

# “Filling a financial gap in SDG3 achievement: Investments vs. budget funds”

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# FILLING A FINANCIAL GAP IN SDG3 ACHIEVEMENT: INVESTMENTS VS. BUDGET FUNDS

## Abstract

This paper delves into the challenge of financing Sustainable Development Goal 3 "Ensure healthy lives and promote well-being for all at all ages" (SDG 3). Despite its ambitious nature, the achievement of this goal has been hindered by a substantial lack of funding. The study aims to investigate potential sources to bridge the investment gap in SDG 3, analyzing data from 28 European countries. This includes factors such as the index and progress in sustainable development, sources of investment resources, and healthcare costs for 2020. Logit and probit regression models are employed for the analysis. The results indicate the absence of a statistically significant relationship between the volume of investments from the state, businesses, and households of countries and their level of SDG 3 achievement. However, an interesting finding emerges regarding healthcare expenditures under state insurance programs among European countries, which show a greater extent of progress in achieving SDGs compared to voluntary insurance programs. The paper emphasizes the importance of a balanced approach that uses multiple funding sources and the need for focused policies and partnerships to mobilize resources to ensure healthy lives and promote well-being for all at all ages.

## Keywords

sustainable development, health, progress, public investments, private investments, government, business, households

## JEL Classification

Q01, H51, E22

## INTRODUCTION

The urgency of achieving the Sustainable Development Goals (SDGs) on a global scale is widely acknowledged as crucial for the future of humanity. Despite significant efforts to embed sustainability in strategic documents, state policies, business cycles, and societal norms, the United Nations (UN) recognizes the formidable challenge of achieving the SDGs by 2030, a situation further complicated by the consequences of the COVID-19 pandemic and geopolitical instability stemming from Russia's military invasion of Ukraine. A major impediment to SDG attainment is the pressing need for additional financial and investment resources.

Before the pandemic, the International Monetary Fund (IMF) estimated an annual financing gap (or investment gap) of approximately USD 2.5 trillion for the SDGs. This figure included around USD 500 billion for low-income countries (15% of their GDP) and US\$2 trillion for other countries (4% of their GDP) (Gaspar et al., 2019). However, the economic and social repercussions of the pandemic, such as reduced state and external private financing, had the potential to inflate this deficit by more than 70%, reaching approximately USD 4.2 trillion, according to OECD estimates (OECD, 2020). The pandemic led to significant reductions in net inflows of portfolio investments (by

80%), foreign direct investments (FDI) (by 35%), remittances (by 20%), and more. These cuts in investment flows, both public and private, not only fail to meet the overall investment needs for achieving the SDGs but exacerbate the existing problem, as reported by the United Nations Conference on Trade and Development (UNCTAD, 2019).

Within the context of SDG 3, which focuses on health and well-being, the situation is equally challenging. UNCTAD estimates an annual deficit of approximately USD 371 billion for SDG 3 (UNCTAD, 2019). The COVID-19 pandemic has significantly worsened the situation for SDG 3 by increasing mortality rates, placing additional strain on healthcare systems, and negatively impacting the mental health of populations, as highlighted by Sachs et al. (2021).

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## 1. LITERATURE REVIEW AND HYPOTHESES

SDG3, which aims to ensure healthy lives and promote well-being for all ages (UN General Assembly, 2015), is a fundamental objective for global development and the overall welfare of communities worldwide. Despite considerable strides in healthcare and access to medical services, a substantial investment gap persists in achieving SDG3 and other related goals, especially in the post-COVID-19 recovery era (Ranjbari et al., 2021).

Setti et al. (2020) and Conticini et al. (2020) propose that spreading viruses, including those responsible for the COVID-19 pandemic, and the resulting health consequences can be linked to unsustainable development practices. This underscores the importance of addressing environmental sustainability not only for ecological well-being but also for safeguarding public health.

During the initial stages of the pandemic, healthcare spending experienced significant reductions (Greig & Deadman, 2022; Ziky & Elghabri, 2022). The health system faced challenges such as an insufficient quantity of doctors and places for patients, inadequate medical and technological support, and a lack of psychological support (Rađenović et al., 2022; Simakhova et al., 2022; Kuzior et al., 2022). While policy measures played a crucial role in mitigating the impact of the pandemic and preventing a more severe scenario, they were not entirely effective in fully overcoming the economic consequences (Boiko et al., 2022). Chronic and systematic problems in the healthcare financing system at

the country level contributed to this situation (Volosovych et al., 2021; Micah et al., 2023).

Vadlamannati et al. (2023) highlight that increased spending to enhance equitable access to healthcare has effectively reduced COVID-19 deaths. However, the study emphasizes that healthcare spending, while crucial, must be complemented by good governance and fair access to healthcare services. Numerous studies support the idea that healthcare spending, as a social function of the state, contributes to both economic (Sanmarchi et al., 2021; Chugunov et al., 2022; Arfara & Samanta, 2022; Verba et al., 2023) and social development (Peña-Sánchez et al., 2021).

Despite the significance of this issue, the financing or investment aspect of sustainable development, including SDG 3, remains inadequately researched, as noted in bibliometric and meta-analysis studies by Sweileh (2020), Makarenko et al. (2021), and Raji and Demehin (2023). Financial constraints pose a significant challenge to achieving SDG 3 (Aftab et al., 2020; Siddiqi et al., 2020), and various funding sources, including domestic taxation, subsidies, collaborations with development partners, and the private sector, are often utilized.

In the current economic landscape, emerging financing instruments aim to expedite progress under the SDGs (Soni et al., 2023; Makarenko et al., 2023a, 2023b). These include green finance and green bonds (Melnik, 2016; Versal & Sholoiko, 2022; Endri et al., 2022), responsible, ESG, or impact investments (Plastun et al., 2019; Sciarelli et al., 2021; Vorontsova et al., 2022). Quatrini (2021) underscores the critical role of decision-support tools (DSTs) in advanc-

ing sustainable finance and achieving global sustainability goals.

Several studies argue that green or sustainable financing practices demonstrate resilience in crises. For instance, Boros et al. (2023) suggest that the green banking sector in Hungary is well-prepared to withstand external economic shocks and global challenges. The sector's commitment to sustainability, coupled with trust and support from residential and corporate stakeholders, positions it as a driving force in facilitating a successful green transition. Pisani and Russo (2021) find that funds with higher ESG ratings outperformed others during the COVID-19 crisis, demonstrating greater resilience and a lower level of risk contagion amid the pandemic-induced financial turmoil.

In this regard, overcoming the investment gap in achieving SDG 3 is a complex challenge that demands a multifaceted approach. Collaboration between governments, private sector actors, and international partners will be vital to finding the right balance between resource accumulation and budget attraction to realize the vision of SDG 3.

This study aims to search for potential sources of accumulation of investment or financial resources to overcome the investment gap in SDG 3 on the example of 28 European countries. The hypotheses of this study are the following:

*H1: The volume of investments by institutional sectors of selected European countries determines their level of SDG 3 achievement.*

*H1.1: The volume of state investments determines the level of SDG 3 achievement.*

*H1.2: The volume of business investments determines the level of SDG 3 achievement.*

*H1.3: The volume of household investments determines the level of SDG 3 achievement.*

*H2: The volume of healthcare expenditures under the state mandatory insurance program among European countries determines their SDG achievement to a greater extent than the volume of expenditures under the voluntary insurance program.*

## 2. METHODOLOGY

The official statistical data of Eurostat, the Organization for Economic Cooperation and Development (OECD), and the State Statistics Service of Ukraine, which contain the necessary comparable statistical data for conducting research between different countries, served as the information base for this study. Based on this, 28 European countries were selected, in particular: Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, and Ukraine. The study period is 2020 as the last year with available open statistical data for the selected sample. All calculations were performed using Stata/SE 12.

The index of sustainable development was chosen as the primary indicator of achievement of the 17 SDGs, which reflects the current situation on this issue. It is published annually in the relevant Sustainable Development Report (SDR), which contains information and analytical materials, methodology, data, and a rating of the world's countries regarding SDG progress. The index is measured in units from 0 (the worst value) to 100 (the best value), making it possible to compare the world countries regarding SDG progress and to form relevant trends. This indicator acts as an independent variable in this study and is denoted as *sdgi* for the composite indicator for all SDGs and *sdg3i* – for the SDG 3 achievement.

This study also analyzes the immediate SDG and SDG 3 progress and its direction in the scale proposed as part of the SDR methodology (Sachs et al., 2021), which includes four levels of the state of achievement and its direction (Table 1). This scale was modified into a numerical and binary dimension for further analysis.

For example, the numerical scale starts from 0, which indicates a regress in SDG achievement, and ends with 3 points, which indicates progress trends. As a result, each country receives two different indicators for the state of achievement and direction of progress, which are transformed into a binary scale – 0 and 1. Their average value forms

**Table 1.** Binary-numerical scale for SDGs achievement progress

Source: Calculations are based on SDR (Sachs et al., 2021).

SDG achievement progress	Color scale	SDG achievement direction	Direction scale	Numerical scale	Binary scale
SDG achievement	●	On track	↑	3	1
Challenges remain	●	Moderately Increasing	↗	2	1
Significant challenges remain	●	Stagnating	→	1	0
Major challenges remain	●	Decreasing	↓	0	0

a performance indicator – the index of progress in achieving the SDG3 (*sdg3pr*), while the indicator 0.5 is rounded as 0.

Determining the amount of necessary investment or financial resources to overcome the investment gap in SDG 3 requires, first of all, an analysis of potential sources of financing. As noted by The Economic and Social Commission for Asia and the Pacific (UN ESCAP, 2020), the financing of the SDG achievement should depend on the assessment of their immediate needs. Therefore, it can be carried out at different levels and time frames. Potential sources of financing here include those that governments directly control (domestic public finance) and those they can influence through policy (international public finance, both budgetary and off-budget; private finance, investment flows, etc.). Based on this, various sources of investment resources were selected as explanatory variables contributing to overcoming the investment gap in achieving the SDGs, particularly SDG 3, within the framework of *H1*. Traditionally, they can belong to three institutional sectors: the state, business, and households.

The healthcare system is essential to the country's social system, so budget funds largely cover its financing. That is why, as part of *H2*, health-

care expenses under the government/compulsory schemes (*govf*) and voluntary schemes/household out-of-pocket payments (*volf*) were chosen as explanatory variables. A summary of the data used in the study is presented in Table 2.

The examination of the functional relationship between variables can be approached through diverse methods, encompassing both linear and non-linear methods. A distinctive category within these methods includes logit- and probit-type models, regarded as a subset of multiple regression. These models are employed to forecast the probability of a specific event occurrence, such as progress in achieving the SDGs. In this context, the dependent variable  $y$  is binary, assuming values of 0 or 1 based on its relation to a particular threshold value ( $\tau$ ) (Jose et al., 2020):

$$y = \begin{cases} 1, & y > \tau \\ 0, & y \leq \tau \end{cases} \quad (1)$$

Both logit and probit models have the standard form for regression dependencies:

$$Y = X\beta + \varepsilon. \quad (2)$$

Mathematically, the logit and probit models differ only in terms of the distribution function, while their essence remains quite close (Table 3).

**Table 2.** Input data information

Indicators	Symbol	Data source
Sustainable development index for SDG 3	sdg3i	Sustainable Development Report
Sustainable development progress for SDG 3	sdg3pr	Authors' calculations
Total investment share of GDP	t_inv	
Business investment share of GDP	b_inv	Eurostat, State Statistics Service of Ukraine
Government investment share of GDP	g_inv	
Households' investment share of GDP	h_inv	
Current expenditure on health by government/compulsory schemes, share of GDP	govf	
Current expenditure on health by voluntary schemes/household out-of-pocket payments, share of GDP	volf	OECD, State Statistics Service of Ukraine



**Table 3.** Mathematical essence of logit and probit models

Source: Systematized based on Jose et al. (2020).

Logit model	Probit model
Standard logistic distribution function	The standard normal distribution function
$E\left(Y = \frac{1}{x}\right) = p(x) = \frac{e^{\beta_0 + \beta x}}{1 + e^{\beta_0 + \beta x}}, \quad (3)$	$F(\beta_0 + \beta x) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\beta_0 + \beta x} e^{-\frac{t^2}{2}} dt. \quad (4)$

### 3. RESULTS AND DISCUSSION

SDG achievement in general and SDG 3 in particular differs from one country to another. This, in turn, means the sustainable development index (*sdgi*) and sustainable development progress for SDG 3 (*sdg3i*) also differ. Figure 1 compares the levels of *sdgi* and *sdg3i* for selected European sample countries as of 2017 and 2020.

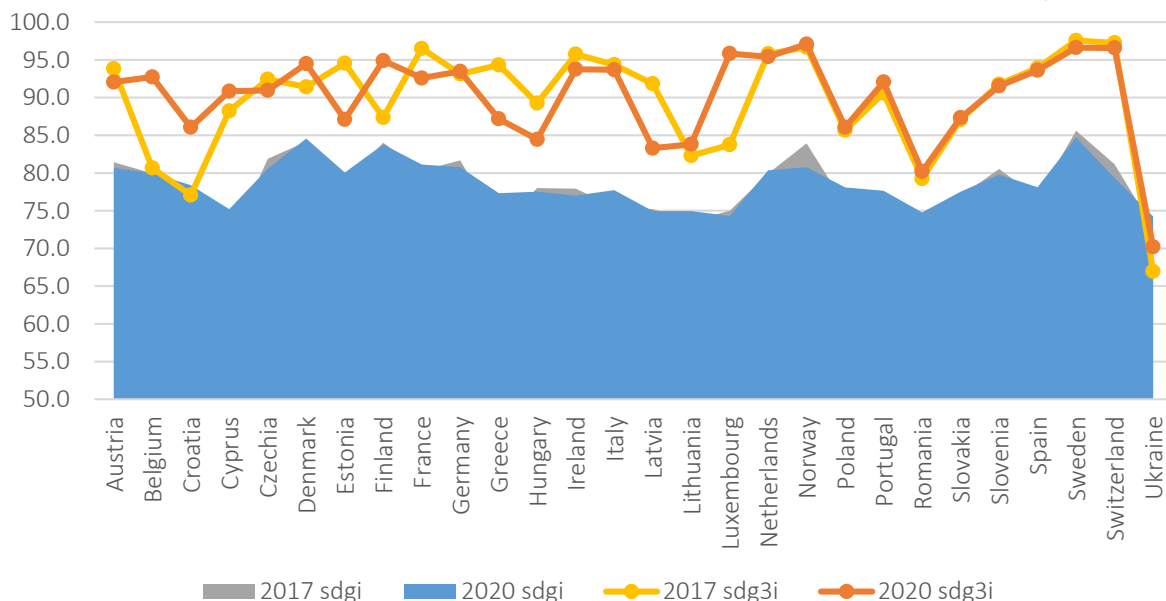
The assessed countries exhibit varying levels of achievement in SDGs overall and specifically in SDG 3. Examining the *sdgi* indicator, leaders include Sweden (84.72 units), Denmark (84.56 units), and Finland (83.77 units). Conversely, Ukraine (74.24 units), Luxembourg (74.31 units), and Romania (74.78 units) are among the countries with lower values. Assessing the dynamics compared to 2017, some countries experienced a decrease in the indicator, with Norway being a notable example, witnessing a three-unit decrease.

Regarding SDG 3 achievement, leaders differ slightly, with Norway, Sweden, and Switzerland at the forefront and Ukraine, Romania, and Latvia categorized as countries with lower achievement. Compared to 2017, some countries demonstrated significant improvement in this indicator, as seen in Belgium and Luxembourg, both experiencing increases of more than 12 units. On the other hand, there was regression in other countries, such as Latvia and Estonia, where the indicator fell by more than 8 and 7 units, respectively. It is noteworthy that the deterioration in some cases is attributed to the impact of the COVID-19 pandemic.

The SDG 3 achievement progress index, computed on a binary-numerical scale, is provided in Table 4.

To validate the appropriateness of the obtained indicators, a correlation matrix was established between the SDG 3 achievement index (*sdg3i*) from the SDR report and the derived binary SDG 3 progress index. The results reveal a direct and suffi-

Source: Created based on official SDR data (Sachs et al., 2021).



**Figure 1.** Change in the general SDG index (*sdgi*) and SDG 3 index (*sdg3i*) among European countries in 2017 and 2020

**Table 4.** Calculations of SDG 3 achievement progress index (*sdg3pr*)

Country	Numerical scale		Binary scale		Average value	The resulting variable <i>sdg3pr</i>
	SDG achievement progress	SDG achievement direction	SDG achievement progress	SDG achievement direction		
Austria	2	2	1	1	1	1
Belgium	2	2	1	1	1	1
Croatia	2	2	1	1	1	1
Cyprus	2	3	1	1	1	1
The Czech Republic	1	2	0	1	0.5	0
Denmark	2	2	1	1	1	1
Estonia	1	2	0	1	0.5	0
Finland	2	2	1	1	1	1
France	2	3	1	1	1	1
Germany	2	2	1	1	1	1
Greece	1	2	0	1	0.5	0
Hungary	1	2	0	1	0.5	0
Ireland	2	2	1	1	1	1
Italy	2	2	1	1	1	1
Latvia	1	2	0	1	0.5	0
Lithuania	1	2	0	1	0.5	0
Luxembourg	3	3	1	1	1	1
The Netherlands	2	2	1	1	1	1
Norway	3	3	1	1	1	1
Poland	2	2	1	1	1	1
Portugal	2	2	1	1	1	1
Romania	1	2	0	1	0.5	0
Slovakia	2	2	1	1	1	1
Slovenia	2	2	1	1	1	1
Spain	2	3	1	1	1	1
Sweden	3	3	1	1	1	1
Switzerland	2	3	1	1	1	1
Ukraine	0	2	0	1	0.5	0

ciently dense relationship, with a Pearson correlation coefficient of 0.72 (Table 5).

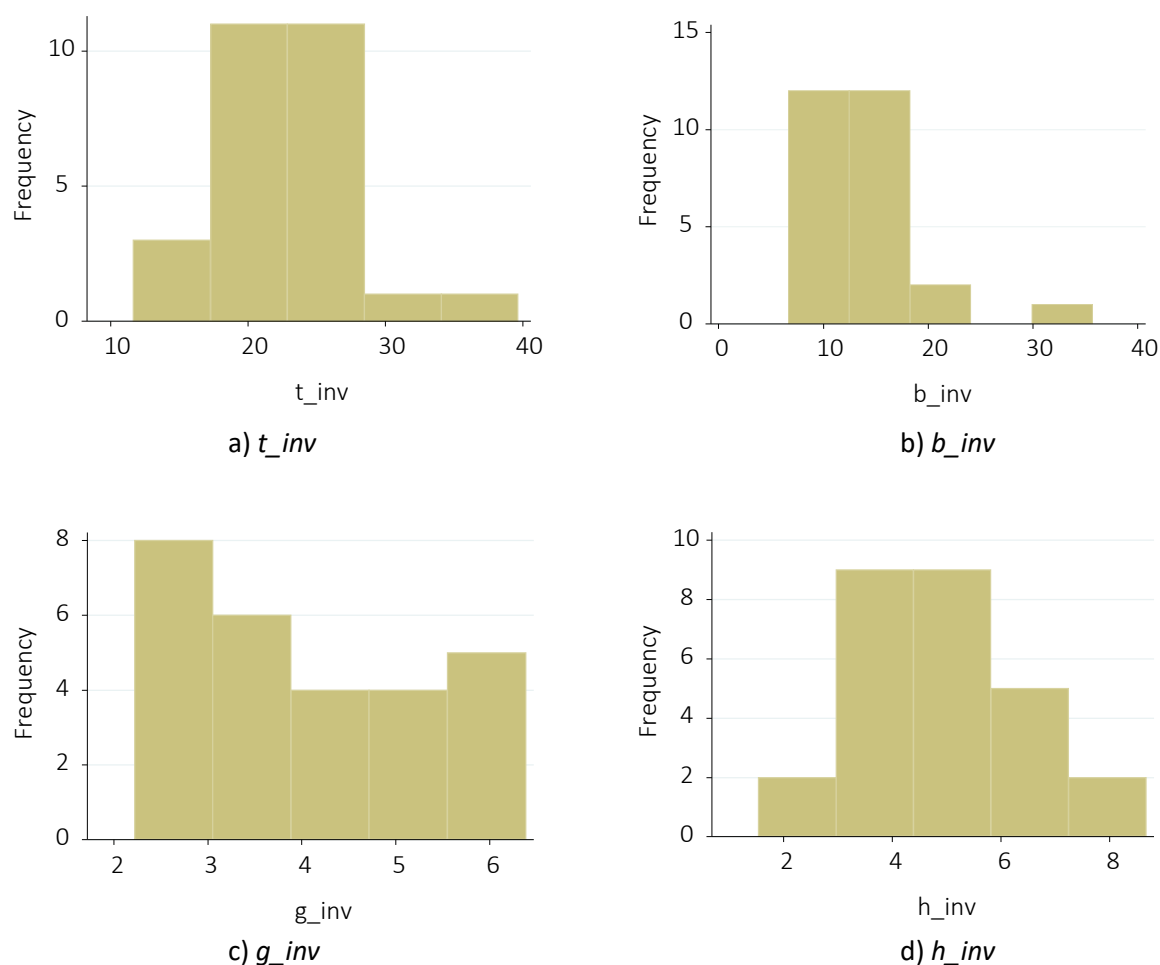
**Table 5.** Correlation matrix between the SDG 3 index and the SDG 3 progress index

Variable	<i>sdg3pr</i>	<i>sdg3i</i>
<i>sdg3pr</i>	1.0000	0.7213
<i>sdg3i</i>	0.7213	1.0000

The examination of the first hypothesis involves investigating whether the investment volumes of selected European countries correlate with their achievement levels in SDG 3. The data include the share of investments across key institutional sectors: total share (*t\_inv*), business (*b\_inv*), government (*g\_inv*), and households (*h\_inv*). Figure 2 illustrates the frequency distribution of these indicators through histograms, offering a visual representation of the data range.

Scatterplots and correlation coefficients (*r*) are presented in Figure 3; they provide insights into the existence or absence of relationships between the variables. These visualizations aid in discerning patterns or trends in the data, contributing to the understanding of potential connections between investment volumes and SDG 3 achievement levels.

The findings reveal relatively weak relationships between the examined indicators, as indicated by the correspondingly low correlation coefficients. Visual inspection does not suggest a clear dependency, but a more thorough investigation is required for a more robust assessment. Notably, the correlation coefficient for investment indicators related to the state and households is negative.



**Figure 2.** Frequency histograms for share of total investment and by institutional sector

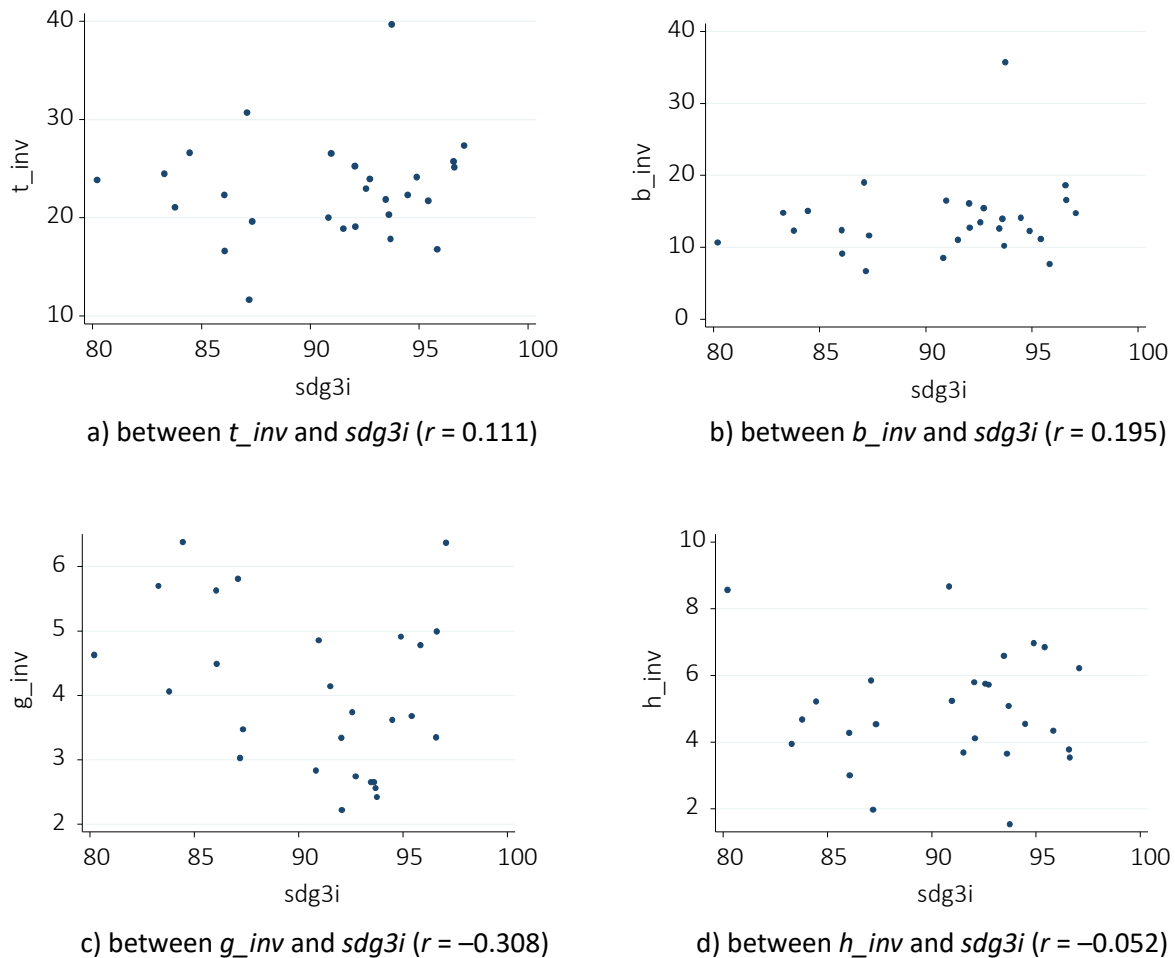
In light of these observations, a comprehensive analysis is conducted using logit and probit modeling. In this analysis, the binary value of the SDG 3 achievement progress index serves as the depend-

ent variable, while investments by institutional sectors of the economy act as the independent variables. The results are presented in Table 6.

**Table 6.** Results of logit and probit regressions for determining the amount of accumulation of investment resources to overcome the investment gap in achieving SDG 3

<b>sdg3pr</b>	<b>Coef.</b>	<b>Std. err.</b>	<b>z</b>	<b>P &gt;  z </b>	<b>[95% conf. interval]</b>	
<b>Logit regression</b>						
$b\_inv$	0.035	0.135	0.260	0.797	-0.229	0.298
$g\_inv$	-0.893	0.445	-2.010	0.045	-1.765	-0.020
$h\_inv$	0.040	0.317	0.120	0.901	-0.582	0.661
$\_cons$	4.248	2.874	1.480	0.139	-1.386	9.881
prob > chi <sup>2</sup>	0.162	–	–	–	–	–
pseudo R <sup>2</sup>	0.166	–	–	–	–	–
<b>Probit regression</b>						
$b\_inv$	0.029	0.078	0.370	0.709	-0.124	0.183
$g\_inv$	-0.549	0.262	-2.090	0.036	-1.063	-0.035
$h\_inv$	0.045	0.175	0.260	0.796	-0.299	0.389
$\_cons$	2.390	1.493	1.600	0.110	-0.537	5.316
prob > chi <sup>2</sup>	0.148	–	–	–	–	–
pseudo R <sup>2</sup>	0.173	–	–	–	–	–





**Figure 3.** Scatter plots of investment shares by institutional sector and SDG 3 index

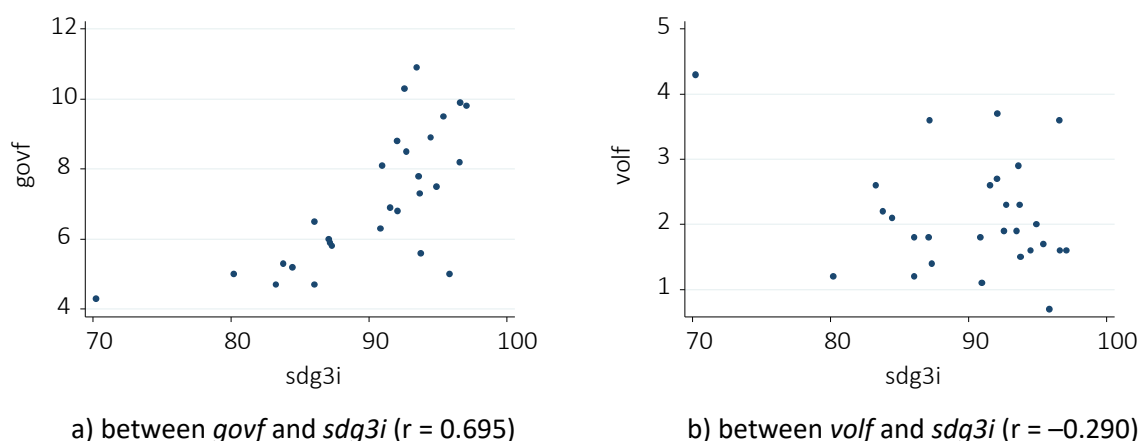
The  $\chi^2$  coefficients testify to the low explanatory power and general adequacy of the model; the coefficient of determination is also sufficiently low, which leads to the conclusion that there are no statistically significant results during the construction of this model. Based on this, it can be stated that *H1*, with the volume of investments of the state (*H1.1*), business (*H1.2*), and households (*H1.3*) of selected European countries determining their level of achievement of SDG 3, is rejected.

The analysis underscores the imperative for increased investment resources, emphasizing the need to explore additional financing sources to bridge the investment gap in realizing SDG 3, particularly within the public sector. To discern potential cause-and-effect relationships, scatter diagrams and correlation coefficients are generated for healthcare expenditures under various programs and the SDG progress index, as depicted in Figure 4.

For the first graph (a), a certain regularity is observed: the correlation coefficient indicates a direct high relationship between healthcare expenditures under the state insurance program and the SDG progress index. Conversely, for the voluntary insurance program, the correlation coefficient is weak, casting uncertainty on the existence of a meaningful dependence.

Subsequently, logit and probit modeling is undertaken, and the outcomes are detailed in Table 7. To compare the two models, additional quality criteria, including information criteria (AIC, BIC), are scrutinized.

Both models obtained meet the minimum adequacy criteria and exhibit explanatory power. Their comparison reveals similar results in all additional parameters. The first model demonstrates a connectivity density of 31%, while the second exhibits 29.9%. This implies that, on



**Figure 4.** Scatterplots for health care expenditure indicators by public and voluntary insurance programs and the SDG index

**Table 7.** Results of repeated logit and probit regressions for determining the amount of accumulation of financial resources to overcome the investment gap in achieving SDG 3

<i>sdg3pr</i>	Coef.	Std. err.	z	P >  z	[95% conf. interval]	Odds ratio
<b>Logit regression</b>						
<i>govf</i>	1.041	0.464	2.240	0.025	0.131	2.832
<i>volf</i>	-0.487	0.591	-0.820	0.411	-1.646	0.615
_cons	-4.750	2.802	-1.690	0.090	-10.242	0.09
prob > chi <sup>2</sup>	0.005	–	–	–	–	–
pseudo R <sup>2</sup>	0.310	–	–	–	–	–
Log likelihood	-11.559	–	–	–	–	–
LR chi2(2)	10.38	–	–	–	–	–
AIC	29.118	–	–	–	–	–
BIC	33.115	–	–	–	–	–
<b>Probit regression</b>						
<i>govf</i>	0.554	0.224	2.470	0.013	0.115	x
<i>volf</i>	-0.206	0.327	-0.630	0.530	-0.847	x
_cons	-2.645	1.556	-1.700	0.089	-5.694	x
prob > chi <sup>2</sup>	0.005	–	–	–	–	–
pseudo R <sup>2</sup>	0.299	–	–	–	–	–
Log likelihood	-11.747	–	–	–	–	–
LR chi2(2)	10.01	–	–	–	–	–
AIC	29.494	–	–	–	–	–
BIC	33.491	–	–	–	–	–

average, 30% of the progress toward SDG 3 achievement depends on health spending. In both models, expenditures on healthcare under the state insurance program emerge as statistically significant.

Since the coefficients in both models represent logarithmic values, understanding the nature of the influence requires consideration of the sign – whether it is positive or negative. To address this, the exponent of these coefficients is calculated, yielding the odds ratio. This ratio indicates the likelihood of the independent variable

(*sdg3pr*) being equal to one when the dependent variable (*govf*, *volf*) increases by one. According to the first model, each unit increase in healthcare costs under the state insurance program is associated with an average increase of 1.041 units in the chances of progress toward SDG 3. The second model also underscores the positive influence of this factor.

Simultaneously, the probability prediction that the resulting variable within these models will equal 1 is quite high – 83.6% for the logit model and 80.7% for the probit model (Table 8).

**Table 8.** Results of forecasting the probability of progress in achieving SDG 3 based on mean values

Parameter	Margin	Std. err.	z	P >  z	[95% conf. interval]	
<b>Logit regression</b>						
_cons	0.836	0.099	8.4	0	0.641	1.031
<b>Probit regression</b>						
_cons	0.807	0.097	8.3	0	0.616	0.997

Upon this analysis, *H2* is confirmed: healthcare expenditures under the state-mandated insurance program in European countries make a more substantial impact on the progression toward Sustainable Development Goals (SDGs) compared to the voluntary insurance program.

Studies devoted to the issues of accumulation of financial resources to overcome the investment gap in achieving the Sustainable Development Goals are of great importance for solving this issue. Notably, Aust et al. (2020), based on a multivariate analysis and an ordered probit model, provide empirical evidence that foreign direct investment (FDI) assumes a pivotal role in propelling the SDGs in the African context. While emphasizing advancements in SDG 3, the study acknowledges the interconnectedness of this goal with others. Furthermore, the study's focus on the nuanced distribution of FDI across various institutional sectors aligns seamlessly with the objectives of the current investigation.

Ibukun (2021) investigates the relationships between health expenditure, health outcomes, and governance quality across 15 West African

countries, specifically focusing on Sustainable Development Goal 3. The findings underscore that health expenditure significantly influences health outcomes, exhibiting a negative impact on infant and under-five mortality but a positive effect on life expectancy at birth. Moreover, the study highlights that the efficacy of public health spending is contingent on the quality of governance, with nations exhibiting superior governance deriving more benefits from their health expenditure. Importantly, this study scrutinizes health expenditure in finer detail, elucidating interdependencies at the level of government-mandated schemes and voluntary initiatives alongside household out-of-pocket payments.

Diverging from analogous studies on this subject, the present investigation explores potential reservoirs of investment or financial resources across various strata to bridge the investment gap associated with SDG 3. This methodical approach contemplates a spectrum of funding sources, laying the groundwork for the formulation of policies and the establishment of strategic partnerships in this pursuit.

## CONCLUSION

This paper aims to bridge the investment gap in SDG 3 across 28 European countries. The study employs logit and probit modeling to explore the relationship between the share of investments from key institutional sectors (business, state, and households) and the progress in achieving SDG 3. The findings reveal that the share of investments does not exhibit a statistically significant relationship with progress in SDG 3.

Recognizing the pivotal role of the state in advancing SDG 3 and regulating healthcare systems, the hypothesis regarding the impact of healthcare costs under state mandatory and voluntary insurance programs is tested. The results indicate a statistically significant direct relationship between healthcare costs under the state insurance program and progress in achieving SDG 3.

The study suggests that the most optimal approach to overcoming the existing gap in SDG 3 achievement involves a combination of resources. While accumulating investment resources through various financial mechanisms like impact investing, philanthropy, and public-private partnerships can provide

crucial capital, the advocacy for policy alignment with national priorities and the attraction of budget funds remain essential. This comprehensive strategy ensures a sustained and equitable progression toward achieving SDG 3.

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