the results will not reflect the most recent situation in BiH, as the HBS was carried out prior to the impact of the COVID-19, inflation, and economic crises. The lack of census data also makes it difficult to determine the size of the population in need, thus making it almost impossible to determine levels of child poverty and to accurately target social transfers.

The econometric evidence generated from this study, therefore, must serve as the basis for progressive policy-making, strategic planning, and the advancement of the agenda on the rights of young children in BD. More detailed recommendations for how to achieve this can be found in Section 5: Conclusions and Recommendations.



**CONCLUSION
AND
RECOMMENDATIONS**

Investing in young children is, first and foremost, a moral decision. Under the Convention of the Rights of the Child (CRC) 1989, every child has basic and inalienable rights. Amongst the 54 articles of the CRC, a child's right to life, to survival and development, to health and health services, to an adequate standard of living, and to education are enshrined. The task of realizing these rights for every child begins in the first years of a child's life. At this stage in the life course, comprehensive interventions from across the *Nurturing Care Framework* form the foundation of a child's ability to survive, thrive, and realize these basic rights.

Beyond this moral imperative, the evidence supporting investments in young children is resounding and unequivocal. Academic research tells us that high quality ECD programmes promote healthy development, reduce adversity in childhood, and cultivate an environment of nurturing care. Interventions targeting children under the age of six are amongst the most effective of any available in human capital development, with impacts felt across the life course. As foundational years in a child's life, investments here will obviate the need for more costly expenditure in the long term and promote sustainable economic growth and development. In education, for example, access to high-quality ECE is associated with improved learning outcomes and students staying longer in school, thus reducing the need for remedial learning programmes and improving prospects for lifetime earnings.

In the context of Brčko District, the impetus to invest is more urgent than ever. With a rapidly ageing and shrinking population, the window of opportunity to invest in young children dims every year. Investments in ECD offer the best hope for catalyzing socio-economic transformation and rejuvenation. Further, improving access to ECD services is also linked to other important opportunities for BiH. Accession to the European Union, for example, is reliant on the improvement of the experiences of vulnerable groups, as well as the development of social sector services, such as ECEC. Combined, there is a monumental case for exploring investments in ECD.

This study has provided sound empirical evidence that supports the case for investment. Aligning with the SDG Financing Framework in BiH²¹³, this study seeks to mobilize investment for ECD amongst government, private sector, and external stakeholders. In line with findings from the international literature, scaling up multi-sectoral ECD interventions were found to be cost-effective and to have strong benefit-cost ratios in the long term. To reiterate some of the headline figures:

- Scaling up essential **health and nutrition services** targeted at young children could generate a **return on investment** of up to **three times** by 2052. This means for every 1 BAM invested, 3 BAM would be returned in socio-economic benefits. Meanwhile, the **cost of inaction** could be reach up to **3.9 million BAM** by 2052.
- If access to **ECEC** services were expanded, **female labour force participation** rates would be expected to **rise by 0.5 percentage points**, and each child would be expected to benefit from up to **1 additional year of education**. When compared to costs, investments would be expected to yield nearly a **sixfold return** in socio-economic benefits during the study period. **Failing** to scale up could **cost** Brčko District a catastrophic **608 million BAM** by 2052.
- Improving the coverage of the **child allowance** would drive down **poverty** and **inequality**, whilst also having indirect effects on **stunting** and completion of **schooling**. Over the time horizon, the **monetized benefits** are expected to be nearly **seven times** the **costs** of the transfer. This translates into a **cost of inaction** amounting to over **137 million BAM** by 2052.

Brčko District is, therefore, presented with a hugely significant decision – whether to invest in its young children or whether to maintain the status quo. This study presents the most solid evidence collated to date to justify investment in ECEC in BiH. When allied to the rapidly shrinking and aging population, both the time and rationale are ripe for reform. This economic and financial argument should not eclipse the strong social and moral one for improving ECD. Whilst every child has the right to survive and thrive, these rights are not being universally realized in Brčko District. Access to high-quality programmes is often inequitable, along parameters of intersectionality (including income, disability, ethnicity, and geographical location). A social justice approach to ECD is foundational, if a bright and cohesive future for Brčko District is to be fostered. Pristup socijalne pravde za RRD je temelj za njegovanje svijetle i kohezivne budućnosti Brčko distrikta.

213 Joint SDG Fund (2021). *SDG Financing Framework (SDG-FF) in Bosnia and Herzegovina: From SDG Financing Context to the Conceptual Proposal*. (Sarajevo, BiH: United Nations Bosnia and Herzegovina)

RECOMMENDATIONS

Capitalizing on these opportunities will require intensive, coordinated efforts. A strong enabling environment must be built to facilitate access to high-quality ECD for all, which will be underpinned by robust social sector services. Based on the analysis feeding into this report, a set of policy recommendations has been developed to guide efforts and maximize the potential for success. These recommendations are outlined below, with practical actions and examples being used for illustration.

Recommendation 1: Strengthen and harmonize policy and legal structures. There are challenges in the legislative landscape for ECD in Brčko District. Weak implementation and gaps in overarching policies have contributed towards poor outcomes for young children, such as low rates of exclusive breastfeeding. Policies must be made more robust to facilitate a strong enabling environment for Nurturing Care and to better harmonize with the SDG agenda and EU priorities.

- Sub-recommendation 1: Enforce the harmonization and implementation of existing policies.** It is critical that stakeholders enforce the standards and guidelines set at BiH and district level. Without even implementation of these guidelines, it is difficult to assess whether these policies actually work, either in single settings or universally. For example, even though Brčko District has almost universal ECEC coverage for the obligatory programme prior to school entry, this programme only lasts for 150 hours, which is far from the 2021 goal set in the Platform: at least three hours a day for the entire pedagogical year. Brčko District is in the process of preparing the new Law for Preschool Education and Care, which should be oriented towards prescribing longer obligatory programmes. For further evidence-based budgetary planning, BD authorities can use the UNICEF tool for a cost estimate of the increase of number of hours.
- Sub-recommendation 2: A few legal and policy gaps remain, hindering early childhood development.** Specifically, better regulatory policies are required to support better infant and childhood nutrition. For example, regulation is needed to inhibit aggressive advertising of breast-milk alternatives, which have been found to reduce the rates of predominant and exclusive breastfeeding. Rates of exclusive breastfeeding up to 6 months are concerningly low in Brčko District currently, sitting at just 18.5%
- Further, the Framework Law on Preschool Education should be revised. In present form, it has been subject to diverse interpretation and has failed to institutionalize mandatory ECEC. Over time, it should be extended to ensure universal access for children between 3 and 6 years, and to mandate coverage of ECEC programmes of longer duration (at least 600 hours), for which the impact on child development has been proven. While the implementation of the BD Law on Child Protection in 2018 is already a significant achievement in terms of reaching vulnerable children, the child allowance should also be expanded to cover more children and to provide a more generous cash transfer. This ought to be done with the ultimate aim of creating a universal child allowance within BD, as the evidence in this report indicates that the benefits of a universal child allowance will outweigh the costs by almost seven times. The potential returns on investment of implementing these policies are all significant.
- Sub-recommendation 3: One of the key drivers behind poor implementation outcomes is a lack of human capital capacities and infrastructure across the ECD sectors.** In social protection particularly, there is a need to focus more on equal access to social protection services. This includes ensuring knowledge about the available policies and social welfare interventions, having trained and available staff to manage cases, and maintaining equity in access across different geographies. Moreover, this requires that the social workers be adequately skilled to assess cases brought before them, and that they be equipped to advise on the best course of action for any given case.

Recommendation 2: Optimize the use of public budgets for human capital development.

The strong socio-economic benefits of improving services for young children make it a prime area for public investment. Public finances must be mobilized to meet the increased demands for resources outlined in this study. Child-friendly financing will require a number of activities to be undertaken, including:

- **Sub-recommendation 1: Analyze trends in public expenditure on ECD.** A child-focused public expenditure review (PER) would help to better decipher the system of public financing for children, and to uncover the status of spending on children. With the data currently available, it is clear that the benefits of public spending are not focused on children, or equitably felt between them. For understandable historical reasons, social protection targets war veterans and the elderly to a far greater degree than children. Meanwhile, in education, a PER would provide better evidence on the targeting of public support to preschools and, importantly, on which groups are benefitting from this support. District expenditure on ECD should be monitored and allocations adjusted so that children can reap greater benefits from public expenditure.
- **Sub-recommendation 2: Undertake a fiscal space analysis.**²¹⁴ Currently, under-investment in the sectors most relevant to ECD (health, education, and social protection) is a challenge. In education, for example, expenditure on education as a proportion of GDP is below international benchmarks. Further, of particular concern, public budgets for these sectors are not oriented towards young children. To understand the feasibility of investing in ECD, the potential financing gap based on the cost estimates of this study, and which actors (government, private etc.) at which level are responsible for financing, a deep analysis of fiscal space is required. This type of evidence would help to identify potential areas to increase budgetary room for spending on ECD services (including through taxation, overseas development aid, or debt). It could be conducted by a government agency or facilitated by a development partner, such as UNICEF.

- **Sub-recommendation 3: Maximize the allocative efficiency in the use of public budgets by reallocating financing towards young children and protecting expenditure on children from budget cuts.** Despite the ageing demographic, investments must be channeled towards services for children – as they are the best hope for long-term development. However, currently, the proportion of public budgets spent on the social sectors in BiH is below international targets and regional averages. In education, for example, it is estimated that only a small fraction of the already low education budgets is being spent on ECEC. This study has found that the costs of scaling up critical ECD services (such as a universal child benefit) are demanding; therefore, it will be important to utilize public funds strategically, effectively and efficiently. On the basis of the PER and fiscal space analysis for ECD, public budgets should be reoriented towards investments in the social sectors. Further, social sector budgets themselves should also be optimized towards benefitting young children where the returns on investment are likely to be greatest. In practice, this might mean developing specific budget lines or programmes within sectoral budgets that are targeted at young children (e.g., for ECEC). It may also involve moving public funds from the provision of primary and secondary education (which has declining demand owing to falling child populations) towards pre-primary level, for example. In the health sector, a tangible example of these changes would be the revision of budgets to include budget lines related to demand generation for immunization and nutrition promotion programmes.
- **Sub-recommendation 3.1: Establish child-friendly budgeting.** Building upon the Public Finance Management Reform Strategy in Brčko District of BiH for the period 2021–2025, and on the evidence from the fiscal space analysis as well as the evidence generated in this report, Brčko District can create a multi-year financing plan for children with a range of financing options, including potential regional support from the EU, public-private partnerships, and earmarked tax. Moreover, in order to implement child-friendly budgeting, Brčko District would need to introduce new tools for budget classification and coding for children, as well as shift towards programme-based budgeting. Specific indicators to assess and monitor allocations for children would be needed, in addition to strategic budget lines which are prioritized and protected in times of crisis. Child-friendly budgeting will better allow the key decision-makers in Brčko District to monitor, prioritize, and increase budgetary allocations for children and protect the sector from budget cuts.

²¹⁴ A recent fiscal space analysis for the social sectors (particularly ECD) was undertaken by the UNICEF Rwanda Country Office in 2022. It provides a good example of how such forms of analysis can be used to understand the financing gap, and potential avenues for investment, in the social sectors. UNICEF Rwanda (2022). Fiscal Space Analysis for Social Sectors in Rwanda, (UNICEF: Kigali, Rwanda)

- **Sub-recommendation 4: Prioritize investment by cost-effectiveness and impact.** Firstly, gather robust evidence about the impact of publicly funded interventions over a number of years. Then, prioritize investments in services which will have the highest social and/or economic returns or with the biggest gaps. The financial resources required to scale up ECD services are extensive and, in the short term, stakeholders should work to prioritize and focus on the interventions that might reap the greatest returns. In the health sector, one such quick win would be to make amendments to the vaccination calendar. Brčko District might also consider adopting on a Children's Fund model, similar to that in the Republika Srpska, which combines contributions at a rate of 1.7% from salaries, as well as any shortfall in funding coming directly from the budget. This model would allow Brčko District to remove some of the burden of paying for an enhanced-coverage child allowance, while still having a high-impact social protection intervention focused on children.
- **Sub-recommendation 5: Maximize technical efficiency in the provision of services, by looking for ways to reduce costs in the provision of services, without jeopardizing quality.** Concrete examples of activities that could take place include integrating service provision, strengthening public financial management (PFM) systems to improve budget execution, strengthening monitoring and internal control functions, or carrying out public expenditure reviews in the social sectors. Governments should also use opportunities from demographic trends to facilitate efficiency. For example, as child populations decline, repurposing primary school classrooms may reduce the capital costs of scaling up ECEC. Meanwhile, in the health sector, early childhood detection and interventions for children with developmental delays should be integrated into regular primary healthcare services. This would reduce costs and ensure better efficiency and access.
- **Sub-recommendation 1: Set up a District-wide ECD Working Group with stakeholders in the public and private sector.** Their aim would be to smooth collaboration between private and public engagement in ECD, motivating action in the space as well as providing a space for consultation. This Working Group would be tasked with providing input into policy, encouraging better consultation and collaboration between private and public actors, and identifying challenges or concerns. This will be of particular relevance for ECEC; however, facilitating closer dialogues between public and private sectors may also be of use in the health sector. The agenda for improving childhood nutrition, for example, will rely on close collaboration with private sector providers of breastmilk substitutes, as well as complementary foods for young children.
- **Sub-recommendation 2: Expand the scope of policies designed to encourage public and private engagement in ECEC.** Demand for ECEC is high and, currently, far outstripping the ability of the public sector to provide. On a positive note, public finances for ECEC are being used to support the provision of the ECEC services in private facilities. However, the size of this subsidy is small and, for parents/caregivers on low incomes or those who do not understand the value of ECEC, this may constitute a barrier to enrollment. The size of the subsidy to parents/caregivers with children enrolled in private institutions should be increased. Other options to stimulate enlarged private provision could also be considered, such as: (i) providing direct grants to private ECEC facilities to expand and increase accessibility; (ii) reducing tax rates for private ECEC providers; and (iii) providing non-monetary support to private facilities, such as making public spaces available for use as an ECEC centre. The legal feasibility of public-private partnerships should be closely considered when planning this collaboration.

Recommendation 3: Develop strong partnerships with the private sector. Achieving ambitious targets to scale up ECD services will require close collaboration with the private sector. Businesses are already an important part of the ECD landscape in Brčko District, particularly in the provision of ECEC. In order to mobilize the financial, infrastructural, and human resources required to make access to ECD universal, mutually beneficial public-private partnerships must be cultivated.

215 UNICEF. (2020). *Strategija socijalnog uključivanja Republike Srpske za period 2021 - 2027.*

- **Sub-recommendation 3: Create a multi-year operational and financial plan for children to support the link between policy and implementation.** A critical link between policy and implementation will be the creation of operational plans for ECD for the district. These plans should specify targets and activities, time horizons, and the roles and responsibilities of different stakeholders (private and public), and at different levels. Importantly, this multi-year plan should have a strong focus on financing, with plans in place to facilitate adequate financial resources (from both the public and private sectors) being made available for plans to be implemented. A range of financing options should be considered in these plans to maximize the speed of the scale up, including innovative financing options (such as blended financing²¹⁶ or results-based financing²¹⁷).

Recommendation 4: Regulate and monitor quality standards in ECD services. Whilst access to many ECD services is fairly widespread, quality remains a critical concern. In the health sector, this has contributed towards hesitancy in the uptake of essential services, whilst in the provision of ECEC there is a lack of oversight and enforcement of standards or regulations. Quality must be a focus for ECD stakeholders to ensure that the full benefits of scaling up coverage are realized. In ECEC, for example, evidence shows that low-quality service provision will not result in the positive impacts on child development modelled in this study.²¹⁸

- **Sub-recommendation 1: The bodies that are monitoring and regulating service provision need to be strengthened.** In ECEC, the Pedagogical Institution in Brčko District must be strengthened to support routine spot checks and comprehensive inspections to ensure quality and adherence to standards in public and private facilities. Further, evaluation and assessment systems in ECEC need to be established. This refers to the appraisal of the work of preschool teachers (including through self-assessment), preschool institutions' self-evaluation, and evaluation on the system level to ensure quality.

- **Sub-recommendation 2: Monitoring services need to link closely with practical support to improve quality.** In ECEC, for example, below-average evaluation and assessment scores should be routinely linked to the Brčko District Department of Education and Pedagogical Institution, which should be able to deliver direct and implementable support to ensure a swift return to minimum standards. This additional level means that underperformance is matched with differentiated support.

Recommendation 5: Mainstream equity and inclusivity. For the rights of all children to be equitably realized, responsive and intentional policy-making must recognize the differences between children and cater to them accordingly. For young children, inequalities have manifested in the form of significant variation in access to the quality services needed (especially for Roma children, children from low-income and/or rural backgrounds, and CWD). Analyzing trends in coverage data, it is clear that equity considerations need to be put at the heart of future decision-making. Policies must address the supply and demand side in order to ensure that all children have access to the services they need to survive and thrive.

- **Sub-recommendation 1: Policy and programme design for young children must be inclusive and focus on reaching the furthest behind first.** In ECEC, for example, public funding should be used to target children who are vulnerable to exclusion or who have additional needs. In practical terms, on the demand side, this might include providing fee exemptions to children from rural areas, children from low income or Roma backgrounds, refugee/migrant children, or CWD. Additional support to overcome access barriers might also be deployed, including providing transportation, as well as information campaigns to sensitize communities on the value of ECEC. On the supply side, this could involve additional subsidies given to preschools to support them in inclusive education. This would be aimed at incentivizing the provision of high-quality services and focusing of public funding on areas with lower enrolment or attendance.

216 Blended financing refers to a combination of ODA with public and private resources, generally with the aim of mobilizing development finance from different sources.

217 Results-based financing refers to any program or intervention that provides rewards to individuals or institutions after agreed-upon results are achieved and verified.

218 K. Sylva, E. Melhuish, P. Sammons, I. Siraj-Blatchford and B. Taggart (2011). 'Pre-school quality and educational outcomes at age 11: Low quality has little benefit', *Journal of Early Childhood Research*, 9:2, pp. 109–124

- **Sub-recommendation 2: Stakeholders must strongly advocate and make the economic and rights-based case for the need to tackle inequities in early childhood.** Strategically targeting financing towards the gaps in ECD will have an impressive rate of return. Extending social protection interventions to cover more vulnerable children, for example, has the potential return on investment of almost four times that spent 2052. It will not be enough to rely on these economic arguments to stimulate support for inclusive programming and policy. In some cases, policies designed to tackle inequities can be expensive and appear to have lower returns. The argument for their implementation must instead be made on the basis of rights and social justice. For instance, our analysis indicates that the existing child allowance has already reduced inequality amongst residents of Brčko District. Therefore, expanding the coverage and adequacy of the child allowance can be advocated for on the basis of equity. Here, stakeholders should take advantage of opportunities presented by BiH's bid for accession to the EU, with the European Commission ruling that BiH must improve its record in assuring child rights and the protection of vulnerable groups.
- **Sub-recommendation 3: The financing architecture underpinning the provision of ECD services must be reconsidered** – Out-of-pocket (OOP) payments (formal and informal) need to be eliminated to reduce barriers to access for core ECD interventions. Financing of ECD services in Brčko District is often regressive, putting more pressure on poorer and more vulnerable households. ECEC services, for example, have high OOP payment requirements for enrolment, meaning that only those children from households with parents/caregivers in employment are likely to attend. These household contributions represent a barrier for more vulnerable children to access the care they need, thus embedding inter-generational poverty and inequity. Public finance must be used to support a more progressive financing system, and OOP spending must slowly be reduced and eliminated, especially for poorer and more vulnerable groups.

Recommendation 6: Support data and information collection, management and dissemination. Chronic data scarcity threatens progress in the ECD sector. Comprehensive data on the coverage of core ECD interventions has not been collected and disseminated since the MICS 2011/12 study, which makes it exceptionally difficult to understand the status of young children (and has been a limitation for this study). For the impressive benefits of ECD to be reaped in BD, a positive enabling environment must be developed. Data and evidence are a core component of functioning ECD systems. Without reliable, high-quality, and up-to-date information, it is difficult (if not impossible) for policy-makers to engage in strategic planning, costing, implementation, and monitoring of services for young children. Implementing practical reforms to the data systems related to ECD will be critical to ensuring rapid progress can be made towards improving service coverage.

- **Sub-recommendation 1: Government stakeholders from Brčko District should set up an ECD Data Working Group, tasked with improving data systems for ECD.** Clear lines of reporting must be set up to prevent duplication in data collection and management. Roles and responsibilities for data collection related to ECD should be determined, with clear parameters and mandates given to stakeholders at all levels. These roles should be standardized across the country in order to facilitate clarity, simplicity and accountability in data collection systems.
- **Sub-recommendation 2: Data related to a common list of ECD indicators must be routinely collected.** Stakeholders in the ECD Data Working Group must commit to routinely collecting information on a set of multi-sectoral ECD interventions. These data would relate to the coverage and quality of essential health and nutrition services as evidence on enrolment and attendance at ECEC, as well as information related to multi-dimensional child poverty. Stakeholders should have a schedule for the collection of these data (annual or biannual) and should upload this data on a central digital database that is open and accessible.

- **Sub-recommendation 3: A central, digitized, open-access database should be developed to facilitate monitoring and evaluation.** Data systems must be streamlined to improve quality and efficiency. The digitization of data systems would improve data sharing, management and dissemination. Stakeholders must develop a simple, central database where users are able to upload data collected or review reports. This would reduce inefficiencies, prevent duplication, and enable far greater accountability and monitoring within the sector.
 - **Sub-recommendation 4: A government body at the District level should be given clear responsibilities in data governance for ECD.** Their role would include ensuring that lines of reporting are set up, that data collection standards are enforced, and that requirements are upheld in terms of collection and dissemination. Their role would also be to manage the central data warehouse for ECD, ensuring that government stakeholders are equipped to report using this tool, and that access to the public is open and transparent. An annual report on indicators related to ECD, and service coverage, could be produced to help track progress.
 - **Sub-recommendation 5: Brčko District should look to undertake a new Multiple Indicator Cluster Survey (MICS) as soon as possible to improve the accuracy of data for strategic planning in the ECD sector.**
 - **Sub-recommendation 6: Create an enabling environment for the digital transformation of the public sector.** This requires the setup of a Management Information System (MIS) for social sectors, for cross-referenced and integrated data management, as well as for digitizing information that currently exists in hard copy. This also requires more funding to be channeled towards the creation of this digital infrastructure and the reskilling of social protection workers to be able to use the system efficiently and effectively. Further, an education management information system (EMIS) should be put in place for preschool education. In the longer term, this investment is likely to pay off by improving the ability to target vulnerable households, providing oversight of the entire social protection system, and improving linkages and coordination between separate bodies.
- Recommendation 7: Mobilize community action and draw on innovative local solutions.** Changing legislation, reprioritizing public financing, and strengthening systems can be slow processes. Impeded by dense bureaucratic structures, especially in such a complicated political landscape as BiH, the types of policy change recommended here may not be feasible in the short term. However, as outlined in this report, investments in ECD must start now if their full benefits are to be reaped. For this reason, a hybrid approach must be taken in which the rights-based argument must be combined with robust evidence on the return on investment, as well as stakeholder mobilization demanding quality services at local and community levels.
- **Sub-recommendation 1: Development partners should provide funding to grass-roots organizations or municipal/city governments that are innovating in the ECD sector.** Grants, for example, might be given to support the trialing of community-based ECEC programmes, or the redevelopment of spaces for ECEC classrooms for children from rural areas.
 - **Sub-recommendation 2: Stimulate grass-roots campaigns to demand quality services,** including breastfeeding support or setting up preschools where none currently exist. Demand generation will be an important component of facilitating the kind of rapid scale-up in the coverage of core ECD interventions modelled in this study. Local community engagement will be required to change attitudes and encourage the uptake of interventions. This is particularly important in areas such as healthy infant and childhood nutrition and ECEC enrollment. Information campaigns about early childhood development screenings and interventions before the age of three should be of particular focus. Further in ECEC, local communities might engage through running local campaigns, raising funds for new preschool facilities, or setting up services that remove barriers to access (such as pooled transportation for young children to preschools).
 - **Sub-recommendation 3: Lesson learning and sharing of experiences across BiH should be encouraged.** This could be achieved through the ECD Working Group or by publishing the results of initiatives online.

TABLE 32: RECOMMENDATIONS SUMMARY TABLE

ECD Recommendation	ECD Sub-Recommendation	Priority Level ²¹⁹	Time Horizon ²²⁰
Strengthen and harmonize policy and legal structures	Enforce and harmonize existing legislation and policies.		
	Close any remaining legislative gaps.		
	Support human capital capacities and infrastructure to implement legislation and policies.		
Optimize the use of public budgets for human capital development	Analyze trends in public expenditure on ECD.		
	Undertake a fiscal space analysis.		
	Maximize the allocative efficiency in the use of public budgets by reallocating financing towards young children and protecting expenditure on children from budget cuts.		
	Prioritize public investment by (cost-)effectiveness.		
	Maximize technical efficiency in the provision of services, by looking for ways to reduce costs in the provision of services, without jeopardizing quality.		
Develop strong partnerships with the private sector.	Set up a District ECD Working Group.		
	Expand the scope of policies designed to encourage public and private engagement in ECEC.		
	Create a multi-year operational and financial plan for children to support the link between policy and implementation.		
Regulate and monitor quality standards of ECD services	Bodies that monitor and regulate service provision need to be strengthened.		
	Monitoring services need to link closely with practical support to improve quality.		
Mainstream equity and inclusion	Policy and programme design for young children must be inclusive.		
	Stakeholders must strongly advocate and make the economic and rights-based case for the need to tackle inequities in early childhood.		
	The financing architecture underpinning the provision of ECD services must be reconsidered.		

219 Darker shades refer to higher priority levels.

220 Darker shades refer to longer time horizons.

Preporuka za RRD	Potpreporuka za RRD	Nivo prioriteta	Vremenski horizont
Support data and information collection, management and dissemination	Government stakeholders should set up an ECD Data Working Group, tasked with improving data systems for ECD.		
	Data related to a common list of ECD indicators must be routinely collected.		
	A central, digitized, open-access database should be developed to facilitate monitoring and evaluation.		
	A government body should be given clear responsibilities in data governance for ECD.		
	BD should look to undertake a new Multiple Indicator Cluster Survey (MICS) as soon as possible to improve the accuracy of data for strategic planning in the ECD sector.		
	Create an enabling environment for the digital transformation of the public sector.		
Mobilize community action and draw on innovative local solutions	Development partners should provide funding to grass-roots organizations or local governments that are innovating in the ECD sector.		
	Stimulate grass-roots campaigns to demand quality services.		
	Lesson learning and sharing of experiences across BiH should be encouraged.		

