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Roadmapping New Impact Bonds in a Post-COVID World: Insights from Case Studies in the Education Sector

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Abstract: In the last year, COVID-19 has tested both advanced and developing economies. Within such a context, the global learning crisis is expected to increase due to difficulties in accessing technology or in receiving learning support. Such a huge need, globally identified with the Sustainable Development Goal number 4 (hereafter SDG 4), implies the need for large-scale solutions from governments around the world, especially in terms of dedicated financial resources. In this context, the impact-investing sector offers an innovative financial tool, i.e., impact bonds (IBs), which are widely applied in the education sector, even if their limitations and potentials remain unexplored in academia. Based on these considerations, our work explores whether and how IBs can contribute to funding and improving educational outcomes, with a focus on their potentials in the post-COVID world. This study adopts a qualitative approach by performing a case study analysis of four IBs. Our pilot analysis is based on the following key dimensions: (i) partnerships and contractual arrangements; (ii) financial terms; and (iii) measurement and impact. The results offer interesting insights by deriving a preliminary model on the role of IBs in the post-COVID-19 world.

Keywords: COVID-19; education; SDG 4; social impact bond(s); impact bond design

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1. Introduction

The need to eradicate illiteracy and improve education outcomes in the world has attracted the attention of many governments and international organizations. Since 2015, education has been represented as the 4th of 17 Sustainable Development Goals (SDGs), declared in the 2030 agenda [1]. Actions identified for achieving these goals span over different segments, from access to education to higher education, and over different regions mainly concentrated in developing countries [2]. Such global educational goals have been grouped under the following expression: "[To] ensure inclusive and equitable quality education and promote lifelong learning opportunities for all". This, of course, defines SDG n. 4 [3]. Global needs in the education sector include free primary and secondary education; equal access to quality pre-primary education; affordable technical, vocational, and higher education; increased number of people with relevant skills for financial success; elimination of all discrimination in education; universal literacy and numeracy; and education for sustainable development and global citizenship. In this context, the lack of adequate finance has been recognized as the most significant obstacles to achieving the education for all goals indicated in SDG n. 4 [4]. According to a recent report of the United Nations Educational, Scientific and Cultural Organization (UNESCO) [5], to meet the SDGs for education, the total spending on education will need to grow by USD 280 million per year through 2030. These needs have been further exacerbated by the COVID-19 pandemic, which has severely impacted the entire global education sector [6]. Specifically, it has been estimated that the divide among low-income countries, and the middle- and high-income countries, are expected to increase due to difficulties in accessing technology or in receiving learning support [7]. All of these emerging challenges call for more funding than previously estimated. For these reasons, the efforts in the fighting against the global learning crisis

imply the need for new and unexplored large-scale solutions from governments around the world [8] that face growing budget restrictions. Within such a context, the competing demand for public funds from other priority sectors, such as health care or other forms of welfare, has compelled governments to explore alternative and innovative methods to finance education outcomes, such as impact bonds (IBs) [8]. Based on impact investing architectures, IBs have been depicted as one of the most innovative business models for sustainability in finance [9]. In this context, IBs represent a recent solution for governments and organizations to achieve better learning outcomes, in accordance with the SDG 4 [10]. However, few academic works have focused on IBs and education [11].

Moving from these considerations, the objects of our investigation concern the application of IBs in the education sector by focusing on their potential for future applications in a post-COVID world. By performing a qualitative analysis, this study explores (i) the potentials and limitations of IBs in the improvement of outcomes in education; (ii) whether and how IBs can bridge the gap in the funding of SDG 4; (iii) the potentials of IBs in contributing and financing solutions suitable to reducing the negative impacts, in the education sector, of the spread of COVID-19. To achieve these aims, the paper is organized as follows. Section 2 provides an overview of innovative financing methods in the education sector, with particular attention to the applications of IBs. Section 3 describes the approach and method adopted for the analysis. In Section 4, case studies are presented while Section 5 discusses findings. In Section 6, conclusions are drawn.

2. Innovative Financing in the Education Sector: An Overview

Traditionally, government institutions have funded universal education spending. However, there is still a lack of resources to meet the growing needs for education. The huge financing gap demands a growing role for private capital to support the growth and innovation in education. Given that the current spending for SDG n. 4 has been estimated at USD 132 million, in order to meet the shortfall in the financing of education goals, public resources should grow by one-third, especially in low- and middle-income countries. More recently, the negative impacts produced by the pandemic in the education sector have expanded the magnitude of the issue concerning the financial gap. To provide a dimension of the magnitude of the challenge, as exacerbated by the pandemic, 307 million children are out of school worldwide due to school closures in 188 countries. The large part of them (i.e., 128 million) are students of primary schools located in developing countries [12] where access to education is lacking or, if obtained, offers poor learning outcomes and weak educational infrastructure [13]. COVID-19 has added a double challenge to the financial resources needed for achieving SDG 4. First, the closure of schools and libraries has further worsened the learning gap that existed before the pandemic [14]. Second, it will bring out new forms of education needs, such as digital inequalities [14] or social emotional well-being of students [15], which will continue to widen the learning gap, threatening the achievement of SDG 4. According to UNESCO [16], some 24 million students are at risk of never returning to school because of COVID-19. Table 1 lists new forms of vulnerability in the education sector caused by COVID-19.

Table 1. New forms of vulnerability caused by COVID-19.

Emerging Forms of Vulnerability in Education Sector
Digital inequalities
Social emotional well-being
Must generate income
Early and forced marriages
Unwanted pregnancies

Source: Authors' elaboration from [14–16].

In the recent past, the involvement of private capital in the education sector increased and new innovative financing methods involving private investors were introduced [17]. The large part of such innovative financial instruments belong to the impact investing

sector, an innovative financial approach that focuses on both social and financial returns of an investment. According to the Global Impact Investing Network (GIIN) [18], impact assets in education include USD 1257 million and a growth in the next future in both developed and developing markets has been estimated.

Within the impact investing field, IBs represent the most debated instruments [19], and the worldwide applications of such innovative financial tools include the education sector [20]. Briefly, IBs represent a partnership between a commissioner (usually represented from a public body), a service provider, and impact investors to achieve a predetermined outcome. Private investors provide the upfront investment and the commissioner remunerates the investors with a fixed return beyond the initial investments, as long as the intervention achieves the expected outcome [21].

Differently from traditional policy interventions funding schemes, in a IB structure, the financial risk deriving from a non-performant intervention of the program is owned by the investors and not by the commissioner [22]. The IB model is represented in Figure 1.

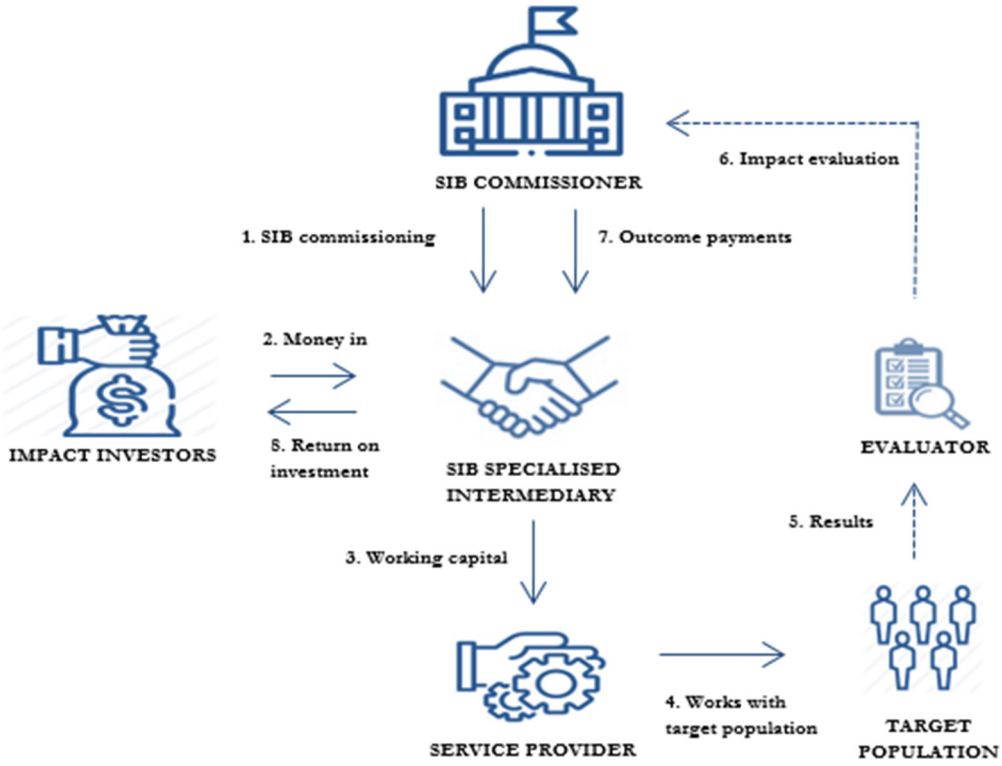

Figure 1. The IB model [10].

As far as it is possible to observe, the first step of an IB adoption begins when the commissioner identifies a social need to be met and enters into a contract with the specialized intermediary. The intermediary receives the money from the investors and disburses it to the service provider, who then delivers the intervention to the beneficiaries involved in the program. The independent evaluator reviews the outcome of the program and reports to the commissioner that, in a successful case, disburses the invested capital plus remuneration to the investors.

The Global IB Market

As of August 2020, 194 IBs had been launched in several countries worldwide (Table 2). Of these, 181 are Social Impact Bonds (SIBs) and 13 are Development Impact Bonds (DIBs). The country with the highest number of IBs launched worldwide is the United Kingdom (81), followed by the United States (27). In Europe, the countries with the highest number of IBs are Portugal (13) and the Netherlands (11). Concerning Portugal, it is worth noting

that the innovation fund has given a boost to the revival of SIBs in Portugal. It is also worth noting that there have been SIB launches in the United Arab Emirates and the Russian Federation. As it is possible to observe, the number of IBs launched in developing countries is lower than IBs issued in developed countries.

Table 2. IB launched worldwide.

Country	IBs Launched	Country	IBs Launched
United Kingdom	81	Korea, Republic of	2
United States	27	New Zealand	2
Portugal	13	Palestine, State of	2
Netherlands	11	South Africa	2
Australia	10	Argentina	1
France	8	Austria	1
Canada	4	Cambodia	1
Belgium	3	Chile	1
Germany	3	Nigeria, Mali, and Democratic Rep. of Congo	1
India	3	Peru	1
Israel	3	Russian Federation	1
Japan	3	Sweden	1
Cameroon	2	Switzerland	1
Colombia	2	Uganda	1
Finland	2	United Arab Emirates	1

Source: authors' elaboration from [23–28], end August 2020.

As shown in Table 3, the IBs covered several areas of intervention. Interestingly, at the end of August 2020, none of the 27 IBs analyzed had started since the spread of the COVID-19 pandemic. The area of intervention with the highest number of IBs was employment and training, while the education sector counted 27 IBs, as detailed in Table 3. Although the uptake of IBs in education has reached considerable numbers, few academic scholars are interested in the topic [29–31]. However, several grey literature contributions to the topic can be recorded [8,32].

Table 3. IBs launched per area of intervention.

Area of Intervention	IBs Launched
Employment and Training	51
Child and Family Welfare	33
Health and Well-being	33
Homelessness	30
Education and early childhood	27
Criminal Justice	15
Agriculture and Environment	2
Poverty reduction	2
Housing	1

Source: authors' elaboration from [23–28], August 2020.

As shown in Table 4, Portugal, with its 8 IBs, is the country with the highest number of IBs launched in the education sector, followed by 6 of the UK. Again, we see that the number

of IBs launched in the education sector is low in developing countries. While regarding the duration, as shown in Table 4, there are IBs with duration ranging from 1.8 years (Academia de Código Júnior Lisbon, Portugal) to 8 years (Aluma Social Impact Bond, Israel).

Table 4. IBs launched in education sector worldwide per country, year, and duration.

IBs per Country		IBs per Year		IBs per Duration	
Country	**IBs Launched**	**Year**	**IBs Launched**	**Duration (Years)**	**IBs Launched**
Portugal	8	2013	1	1.8	1
UK	6	2014	1	2	1
USA	2	2015	3	2.4	3
India	2	2016	4	3	7
Israel	2	2017	4	3.3	1
Germany	1	2018	9	4	5
Russian Federation	1	2019	5	5	6
South Korea	1			5.5	1
Sweden	1			6	1
France	1			8	1
Chile	1				
Canada	1				

Source: authors' elaboration from [23–28], August 2020.

3. Approach and Method

The theme of the "educational poverty" is mostly debated, from several different points of view and this topic is currently under scrutiny due to the negative forecasts related to the effects of COVID. These effects seem to widen inequalities, with the most negative consequences being for children and young people. In this regard, it is worth underlining that, at the time of writing, the world is still experiencing the COVID-19 pandemic, and the economic and social consequences have been onerous even for the most advanced economies.

Some research has pointed out that the impact of COVID-19 on global poverty is and will continue to be severe [33], presenting a crucial challenge to the SDGs of the agenda 2030. According to Sumner et al. [33], global poverty could increase for the first time since 1990 and the number of people living in poverty could also increase under an extreme scenario, by 420–580 million, relative to the latest official dates for 2018. In addition, if inequality could also spread COVID-19 [34], it is true that COVID-19 could also spread inequality worldwide, especially regarding child poverty.

These considerations underline the relevance and urgency of further analytical efforts in this field, in theory and practice. It is worth noting that most of the existing studies that focus on educational poverty (and on instruments to tackle this problem) almost always use macroeconomic approaches.

Instead, for the first time, as far as we know, this work explores whether and how innovative financial models—related to impact investing industry (and movement)—can contribute to funding and improving education outcomes, with a focus on their potential in the post-COVID-19 world, in an innovative manner. Our study proposes an exploratory analysis that uses social science approaches and tools to contribute in building the foundations for an alternative paradigm (to the mainstream) in finance disciplines. For several years, and especially after the 2007 crisis, many scholars have proposed alternative views to a mainstream paradigm. In particular, some scholars have called for a "finance reconsidered", from an epistemological, ontological, and methodological perspective [35–38]. In particular, Lagoarde-Segot [36], Rania et al. [39], and Trotta [40] pointed out the linkages between impact investing and new foundations for a new theory of finance.

In this vein and by accepting the claims posed by scholars about innovative and alternative financial approaches, we adopted a qualitative approach by performing multiple case studies of four IBs.

The empirical material was collected using a case study analysis method (typical of social science studies), with the aim to explore whether and how IBs can contribute to funding and improving education outcomes, with a focus on their potentials in the post-COVID world. Our pilot work is based on an in-depth investigation of 4 SIB and DIB models, scrutinized on the basis of the following key dimensions: (i) partnerships and contractual arrangements; (ii) financial terms; and (iii) measurement and impact.

The case study method is very useful when research requires answering questions such as "how" and "why" [41]. In addition, it is very well-suited to generating insights that may elaborate new theories [42,43], especially in the case in which knowledge is still fragmented. However, the richness and value of our case description and analysis contribute to increasing the body of knowledge. We performed a case study analysis by following a protocol that ensured the rigor of a qualitative analysis and allowed us to obtain sufficient and update data (especially public data) to support our research, based on the grounded theory procedures and techniques. Concerning the SIBs, it is worth noting that the availability and use of public data is a considerable issue. Publicly available data are useful in order to both improve scalability of similar approaches worldwide and support research and policy recommendations.

Moreover, publicly available data support the fundamental principles of transparency and accountability, which are related to one of the pillars (measurability) of impact investing. Furthermore, the resource selection process included documents originating from various stakeholders (investors, evaluators, commissioners/payers, and intermediaries) and publicly available data retrieved from online databases to illuminate with multiple perspectives the analysis of the cases.

Several scholars agree on the usefulness of case studies in the context of large challenges such as sustainability-related problems [44,45]. In this light, the case study approach represents a suitable way to perform inductive analysis needed in grounded theory methodology [43], especially in nascent or unexplored phenomena. In addition, in the field of impact bond research, several studies put in evidence of the need to increase empirical studies [46–48] to contribute to building up knowledge for such instruments, which are still in an infant stage. The number of cases is coherent with the accepted limit for meaningful case study research as postulated by Yin [49] and Eisenhardt [50]. Each selected case is extreme or unique [41], being a 'revelatory' one, which offers the possibility to observe and analyze a phenomenon previously unknown or inaccessible. The analyzed dimensions are compatible with the main results of literature reviews of SIBs [40,51], and they are clearly conceptualized, described, and applied in our previous research on SIBs [9,10].

4. Case Studies of Impact Bonds in the Education Sector

This section presents four case studies of IBs: 1 DIB (Educate Girls) and 3 SIB launched in different geographical areas around the world. The Utah High-Quality Preschool Program launched in the USA in 2013, Educate Girls launched in India in 2015, ARTICLE 1 launched in France in 2018, and the Education Improvement Project in the Republic of Sakha (Yakutia) launched in the Russian Federation in 2019. As of the date of 1 March 2021, only Educate Girls provided final results. An overview of the selected cases is reported in Table 5.

4.1. Utah High-Quality Preschool Program

The Utah High-Quality Preschool Program (henceforth UHQPP IB) was launched in the USA in 2013 [26,52–54]. The program seeks to provide pre-school education for low-income children aged 3 and 4 years old [53,55]. It is the first Pay for Success program launched worldwide on education [52,53,55].

Table 5. Case studies overview.

IB Name	Country	Year of Launch	Duration (Years)	IB Description	IB Distinctive Elements
Utah High-Quality Preschool Program	USA	2013	4	The program seeks to provide pre-school education for low-income children aged 3 and 4 years.	The first Pay for Success program launched worldwide on education.
Educate Girls	India	2015	3	The program aims to increase the enrolment rate of girls, as well as to improve the learning of boys and girls in the rural area of Bhilwara in Rajasthan.	The first DIB to be launched in a developing country on education sector and the first to surpasses both target outcomes.
ARTICLE 1	France	2018	5	The program supports the agricultural training of students before and after the *Baccalauréat* in the Hauts de France and Occitanie regions.	France's first SIB on education and the first to combine private and public funds for payment in case of success.
Education Improvement Project in the Republic of Sakha (Yakutia)	Russian Federation	2019	3	The program improves educational achievements of students in the Republic of Sakha (Yakutia).	The first Russian Social Impact Project and the first on education to use also of distance learning.

Source: Authors' elaboration from publicly available information.

4.2. Educate Girls

Educate Girls (henceforth EG IB) was launched in 2015 in India [56]. The program target was to increase the enrolment rate of girls, as well as to improve the learning of boys and girls in rural areas of the state of Rajasthan [56,57]. EG IB was the first IB to be launched in a developing country on education, and the first to surpass the expected target outcomes [57]. The program, started in 2015, was completed in 2018 [56,57].

4.3. ARTICLE 1

ARTICLE 1 was launched in France in 2018 [25,58]. The aim of the program is to support the agricultural training of students before and after the Baccalauréat in the Hauts de France and Occitanie regions [25]. The program was the first SIB on education to be launched in France [58].

4.4. Education Improvement Project in the Republic of Sakha (Yakutia)

Education Improvement Project (hereinafter EIP Yakutia IB) in the Republic of Sakha (Yakutia) was launched in the Russian Federation in 2019 [59–61]. The program aims to improve educational achievements of students in the Republic of Sakha (Yakutia) [59–61]. It is the first Russian social impact project [60–62] and the first on education to also use distance-learning [60].

4.5. Partnerships and Contractual Arrangements

The UHQPP impact bond includes among the outcome payers for a non-profit organization (United Way of Salt Lake), which also acts as intermediary in the IB. Of particular importance is the presence of a bank of international significance (Goldman Sachs) as a senior investor, while the J.B. and M.K. Pritzker Family Foundation provided a subordinated investment. Moreover, it is possible to observe six service providers, including three social enterprises and three public schools.

With regard to EG impact bond, similarly to other IBs issued in the developing world have an outcome payer as a socially oriented organization (Children's Investment Fund Foundation) and not a public body. As regard the investors, it is important to note the presence of an impact-focused Foundation, UBS Optimus Foundation.

As for ARTICLE 1, it should be noted that three out of four payers of results are central public authorities, while the remaining is a foundation having the main mission directed to the improvement of IBs. Among the investors, there is the presence of the Bank BNP Paribas and Caisse des Dépôts and Fonds Européen d'Investissement. Moreover, in this IB, there is only one service provider (Article 1).

Finally, in the EIP Yakutia IB, the outcome payer is a local authority, while the investor is a public development institution (the Far East and Baikal Region Development Fund). The service provider is a Russian public university (Higher School of Economics National Research University).

In summary, the presence of both central authorities and mainstream financial actors, such as Goldman Sachs and BNP, as investors in the IBs, should be highlighted. As for the service provider, there are several service providers involved in the American SIB (Granite School District, Park City School District, Guadalupe School, Lit'l Scholars, Smart Kids, and YMCA). In contrast, we only found one service provider involved in the Indian DIB (Educate Girls), the French SIB (Article 1), and the Russian SIB (Higher School of Economics National Research University). Finally, concerning contractual structure, we classified IB according to the categories identified by Goodall [63]. These structures can be defined as (i) managed where the delivery contract is stipulated between the service provider and outcome payers; (ii) direct where the delivery contract is stipulated between the prime contractor (usually the intermediary) and the outcome payers; and (iii) intermediated where the delivery contract is stipulated between the special purpose vehicle and outcome payers). In particular, both the American SIB and Indian DIB have a managed structure. In contrast, the Russian SIB has an intermediated structure, and the French SIB has a direct structure. Table 6 shows the partnerships and contractual arrangements.

Table 6. Partnerships and contractual arrangements.

IB Name	Outcome Payers Type(s)	IB Structure	Investors Type(s)	Service Providers
Utah High-Quality Preschool Program	United Way of Salt Lake (Non-profit organization), Salt Lake County (Local public authority) (cohort 1)/and State of Utah (Central public authority) (cohorts 2–5)	Managed	Goldman Sachs (Bank), and J.B. and M.K. Pritzker Family Foundation (Foundation)	Granite School District, Park City School District, Guadalupe School, Lit'l Scholars, Smart Kids, and YMCA
Educate Girls	Children's Investment Fund Foundation (Foundation)	Managed	UBS Optimus Foundation (Foundation)	Educate Girls
ARTICLE 1	Ministère de l'Agriculture et de l'Alimentation (Central public authority), Ministère de la Transition Ecologique et Solidaire (Central public authority), Ministère de l'Economie et des Finances (Central public authority), Fonds B. (Foundation)	Direct	Caisse des Dépôts (public financial institution), BNP Paribas (Bank), and Fonds Européen d'Investissement (FEI) (Intergovernmental Financial Institutions)	Article 1
Education Improvement Project in the Republic of Sakha (Yakutia)	Ministry of Education and Science of the Republic of Sakha (Yakutia) (Local public authority)	Intermediated	The Far East and Baikal Region Development Fund (Development bank)	Higher School of Economics National Research University

Source: Authors' elaboration from [23,25,26,52,54–56,58–61,64,65].

4.6. Financial Terms

With reference to the financial terms, we expressed the amounts of capital raised, max outcome payment, and expected financial returns by using euro currency as at the exchange rate as at 14 November 2020.

Concerning UHQPP IB, there is a significant capital raised (€5,712,269.00) over a period of 4 years, with a return of 5% p.a. Goldman Sachs invested most of the capital (€3,770,100.00) as a senior investor and the remainder (€1,942,169.00) derived from J.B. and M.K. Pritzker Family Foundation as a subordinate investor.

As regard EG IB, the UBS Optimus Foundation invested €228,129.00 for a duration of 3 years. Of particular interest is the return provided to investors (15% of the investment).

In ARTICLE 1 IB, there is an investment of €870,000.00 with a duration of 5 years and a yield of 3% while in EIP Yakutia IB, in the Far East, and Baikal Region Development Fund, which is owned by the Russian Development Bank (VEB.RF) and for 3 years has invested €655,826.00.

In summary, note that where banks are present as investors (American and French IBs) the duration is longer, with the low market rate return, while those with lower investment (Russian and Indian) with different categories of impact founders, the duration is of three years. Regarding the DIB (educate girls), the investor is a foundation. Table 7 shows the financial terms.

Table 7. Financial terms.

IB Name	Amount of Capital Raised *	Duration (Years)	Max Outcome Payment *	Expected Financial Return	Investor Name	Presence of Guarantee
Utah High-Quality Preschool Program	€5,712,269.00	4	7,304,358.00	Interest rate of 5.0%	Goldman Sachs and J.B. and M.K. Pritzker Family Foundation	None
Educate Girls	€228,129.00	3	€356,557.00	IRR 15%	UBS Optimus Foundation	None
ARTICLE 1	€870,000.00	5	€1,000,000.00	IRR 3%	Caisse des Dépôts, BNP Paribas and Fonds Européen d'Investissement (FEI).	None
Education Improvement Project in the Republic of Sakha (Yakutia)	€655,826.00	3	N/A	N/A	The Far East and Baikal Region Development Fund	None

(*) All the amounts expressed in the table are indicated in euros (exchange rates of 14 November 2020). Source: Authors' elaboration from [25,52,54–61,64,65].

4.7. Impact Measurement and Evaluation

In the UHQPP IB, it can be observed that the program involves as many as 3500 children in sensitive age groups (3 to 4 years old), who are living in a low-income environment. The metrics of the program are clearly designed and a research institute (Utah State University's Early Intervention Research Institute) will evaluate the result of the program.

In the EG IB, the program involved not only the enrolment of girls in accessing education (which remains a central issue in India) but also improving the learning of boys and girls. Moreover, in EG IB, as in the previous IB, the metrics are clearly designed. The method used for the measurement is the randomized controlled trial (RCT).

In ARTICLE 1 IB, the intervention concerns the support to the agricultural training of 1000 students in the Hauts de France and Occitania. The metrics, unlike the other IBs, are multiple.

Finally, in EIP Yakutia IB, the program aims to improve educational achievements for 5000 schoolchildren with the use of distance-learning, given the presence of many sparsely populated and difficult to reach settlements and small schools.

In summary, with regard to the target population, a relevant number of beneficiaries are recorded in American, Indian, and Russian IBs. The IBs examined use different metrics to achieve both the results set by the program and, therefore, the SDG 4 (in particular target 4.5).

Finally, it is useful to underline how IBs (launched in developed countries) use validated administrative data as the measurement method, and only the one launched in a developing country (EG IB) used the RCT. Table 8 shows the impact measurement and evaluation details.

Table 8. Impact measurement and evaluation.

IB Name	Target Population	Specific Area of Intervention	Outcome Metrics	Impact Measurement Method (Independent Evaluator in Parentheses)	Compliance of Outcome Metrics with SDG 4 (Target 4.5)
Utah High-Quality Preschool Program	3500 children	Ensure pre-school education for low-income children aged 3 and 4 years.	Decrease in terms of a child's use of special education and remedial services each year between kindergarten and grade 6.	Historical comparison and validated administrative data (Utah State University's Early Intervention Research Institute)	Outcome metrics compliant with SDG 4 (target 4.5)
Educate Girls	7318 students	Increase the enrolment rate of girls, and improve the learning for boys and girls.	Increase in enrolment and improve school learning.	Randomised Controlled Trial (RCT) (IDinsight)	Outcome metrics compliant with SDG 4 (target 4.5)
ARTICLE 1	1000 students	The reduction of the school dropout rate.	Workshops deployment indicator (at least 125 workshops organized during the program); school perseverance indicator (+ 7 percentage points compared to the annual national reference rate of willingness to continue studying); exam attendance indicator (+ 5 percentage points above the annual national reference rate for participation in the BTS examination); and number of mentors (At least 25 per cohort)	Validated administrative data (Kimso)	Outcome metrics compliant with SDG 4 (target 4.5)
Education Improvement Project in the Republic of Sakha (Yakutia)	5000 schoolchildren	Improve educational achievements through the use also of distance learning.	Improve educational achievements of students by 10%.	Validated administrative data (N/A)	Outcome metrics compliant with SDG 4 (target 4.5)

Source: Authors' elaboration from [23,25,26,52,54–62,64–66].

4.8. Early Empirical Evidence on the IBs' Achievement of Planned Targets

Of the 4 IBs described above, two of them (ARTICLE 1 and EIP Yakutia IB) are currently in the implementation phase. As regards the remaining two IBs (EG IB and UHQPP IB), the first was successfully completed in 2018 [56,57,67,68], while the second scheduled a service delivery period of four years and a reimbursement and evaluation period of 12 years [65]. Specifically, EG IB increased the final enrolment goal to 116% and the final

learning goal to 160% [57]. This result allowed the UBS Optimus Foundation as an investor to realize a 15% internal rate of return in addition to its initial investment of $270,000 [57]. Regarding the UHQPP IB, only the results of the first cohort are publicly known [69]. More specifically, the total savings in year 1 calculated for cohort 1 was $281,550 [69] and, of these savings, investors in the program received 95% of the total registered savings [69].

5. Discussion

This section resumes the main findings of our paper derived from the four dimensions of analysis. In particular, the results provide several interesting insights useful to highlight a preliminary model of IBs in actively contributing education in a post-COVID-19 world.

The adoption of IB in the education sector presents a high potential for different reasons. First, it is interesting to note how IBs seems particularly suitable to address effectively measurable educational outcomes. More in detail, the adoption of measurable educational outcomes allows the attraction of the financial support for those interventions traditionally lacking in terms of public budget resources. Furthermore, the educational outcomes of IBs investigated result to be easily replicated for future applications of IBs in the mitigation of the emergent education challenges produced by the pandemic impact on society (i.e., technology divide, low access to school, and poor quality infrastructures). Furthermore, in terms of capacity to attract private capitals from our analysis emerges how IBs are particularly adapted to attract not only impact-oriented investors but also mainstream investors. Such a result implies two considerations. IBs in education sector offer to investors opportunities to scale evidence-based interventions, particularly adapt to mainstream investors, characterized by a low risk aversion. Furthermore, IBs can provide attractive and, in some case, market-rate financial returns. Moreover, for both the commissioners and investors, IBs, given their focus on outcomes, are suitable to achieve success by adopting a private management and accountable actions.

The same considerations have been evidenced from several contributions [57,67,68,70,71] concerning the concluded IB Educate Girls. More in detail, such contributions put in evidence of how IBs represent an innovative tool suitable for: (i) performing an efficient delivery of education outcomes thanks to their "combined force of an ambitious outcome framework with independent evaluation mechanisms" [71] (p. 5); (ii) advancing complementary funding mechanisms of education outcomes (useful to fill the enormous gap thanks to their natural attitude to attract new private capital); and (iii) increasing transparency around impact and cost of achieving education impact. However, [71] put in evidence a series of suggestions for future IB design in education sector drowned from lessons learned in developing Educate Girls IB, useful to improve the efficiency of IBs in delivering education outcomes. The study underlines the importance of setting the outcome targets by considering the existing evaluation data as well as of enhancing that capacity building of the implementation partners to better understand the targets and evaluation methodologies. Simultaneously, the study observed how the sharing of detailed outcome evaluation data during the implementation process was useful to help partners better identify gaps and adapt their interventions. Finally, a consideration for a longer time horizon of 4–5 years for such education IBs is suggested, given that the impact is only visible in later years. For this reason, investors should consider in their risk evaluation such conditions.

IBs, therefore, can be considered as one of the most innovative financial partnerships to provide quality education [10,72]. Furthermore, in line with recent studies [73], partnerships represent viable solutions for the "new normal" of a post-COVID world, as they can promote the growth and development of a range of student skills, both in and out of school (with the support of technology). The results of this study not only are in line but also confirm what has been explored in recent publications [8,73,74].

With regard to the potentials of IBs in the fight of education poverty, the nature of IBs as business models are evolving. It is thus possible to observe how they can highlight a transition from business models for sustainable innovation [75], as initially conceived

before the agenda 2030, to business models adapted to address sustainability [9] up to an emerging concept of IBs as business models for resilience [76]. Such evolution is represented in Figure 2.

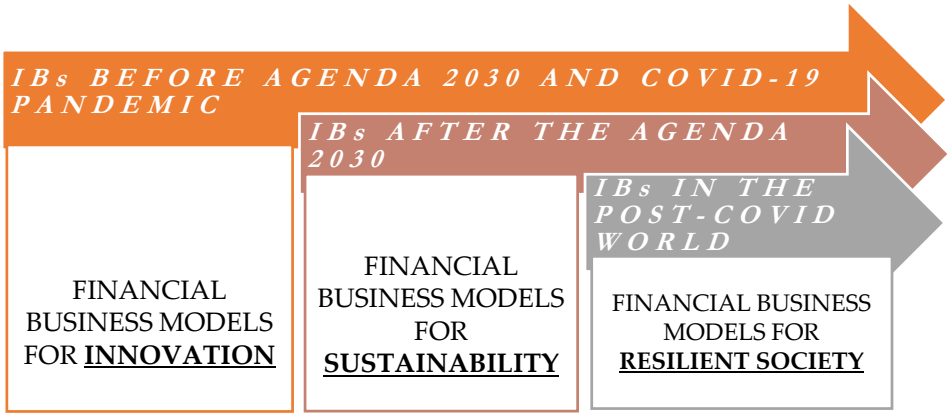

Figure 2. The Evolution of Impact Bonds as business models. Source: Authors' elaboration from [9,75,76].

At the beginning of their introduction in social policy contexts, IBs were considered particularly adept at financing of interventions suitable to introducing new technologies and social practices that enabled societies to become more sustainable [77]. In a second stage, especially after the declaration of SDGs in the 2030 agenda, IBs were included among the emerging (within financial industry) business models for sustainability [9], where their adoption aimed at solving social or environmental challenges and, simultaneously, creating positive effects for investors. As emerged in our analysis, the adoption of IBs in a post-COVID world could result particularly fitting in the education sector for two main reasons. First, the increase in educational challenges will face the same level (in a best scenario) of public financial resources dedicated to the education sector. For this reason, the role of IBs in attracting private capital for education outcomes could represent the primary alternative to the public budget for education sector. Second, IBs appear suitable to be adopted for interventions directed to the mitigation of the new education challenges derived from the pandemic. For these reasons, in a post-COVID world, IBs can be considered business models that fit particularly well in a time of crisis [78], representing an essential tool for communities in the mitigation of negative impact produced by the pandemic [76]. In brief, from our analysis emerged a first empirical base regarding IBs in the education sector. Such results are useful for evaluating: (i) the potential of IBs as financing mechanisms adept at raising additional (to public spending) education financing; (ii) the efficiency of the use of financing for education through public–private financial partnerships; and (iii) the adoption of IBs in policies aimed at the enhancement of community resilience in the post-COVID era.

6. Conclusions

Our analysis focused on the application of IBs in the education sector. This work was conducted to understand whether, and how, IBs could bridge the gap in financing solutions for education outcomes, and if such innovative financial tools are suitable to reduce the negative impact of the pandemic in the education sector.

Using an explorative case study analysis of four SIBs, this research contributes to the theory and practice in several different ways. First, to the best of our knowledge, this paper is the first study to show that the IB business model seems to evolve. Our approach was derived from La Torre et al. [9], who positioned the IB model under the lens of Business Model for Sustainability (BMfS).

Our analysis further highlighted how the concept of IB as a business model for resilience is emerging and proposes a preliminary conceptual model of IBs in actively contributing education in a post-COVID world.

From a more practical perspective, our findings are useful to policy-makers and practitioners involved in SIB design and implementation, specifically vis-à-vis how they suggest best practices for modelling prototypes in new geographical areas or launching more advanced IBs. Results offer several interesting insights and contribute to building up the knowledge about three key-areas of the IB structuring process: (1) partnerships and contractual arrangements, (2) financial terms, and (3) measurement and impact.

Although the findings are encouraging, there are a few limitations related to the explorative nature of the analysis that need to be considered. Future development of the research should consider the opportunity to enlarge IB samples and to include different types of business models, to arrive at a more general conclusion. Furthermore, future lines of research should include IB stakeholder perspectives derived by in-depth interviews or focus groups to identify key characteristics useful to improving the design as well as the adoption of Impact Bonds in the education sector. In addition, using the framework sketched in this paper, future research should expand the understanding of the relationship between partnerships, financial terms, and outcomes in order to better describe and understand the IB model as an innovative financial business model for a resilient society.

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References

1. Bebbington, J.; Unerman, J. Achieving the United Nations sustainable development goals. *Account. Audit. Account. J.* **2018**, *31*, 2–24. [CrossRef]
2. Boeren, E. Understanding Sustainable Development Goal (SDG) 4 on "quality education" from micro, meso and macro perspectives. *Int. Rev. Educ.* **2019**, *65*, 277–294. [CrossRef]
3. Unterhalter, E. The many meanings of quality education: Politics of targets and indicators in SDG 4. *Glob. Policy* **2019**, *10*, 39–51. [CrossRef]
4. Thapa, A.; Panigrahi, J.; BenDavid-Hadar, I. Economics and finance of education: Review of developments, trends, and challenges. In *Annual Review of Comparative and International Education 2019*; Emerald Publishing Limited: Bingley, UK, 2020.
5. United Nations Educational, Scientific and Cultural Organization (UNESCO). Meeting Commitments: Are Countries on Track to Achieve SDG4? 2019. Available online: https://reliefweb.int/sites/reliefweb.int/files/resources/UNESCO-2019-HLPF_UIS_Meeting-EN-v7-web_aer.pdf (accessed on 4 November 2020).

6. United Nations Development Programme (UNDP). *COVID-19 and Human Development: Assessing the Crisis, Envisioning the Recovery. 2020 Human Development Perspectives*; UNDP: New York, NY, USA, 2020. Available online: http://hdr.undp.org/en/hdp-covid (accessed on 4 November 2020).
7. Maria, N.; Zaid, A.; Catrin, S.; Ahmed, K.; Ahmed, A.J.; Christos, I.; Maliha, A.; Riaz, A. The socio-economic implications of the coronavirus pandemic (COVID-19): A review. *Int. J. Surg.* **2020**, *78*, 185.
8. Brookings. Can Impact Bonds Help Solve the Global Education Crisis? 2020. Available online: https://www.brookings.edu/podcast-episode/can-impact-bonds-help-solve-the-global-education-crisis/ (accessed on 10 November 2020).
9. La Torre, M.; Trotta, A.; Chiappini, H.; Rizzello, A. Business models for sustainable finance: The case study of social impact bonds. *Sustainability* **2019**, *11*, 1887. [CrossRef]
10. Rizzello, A.; Kabli, A. Sustainable financial partnerships for the SDGs: The case of social impact bonds. *Sustainability* **2020**, *12*, 5362. [CrossRef]
11. Gustafsson-Wright, E.; Gardiner, S. Using Impact Bonds to Achieve Early Childhood Development Outcomes in Low-and Middle-Income Countries. 2016. Available online: https://www.brookings.edu/wp-content/uploads/2016/07/Impact-Bonds-for-ECDweb.pdf (accessed on 8 November 2020).
12. UNESCO. Act Now: Reduce the Impact of Covid-19 on the Cost of Achieving SDG 4, GEM Report Policy Paper 2020. Available online: https://en.unesco.org/gem-report/publications (accessed on 2 November 2020).
13. Jain, G. Emerging trends of education during & post COVID 19: A new challenge. *Solid State Technol.* **2020**, *63*, 796–806.
14. Robinson, L.; Schulz, J.; Khilnani, A.; Ono, H.; Cotten, S.R.; Mcclain, N.; Levine, L.; Chen, W.; Huang, G.; Casilli, A.A.; et al. Digital inequalities in time of pandemic: COVID-19 exposure risk profiles and new forms of vulnerability. *First Monday* **2020**, 25. [CrossRef]
15. Kuhfeld, M.; Soland, J.; Tarasawa, B.; Johnson, A.; Ruzek, E.; Liu, J. Projecting the potential impact of COVID-19 school closures on academic achievement. *Educ. Res.* **2020**, *49*, 549–565. [CrossRef]
16. UNESCO. UNESCO COVID-19 Education Response: How Many Students Are at Risk of Not Returning to School? Advocacy Paper. Available online: https://unesdoc.unesco.org/ark:/48223/pf0000373992?posInSet=1&queryId=1d93fb93-2e54-4f3e-bbb4-5628edf54314 (accessed on 10 November 2020).
17. Panigrahi, J. Innovative financing of higher education: Changing options and implications. *High. Educ. Future* **2018**, *5*, 61–74. [CrossRef]
18. Global Impact Investing Network (GIIN). Annual Impact Investor Survey 2020. Available online: https://thegiin.org/research/publication/impinv-survey-2020 (accessed on 8 November 2020).
19. Shiller, R.J. *Finance and the Good Society*; Princeton University Press: Princeton, NJ, USA, 2013.
20. Brookings Institution. A Landmark Month for Impact Bonds in Education: Two New Initiatives Focus Spending on Results. 2018. Available online: https://www.brookings.edu/wp-content/uploads/2017/09/impact-bonds-in-developing-countries_web.pdf (accessed on 15 February 2021).
21. Tan, S.; Fraser, A.; McHugh, N.; Warner, M. Widening perspectives on social impact bonds. *J. Econ. Policy Reform* **2019**. [CrossRef]
22. Laad, S.; Assomull, A.; Budhiraja, A. Impact Investing in Education: The Opportunity to Make a Difference, 2020. Available online: https://www.lek.com/insights/ei/impact-investing-education-opportunity-make-difference (accessed on 10 November 2020).
23. Government Outcomes Lab (Go Lab). Blavatnik School of Government. Projects Database. Available online: https://golab.bsg.ox.ac.uk/knowledge-bank/indigo-data-and-visualisation/project-database/ (accessed on 31 August 2020).
24. Social Finance Database. Available online: https://sibdatabase.socialfinance.org.uk/ (accessed on 31 August 2020).
25. Impact Invest Lab.Retour D'expérience sur les Contrats à Impact Social en France. Available online: https://iilab.fr/wp-content/uploads/2020/02/RETOUR-EXPERIENCE-CIS.pdf (accessed on 31 August 2020).
26. Pay for Success: The First 25. 2019. Available online: https://nff.org/report/pay-success-first-25 (accessed on 31 August 2020).
27. Brookings Institution. What Is the Size and Scope of the Impact Bonds Market? 2020. Available online: https://www.brookings.edu/wp-content/uploads/2020/09/Impact_Bonds-Brief_1-FINAL-1.pdf (accessed on 31 August 2020).
28. Brookings Institution. *Brookings Impact Bonds Snapshot—September 1, 2020*. Available online: https://www.brookings.edu/wp-content/uploads/2019/01/Global-Impact-Bonds-Snapshot-September-2020.pdf (accessed on 15 February 2021).
29. Saltman, K.J. The promise and realities of pay for success/ social impact bonds. *Educ. Policy Anal. Arch.* **2017**, *25*, 59. [CrossRef]
30. Smeets, D.J.A. Collaborative learning processes in social impact bonds: A case study from The Netherlands. *J. Soc. Entrep.* **2017**, *8*, 67–87. [CrossRef]
31. Temple, J.A.; Reynolds, A.J. Using benefit-cost analysis to scale up early childhood programs through pay-for-success financing. *J. Benefit-Cost Anal.* **2015**, *6*, 628–653. [CrossRef] [PubMed]
32. Gustafsson-Wright, E.; Boggild-Jones, I. Paying for education outcomes at scale in India. Center for Universal Education at The Brookings Institution. 2019. Available online: https://www.brookings.edu/research/paying-for-education-outcomes-at-scale-in-india/ (accessed on 11 November 2020).
33. Sumner, A.; Hoy, C.; Ortiz-Juarez, E. Estimates of the Impact of COVID-19 on Global Poverty. Working Paper, 2020. Available online: https://www.wider.unu.edu/sites/default/files/Publications/Working-paper/PDF/wp2020-43.pdf (accessed on 31 August 2020).
34. Ahmed, F.; Ahmed, N.E.; Pissarides, C.; Stiglitz, J. Why inequality could spread COVID-19. *Lancet Public Health* **2020**, *5*, e240. [CrossRef]

35. Paranque, B.; Pérez, R. *Finance Reconsidered: New Perspectives for a Responsible and Sustainable Finance*; Critical Studies on Corporate Responsibility, Governance and Sustainability; Emerald Group Publishing Limited: Bingley, UK, 2016.
36. Lagoarde-Segot, T. Prolegomena to an alternative study of finance. In *Finance Reconsidered: New Perspectives for a Responsible and Sustainable Finance*; Paranque, B., Pèrez, R., Eds.; Critical Studies on Corporate Responsibility, Governance and Sustainability; Emerald Group Publishing Limited: Bingley, UK, 2016; Volume 10.
37. Lagoarde-Segot, T.; Paranque, B. Sustainability and the reconstruction of academic finance. *Res. Int. Bus. Financ.* **2017**, *39*, 657–662. [CrossRef]
38. Lagoarde-Segot, T. Sustainable finance. A critical realist perspective. *Res. Int. Bus. Financ.* **2019**, *47*, 1–9. [CrossRef]
39. Rania, F.; Trotta, A.; Carè; R; Migliazza, M.C.; Kabli, A. Social uncertainty evaluation of social impact bonds: A model and practical application. *Sustainability* **2020**, *12*, 3854. [CrossRef]
40. Trotta, A. *La Finanza per L'impatto. Analisi di Una Possibile Rivoluzione*; Libreria Universitaria: Padova, Italy, 2020.
41. Yin, R. *Case Study Research, Design and Methods*; Sage: Thousands Oaks, CA, USA, 1994.
42. Corbin, J.M.; Strauss, A. Grounded theory research: Procedures, canons, and evaluative criteria. *Qual. Sociol.* **1990**, *13*, 3–21. [CrossRef]
43. Strauss, A.; Corbin, J.M. *Grounded Theory in Practice*; Sage: Thousands Oaks, CA, USA, 1997.
44. Dentchev, N.; Rauter, R.; Jóhannsdóttir, L.; Snihur, Y.; Rosano, M.; Baumgartner, R.; Nyberg, T.; Tang, X.; van Hoof, B.; Jonker, J. Embracing the variety of sustainable business models: A prolific field of research and a future research agenda. *J. Clean. Prod.* **2018**, *194*, 695–703. [CrossRef]
45. Eisenhardt, K.M.; Graebner, M.E.; Sonenshein, S. Grand challenges and inductive methods: Rigor without rigor mortis. *Acad. Manag. J.* **2016**, *59*, 1113–1123. [CrossRef]
46. FitzGerald, C.; Fraser, A.; Kimmitt, J. Tackling the big questions in social impact bond research through comparative approaches. *J. Comp. Policy Anal. Res. Pract.* **2020**, *22*, 85–99. [CrossRef]
47. Fraser, A.; Tan, S.; Lagarde, M.; Mays, N. Narratives of promise, narratives of caution: A review of the literature on Social Impact Bonds. *Soc. Policy Adm.* **2018**, *52*, 4–28. [CrossRef]
48. Andersen, M.M.; Dilling-Hansen, R.; Hansen, A.V. Expanding the concept of social impact bonds. *J. Soc. Entrep.* **2020**, 1–18. [CrossRef]
49. Yin, R.K. *Case Study Design and Methods*; Sage: Thousands Oaks, CA, USA, 1984.
50. Eisenhardt, K.M. Building theories from case study research. *Acad. Manag. Rev.* **1989**, *14*, 532–550. [CrossRef]
51. Broccardo, E.; Mazzuca, M.; Frigotto, M.L. Social impact bonds: The evolution of research and a review of the academic literature. *Corp. Soc. Responsib. Environ. Manag.* **2020**, *27*, 1316–1332. [CrossRef]
52. Corporation for National and Community Service, Office of Research and Evaluation. State of the Pay for Success Field: Opportunities, Trends, and Recommendations. Washington, D.C.: Author. 2015. Available online: https://www.nationalservice.gov/sites/default/files/documents/CNCS%20PFS%20State%20of%20the%20Field%20Document%20Final%204-17-15%20sxf.pdf (accessed on 31 August 2020).
53. United Way of Salt Lake. United Way of Salt Lake Announces Results-based Financing for Low-income Preschool Students. 2013. Available online: https://guinncenter.org/wp-content/uploads/2014/01/Results-Bases-Financing.pdf (accessed on 22 March 2021).
54. Gustafsson-Wright, E.; Gardiner, S.; Putcha, V. The Potential and Limitations of Impact Bonds: Lessons from the First Five Years of Experience Worldwide. Global Economy and Development at Brookings. 2015. Available online: https://www.brookings.edu/wp-content/uploads/2016/07/Impact-Bondsweb.pdf (accessed on 15 February 2021).
55. Goldman Sachs; J.B.; Pritzker, M.K.; United Way of Salt Lake. *FACT SHEET: The Utah High Quality Preschool Program.* Available online: https://hceconomics.uchicago.edu/sites/default/files/file_uploads/SIB-RBFFact_SheetUtahVersion.pdf (accessed on 31 August 2020).
56. Instiglio. Educate Girls Development Impact Bond: Improving Education for 18,000 Children in Rajasthan. 2015. Available online: http://instiglio.org/educategirlsdib/wp-content/uploads/2016/03/EG-DIB-Design-1.pdf (accessed on 22 March 2021).
57. UBS. Knowledge Is Power: The World's First Development Impact Bond in Education Surpasses both Target Outcomes. Available online: https://www.ubs.com/global/en/ubs-society/philanthropy/ubs-optimus-foundation/our-impact/development-impact-bond.html (accessed on 13 November 2020).
58. Article 1. Le CIS "Persévérance et Ambition Scolaire Dans les Zones Rurales". Available online: https://article-1.eu/actualites/le-cis-au-service-de-la-perseverance-et-de-lambition-scolaire-dans-les-zones-rurales/#:~{}:text=Nos%20implantations-,Le%20CIS%20%E2%80%9Cpers%C3%A9v%C3%A9rance%20et%20ambition%20scolaire%20dans%20les%20zones%20rurales,en%20tant%20que%20payeurs%20finaux. (accessed on 9 November 2020).
59. Far East Development Fund. VEB.RF Wins the ADFIAP Contest for an Educational Project in Yakutia. Available online: https://www.fondvostok.ru/en/press/publications/veb-rf-wins-the-adfiap-contest-for-an-educational-project-in-yakutia/ (accessed on 11 November 2020).
60. VEB.RF. Two VEB.RF's Projects Win International ADFIAP Awards. Available online: https://veb.ru/en/press-center/44788/ (accessed on 11 November 2020).
61. VEB.RF. VEB.RF, Yakutiya, Far East Development Fund (FEDF) and Higher School of Economics (HSE) Launch First Russian Social Impact Project. Available online: https://veb.ru/en/press-center/38908/ (accessed on 11 November 2020).

62. National Research University Higher School of Economics. First Social Impact Project in Yakutia Goes Online. Available online: https://www.hse.ru/en/news/keywords/62608925/ (accessed on 11 November 2020).
63. Goodall, E. *Choosing Social Impact Bonds: A Practitioner's Guide*; Bridges Ventures: London, UK, 2014.
64. Idinsight. Educate Girls Development Impact Bond: Final Report. 2018. Available online: https://static1.squarespace.com/static/5b7cc54eec4eb7d25f7af2be/t/5b8f0cbb575d1fff85e7397c/1536101613230/Project+Report_28th+August_Revised.pdf (accessed on 22 March 2021).
65. Urban Institute. Utah High Quality Preschool Program. Available online: https://pfs.urban.org/pfs-project-fact-sheets/content/utah-high-quality-preschool-program (accessed on 10 November 2020).
66. Brookings Institute. Impact Bonds in Developing Countries: Early Learnings from the Field. 2017. Available online: https://www.brookings.edu/wp-content/uploads/2017/09/impact-bonds-in-developing-countries_web.pdf (accessed on 15 February 2020).
67. The Knowledge, Evidence and Learning for Development Programme (K4D). An Overview of Evidence Regarding the Impact of Impact Bonds as Innovative Financing Mechanisms for Education in Development Contexts. Available online: https://assets.publishing.service.gov.uk/media/5c87e016ed915d50aa142f89/544.pdf (accessed on 15 February 2021).
68. Saïd Business School. UBS Optimus Foundation: From Giving to Investing. 2018. Available online: https://www.sbs.ox.ac.uk/sites/default/files/2020-03/2018-11-12%20UBSOF%20case%20study%20FINAL.pdf (accessed on 31 August 2020).
69. The Bond Buyer. Goldman Sachs Social Impact Bond Pays Off in Utah. Available online: https://www.cdfa.net/cdfa/cdfaweb.nsf/pages/27016/$file/Goldman%20Sachs%20Social%20Impact%20Bond%20Pays%20Off%20in%20Utah%20_%20The%20Bond%20Buyer.pdf (accessed on 22 March 2021).
70. Worldbank. Can Impact Bonds Deliver Better Results, Faster and Cheaper? 2017. Available online: http://pubdocs.worldbank.org/en/106471517242026475/QD-Note-No5-Impact-Bonds-Final-version.pdf (accessed on 15 February 2021).
71. UBS Optimus Foundation and the Children's Investment Fund Foundation. World's first Development Impact Bond in education: Process evaluation from the Educate Girls Development Impact Bond. 2018. Available online: https://dalberg.com/wp-content/uploads/2018/10/Dalberg-report_EG.pdf (accessed on 22 March 2021).
72. Coffey. Endline Evaluation Report Strategic Partnerships Window: Final Report, Evaluation Manager Girls' Education Challenge Fund. 2017. Available online: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/701007/Endline-report-Girls-Education-Challenge-Partnership-Window.pdf (accessed on 22 March 2021).
73. Vegas, E.; Winthrop, R. *Beyond Reopening Schools: How Education Can Emerge Stronger Than before COVID-19*; Brookings Institute: Washington, DC, USA, 2020.
74. Brookings Institution. Are Impact Bonds Delivering Outcomes and Paying out Returns? Available online: https://www.brookings.edu/wp-content/uploads/2020/09/Are-impact-bonds-delivering-outcomes-and-paying-out-returns-FINAL-2.pdf (accessed on 15 February 2021).
75. Boons, F.; Lüdeke-Freund, F. Business models for sustainable innovation: State-of-the-art and steps towards a research agenda. *J. Clean. Prod.* **2013**, *45*, 9–19. [CrossRef]
76. Dentoni, D.; Pinkse, J.; Lubberink, R. Linking sustainable business models to socio-ecological resilience through cross-sector partnerships: A complex adaptive systems view. *Bus. Soc.* **2020**. [CrossRef]
77. Jackson, E.T. Evaluating social impact bonds: Questions, challenges, innovations, and possibilities in measuring outcomes in impact investing. *Community Dev.* **2013**, *44*, 608–616. [CrossRef]
78. Taleb, N.N. *Antifragile: How to Live in a World We Don't Understand*; Allen Lane: London, UK, 2012; Volume 3.