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Do Subsidies Foster Growth or Dependency? An Empirical Analysis of Georgian Small and Medium Enterprises

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ABSTRACT

The paper aims to assess the impact of state subsidies on the development of small and medium-sized enterprises (SMEs) in Georgia. The empirical analysis, using data from 2016 to 2025 and financial indicators for beneficiaries of the "Enterprise Georgia" program, demonstrates that subsidies have a substantial positive impact on SME revenues and assets in the short term. However, in the long run, this effect diminishes, liabilities relative to assets increase, and no significant correlation with employment levels is observed. The study concludes that unplanned subsidies with weak control mechanisms pose a risk of creating a "zombie economy" and do not generate a sustainable, positive impact on the SME sector.

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სტატიის შესახებ

საკვანძო სიტყვები:

სუბსიდია
მცირე და საშუალო საწარმოები (SMEs)
სუბსიდიის ეფექტურობა
თანადაფინანსება
გრანტი
მცირე და საშუალო ბიზნესის მაჩვენებლები
ვალისა და აქტივების თანაფარდობა
ზომბი კომპანიები.

აბსტრაქტი

ნაშრომის მიზანია სახელმწიფო სუბსიდიების გავლენის შეფასება საქართველოში მცირე და საშუალო საწარმოების განვითარებაზე. ემპირიული ანალიზი, რომელიც იყენებს 2016 -2025 წლების მონაცემებს და „აწარმოე საქართველოში“ პროგრამის ბენეფიციარების ფინანსურ ინდიკატორებს, აჩვენებს, რომ სუბსიდიებს მოკლევადიან პერიოდში მნიშვნელოვანი დადებითი გავლენა აქვთ მცირე და საშუალო საწარმოების შემოსავლებსა და აქტივებზე. თუმცა, გრძელვადიან პერსპექტივაში ეს ეფექტი მცირდება, ვალდებულებების აქტივებთან თანაფარდობა იზრდება და დასაქმების დონესთან მნიშვნელოვანი კორელაცია არ შეინიშნება. კვლევა ასკვნის, რომ დაუგეგმავი სუბსიდიები სუსტი კონტროლის მექანიზმებით ქმნის „ზომბი ეკონომიკის“ ჩამოყალიბების რისკს და არ ახდენს მდგრად, დადებით გავლენას მცირე და საშუალო ბიზნესზე.

1. Introduction

Small and medium-sized enterprises (SMEs) are globally recognized as a driving force for a country's economic and social development. Their importance is particularly pronounced in developing and

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transitional economies, where they generate a significant share of employment, innovation, and added value across sectors, thereby directly contributing to overall economic activity. However, in these types of economies, SMEs often face systemic financial constraints that hinder their competitiveness, stability, and growth potential.

The market's "invisible hand" often disadvantages small businesses, deepening regional and social inequalities. To address these challenges, governments actively implement various intervention instruments, including subsidy programs. These programs generally aim to stimulate economic activity, promote job creation, encourage innovation, and enhance the country's overall competitiveness. Subsidies can take diverse forms—tax incentives, grants, low-interest loans, or direct financial support—and are often targeted at strategically essential sectors.

Nevertheless, the impact of state support on SME development remains a debated topic among researchers and policymakers. Evidence regarding its effectiveness is mixed: some studies indicate positive effects of state support on sales, employment, productivity, and innovation (Biru, 2014; Decramer & Vanormelingen, 2016; McKenzie, 2017), while others do not confirm such effects or observe significant differences depending on the type, design of the program, and characteristics of the beneficiaries (Bernini & Pellegrini, 2011; Kumbhakar et al., 2023). Moreover, potential negative consequences of subsidies are actively discussed, including inefficient resource allocation, market distortions, and the risk of creating "zombie companies"[5] that cannot compete in natural market conditions and survive only through state assistance.

In Georgia, where SMEs account for a substantial share of the country's economic development, assessing the effectiveness of state subsidy programs is particularly significant. Over the past decade, implemented policies - especially under the "Enterprise Georgia" program - have enabled the mobilization of significant resources to support this sector. However, the question remains: to what extent is this support effective and sustainable in the long term?

This paper aims to evaluate the impact of state subsidy programs on the development and growth of small and medium-sized enterprises in Georgia. Building on our preliminary analysis, which highlighted

[5] A "zombie company" is a business unable to sustain itself without external financial support, such as government bailouts or loans. Burdened by high debt, these companies can only cover operating expenses and interest payments, not reduce their obligations. Edward Kane coined the term in 1987 for struggling savings and loan organizations. By Altman a company is deemed to be a zombie if its three-year average EBITDA interest coverage ratio is below one and its three-year moving average Altman Z-score is below zero.

concerns regarding the sustainability of subsidy effects (Kasradze & Lakia, 2024), this study is based on an analysis of financial data and seeks to address two main research questions:

1. Does state subsidization increase the productivity and profitability of enterprises?
2. Does the subsidy have a long-term effect on business development?

The results of this study aim to contribute to academic discourse and to the development of practical recommendations for policymakers to enhance the effectiveness and sustainability of state support mechanisms.

2. Literature Review

State involvement in supporting small and medium-sized enterprises (SMEs), particularly through subsidy programs, has become a prominent subject of research worldwide over the past decade. The existing literature offers diverse, sometimes contradictory findings in this area.

Several studies confirm the positive role of state support on SMEs' key performance indicators. Based on a study conducted in Belgium, Decramer and Vanormelingen (2016) found that state subsidies had a positive impact on employment, production, and productivity in small businesses. Similarly, Cerqua and Pellegrini (2014), examining the case of Italy, indicate that subsidy programs contributed to the growth of firms' assets and revenues (Adorno et al., 2007; Liu et al., 2024). Howell (2017), analyzing R&D subsidies in the United States, concluded that funded companies experienced faster early-stage growth and attracted additional capital.

However, authors often note that these positive effects tend to be short-term or that cumulative expenditures may not exceed the benefits received. Bernini and Pellegrini (2011) conclude that while subsidies may have an adverse short-term effect on productivity, they can have a positive long-term impact, particularly in conjunction with technological development.

A significant portion of the literature criticizes the effectiveness of subsidies and highlights the associated systemic risks. One of the most common critiques concerns the danger that subsidies may create firms that remain viable solely through state support, without relying on natural market mechanisms. This phenomenon is frequently referred to in the literature as a "zombie economy" (Papava, 2020) or "zombie firms. The risk of such outcomes is significantly heightened by weaknesses in the program design,

particularly in the evaluation, selection, and monitoring stages, as highlighted in recent policy literature (Kállay & Takács, 2023).

Research shows that subsidies can lead to suboptimal allocation of resources and distort competition. For instance, Pellegrini and Muccigrosso (2017) found that subsidized startups have a low risk of default, which, on the one hand, is a positive indicator, but on the other hand, may suggest that inefficient businesses are artificially sustained in the market economy.

The existing scientific literature in Georgia is relatively limited and primarily focuses on agricultural subsidy programs. Pérez-Méndez (2019) confirms a positive correlation between agricultural subsidies and improvements in farmers' livelihoods; however, the author notes that the effectiveness of distribution mechanisms requires further investigation. Skhirtladze (2022) attempts a comparative analysis of Georgian programs in the context of international experience. The author emphasizes that learning from global best practices and implementing innovative approaches is essential to enhance the effectiveness of state support mechanisms (Skhirtladze et al., 2022).

Despite the number of existing studies, several significant gaps can be identified:

1. Contextual dependence: Results are highly dependent on the specific country, sector, and program design, making it difficult to draw general conclusions.
2. Lack of long-term effects: Many studies focus on short-term outcomes, while the potential distorting effects of subsidies on the long-term sustainability and market performance of enterprises are less explored.
3. Limited Georgian context: There is a scarcity of systematic, empirical research on the effectiveness of SME subsidy programs in Georgia.

The present study aims to assess the outcomes of subsidies through an empirical analysis of the long-term effectiveness of one of Georgia's most extensive programs, the "Enterprise Georgia" subsidy scheme.

3. Research Methodology

The research methodology is based on secondary data analysis. Both theoretical and empirical methods were employed to assess the impact of state subsidy programs on the financial performance of small and medium-sized enterprises (SMEs).

The empirical foundation of the study was built on publicly available, high-reliability data sources. The primary sources included:

- Official statistical reports published by the National Statistics Office of Georgia (GeoStat) on business sector turnover, production output, employment, and average wage dynamics for the period 2016–2025.
- Official reports of the state program “Enterprise Georgia,” including financial indicators of beneficiary enterprises and subsidy volumes for the period 2014–2024 (BDO, 2020; State Audit Office of Georgia, 2022)

The research subjects were selected based on principles of accuracy and relevance, focusing on enterprises (hereafter referred to as beneficiaries) that participated in the “Enterprise Georgia” program between 2016 and 2024. Two main analytical approaches were employed for data processing and hypothesis testing:

Trend Analysis: This method was used to assess the dynamics of financial indicators (revenue, assets, and liabilities) for SMEs participating in subsidy programs over the years. The analysis identified both short- and long-term trends following the receipt of subsidies.

Correlation Analysis: This method was applied to identify relationships and statistical dependencies between the amount of subsidies and the key financial indicators of the beneficiary enterprises. Specifically, the analysis examined the relationships between subsidies and revenue, asset levels, employment size, and the debt-to-asset ratio. The study was conducted using SPSS software and employed Pearson's correlation coefficient.

The combination of these two approaches enabled the evaluation of both temporal changes and statistical relationships among variables, providing a solid basis for well-supported conclusions.

4. Research Results and Discussion

Georgia's economic policy aims to support the private sector, particularly small and medium-sized enterprises (SMEs), and to create a favorable business environment for them. According to GeoStat data from 2023, there are more than 950,000 registered business entities in the country, of which approximately 250,000 are active enterprises. SMEs account for 75% of this total, highlighting their significant role in the national economy.

Data from 2024 indicate that SMEs account for 65% of total employment in Georgia, while their share of overall value added exceeds 60%. Additionally, in 2024, the number of employees in the SME sector increased by 10%, and their productivity grew by 20%. These figures confirm the substantial contribution of small and medium-sized businesses to the country's economic growth and employment expansion.

Chart 1.

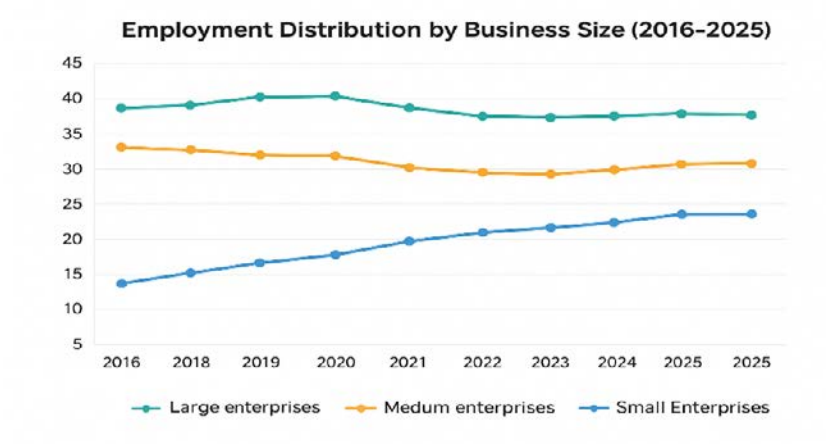
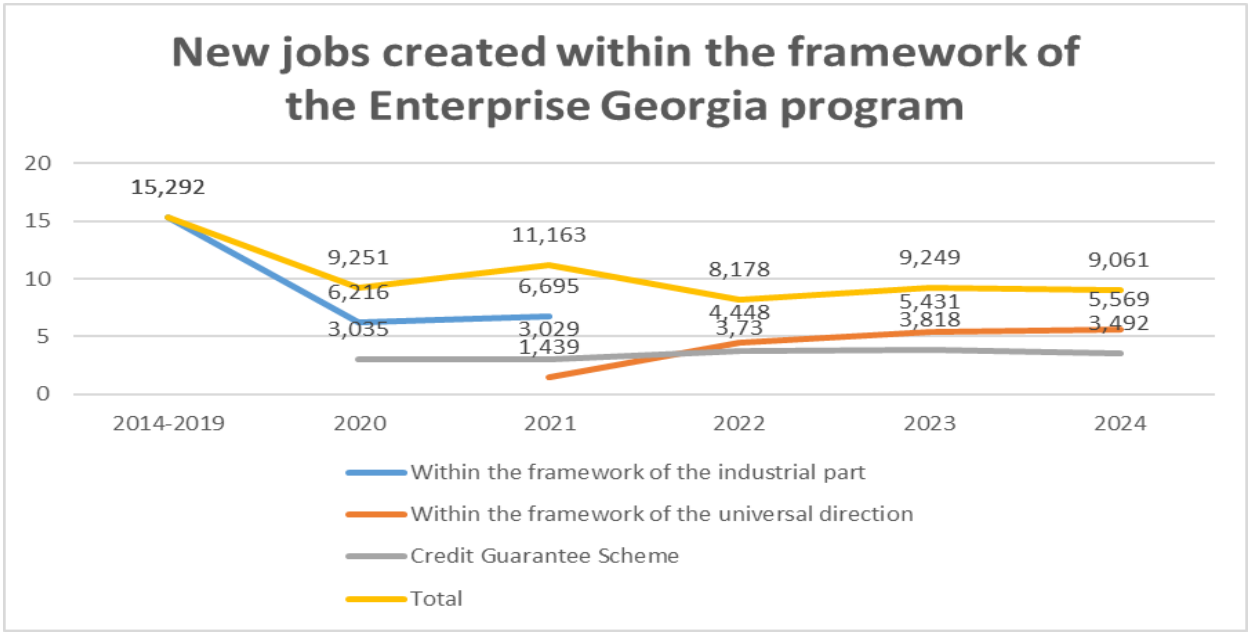


Chart 2.

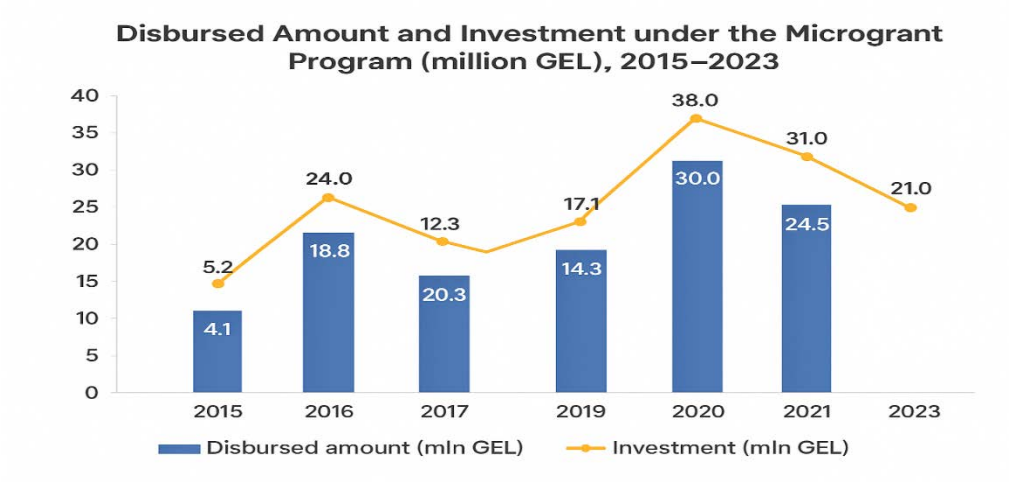


Source: Enterprise Georgia, 2023

The development strategies for 2016–2021 and 2021–2025, formulated by the Ministry of Economy and Sustainable Development of Georgia, include promoting various industries through state subsidy mechanisms. Within the framework of the "Enterprise Georgia" program, the total amount of subsidies issued between 2014 and 2024 exceeded 2 billion GEL. This amount includes grants, low-interest loans,

and co-financing of interest expenses. The interest subsidy mechanism reduced the average annual interest rate on loans for medium-sized enterprises by approximately 5–6 percentage points, significantly enhancing financial accessibility.

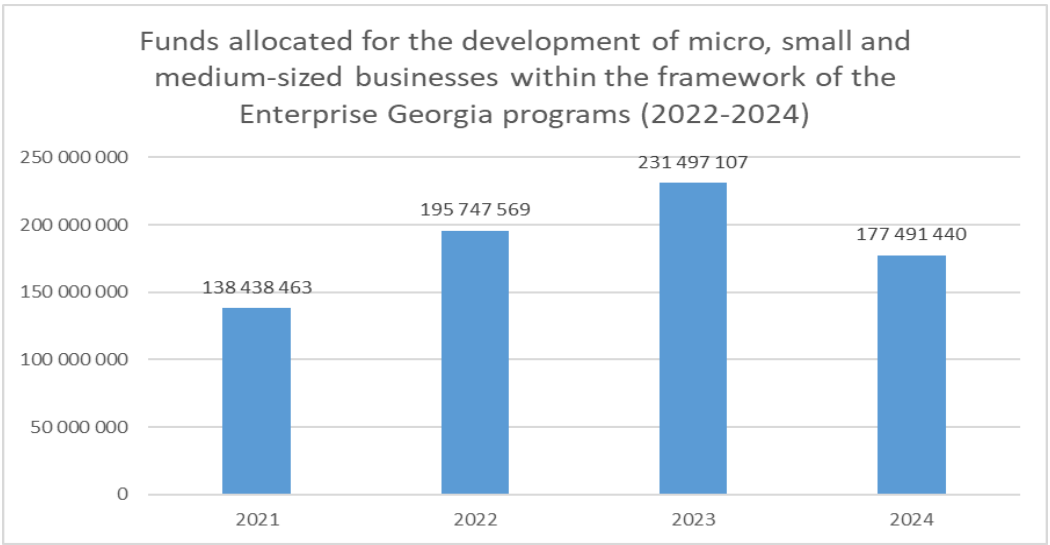
Chart 3



Source: Enterprise Georgia, 2023

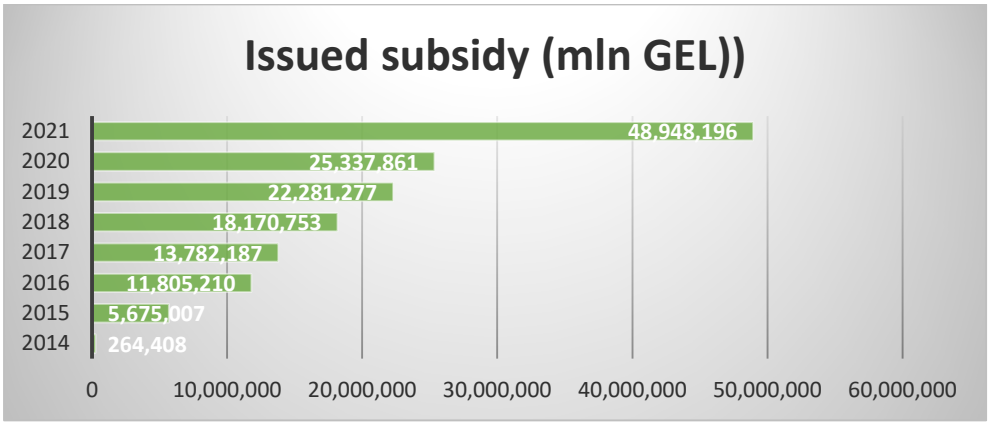
In 2023 alone, the program's beneficiaries exceeded 6,000, of whom 70% were small and medium-sized enterprises. The turnover of the enterprises financed under the program increased by an average of 25%, while the number of employees grew by 15%. The amount of subsidies issued by "Enterprise Georgia" since 2014 is presented in Diagrams 3 and 4.

Chart 4



Source: Enterprise Georgia, 2023

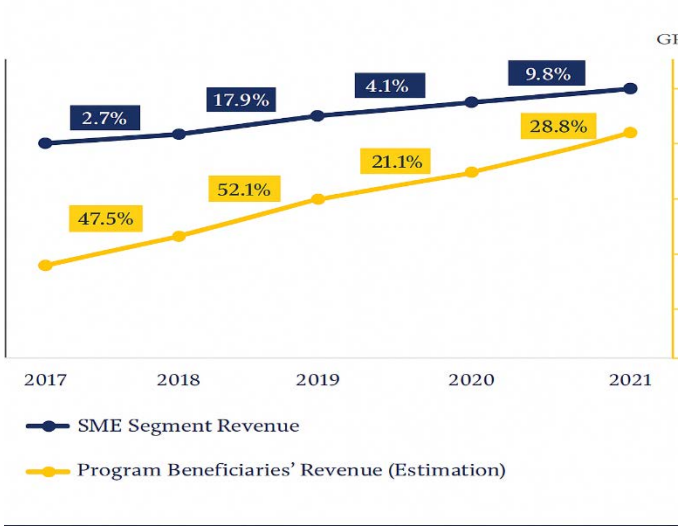
Chart 5



Source: Enterprise Georgia, 2023

Within the program implemented between 2015 and 2023, a total of 9,349 projects were financed, involving 12,521 beneficiaries. The total amount of financial support allocated by the Agency under the Micro and Small Entrepreneurship Support Program amounted to approximately GEL 115.8 million, while the total volume of investments exceeded GEL 147.7 million. According to the Agency, more than 23,000 new jobs were created as a result. According to 2021 data from *Enterprise Georgia*, the share of participating beneficiaries' revenues in the total SME segment was 15%. In 2021, beneficiaries' revenues accounted for 16% of total revenue in the respective SME sectors. During 2017–2021, the annual growth rate of beneficiaries' revenues significantly exceeded that of revenues in the corresponding SME sectors. Over the period 2017–2021, the compound annual growth rate (CAGR) for the SME segment was 8.5%, while for the beneficiaries it reached 36.8%.

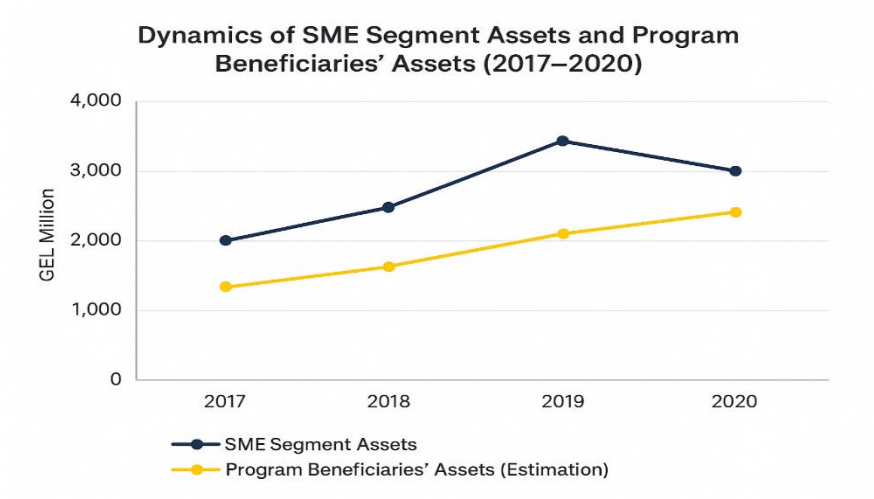
Chart 6



Source: Enterprise Georgia, 2021

According to data from beneficiaries in 2021, their assets in 2020 accounted for 21% of total assets in the SME segment. The total value of assets owned by the Agency's beneficiary companies amounted to GEL 670 million, while the total value of assets in the corresponding SME sectors reached GEL 3.2 billion. In 2017, the value of beneficiaries' assets accounted for 12% of the SME segment, representing a 9-percentage-point increase by 2020.

Chart 7



Below is the percentage change in the financial indicators of the Agency's beneficiary companies during the period of 2017–2021.

Table N1 - Total assets (million GEL)

Economic Sector	**2017**	**2018**	**YoY**	**2019**	**YoY**	**2020**	**YoY**	**2021**	**YoY**
Processing Industry	9,2	16,3	76%	28,4	75%	31,2	10%	34,4	10%
Agriculture	70,5	75,7	7%	87,3	15%	98,7	13%	111,4	13%
Construction	-	-	-	11,6	-	13,6	17%	15,6	15%
Trade and Service Industry	28,3	37,7	33%	53	41%	64,8	22%	78,8	22%
Transport and Storage	5,6	6,9	24%	8,9	29%	8,9	0%	9,3	5%
Education and Health Care	7,1	7,9	12%	8,8	10%	12,2	39%	21,3	74%
Other Services	78,3	122,4	56%	166,1	36%	207,9	25%	242,5	17%

Accommodation and Catering	44,2	54,7	24%	72,3	32%	101,6	41%	123	21%
Creative Industry	8,6	13,4	56%	17,9	34%	21,1	18%	24,7	17%
Financial and Business Support Services	19,5	44	125%	79,1	80%	102,3	29%	146	43%
Total	**271,2**	**379**	**40%**	**533,4**	**41%**	**662,3**	**24%**	**807,1**	**22%**

Source: Enterprise Georgia 2021

Table N2 - Total Loan (Million GEL)

Economic Sector	**2017**	**2018**	**YoY_2018**	**2019**	**YoY_2019**	**2020**	**YoY_2020**	**2021**	**YoY_2021**
Construction	3,9	9,3	140%	21,8	134%	23,1	6%	22,9	-1%
Manufacturing	36	33,3	-7%	39,5	19%	49,6	25%	48,6	-2%
Transport				2,3		2,3	-1%	2,3	1%
Trade and Vehicle Repair	8,8	13	48%	20,9	61%	26,5	27%	24,8	-6%
Hotels and Restaurants	2,2	2,5	15%	3	20%	3,7	24%	5,3	43%
Information and Communication	5,6	8,8	59%	9,9	13%	12,5	26%	17,5	40%
Real Estate Activities	20,7	28,8	39%	53,1	84%	78,2	47%	76	-3%
Professional, Scientific and Technical Activities	12,2	17,3	41%	31	80%	41,6	34%	52,9	27%
Education	1,8	5,2	187%	8,8	70%	11,7	33%	10,3	-12%
Health and Social Work	6	23,4	293%	46,1	97%	68,7	49%	73,1	6%
Total	**97,1**	**141,6**	**46%**	**236,4**	**67%**	**317,7**	**34%**	**333,6**	**5%**

Source: Enterprise Georgia 2021

Table 3 (Debt / Asset Ratio)

Economic Sector	2017	2018	2019	2020	2021
Construction	42%	57%	77%	74%	67%
Manufacturing	51%	44%	45%	50%	44%
Transport			20%	17%	15%
Trade and Vehicle Repair	31%	34%	39%	41%	31%
Hotels and Restaurants	39%	37%	34%	42%	56%
Information and Communication	79%	111%	114%	103%	82%
Real Estate Activities	26%	24%	32%	38%	31%
Professional, Scientific and Technical Activities	28%	32%	43%	41%	43%
Education	21%	39%	49%	55%	42%
Health and Social Work	30%	53%	58%	67%	50%
Total	36%	37%	44%	48%	41%

Source: Enterprise Georgia (To calculate the beneficiary enterprise's Debt/Asset ratio, the total amount of loans issued was divided by the total value of assets.)

Looking at the trend, it is evident that since 2014, the total amount of funds disbursed under the state subsidy program has steadily increased. This growth has a short- and medium-term shock effect on the revenues and asset values of beneficiary companies. The "shock" effect occurs because funds received through subsidies serve as additional income for companies, which, in the short term, increases their current assets (cash flow) and has a positive impact on their financial statements. However, in the long run, this effect diminishes. For instance, based on the most recent available data - from 2019, 2020, and 2021 - both the revenues and total asset values of beneficiary companies show a decline.

Furthermore, when examining the Debt-to-Asset ratio, it becomes evident that in key industrial sectors this ratio has been increasing. Over time, enterprises tend to accumulate more liabilities than assets, resulting in low liquidity. In economics, such firms are often referred to as "zombie companies," meaning they become a burden on the industry rather than a contributor to its growth.

Considering the scale of the subsidy programs — whose purpose should extend beyond benefiting individual recipients to fostering overall industrial development — it appears that state subsidies for Georgian small and medium-sized enterprises have not fully achieved this goal. Consequently, in the long term, government subsidies do not have a significant positive impact on SMEs. Moreover, data after 2021 are not yet available, making it difficult to obtain a complete picture of long-term trends.

Additionally, Table N4 presents a correlation analysis conducted in SPSS, showing the relationships among the amount of subsidies provided, beneficiaries' revenues, and employment levels.

Table N4

Correlations

		subsidia	Shenosavali	aqtivebi	dasaqmeba
subsidia	Pearson Correlation	1.000	.858	.902[a]	-.699
	Sig. (2-tailed)		.063	.036	.189
	N	5	5	5	5
Shenosavali	Pearson Correlation	.858	1.000	.941[a]	-.935[a]
	Sig. (2-tailed)	.063		.017	.020
	N	5	5	5	5
aqtivebi	Pearson Correlation	.902[a]	.941[a]	1.000	-.921[a]
	Sig. (2-tailed)	.036	.017		.027
	N	5	5	5	5
dasaqmeba	Pearson Correlation	-.699	-.935[a]	-.921[a]	1.000
	Sig. (2-tailed)	.189	.020	.027	
	N	5	5	5	5

a. Significant at .05 level

The research results indicate that there is no significant correlation between subsidies and employment levels. Nevertheless, subsidies have a positive impact on companies' revenues and asset values. The correlation was calculated based on data from the last five years, providing a short- and medium-term assessment. This indicator creates an illusory effect. The company's financial position appears firmer in the short term; however, this effect is primarily driven by an increase in current assets from the receipt of subsidized funds, rather than by the infusion of real capital or by improvements in the company's long-term financial strength. Specifically, loans or obligations obtained through subsidies do not generate sustainable capital growth; instead, they increase the debt-to-asset ratio, which in turn negatively affects the company's liquidity.

Accordingly, it can be assumed that the impact of subsidies primarily affects financial indicators - such as revenues and asset values - over the short - and medium-term, while their long-term effect is almost negligible. This suggests that the subsidy design produces only a temporary financial effect and does not significantly contribute to companies' sustainable development.

Furthermore, it is essential to note that while the short-term effect may temporarily boost business performance, in the long run, it may even contribute to the degradation of the company's financial structure. High liabilities are not correctly matched to asset growth, ultimately creating a pseudo-capital effect from subsidized revenues.

5. Conclusion and Recommendations

The study found that state subsidy programs in Georgia do not have a sustainable, positive impact on the long-term development of small and medium-sized enterprises (SMEs). Although subsidies generate a significant short-term effect on the revenues and assets of beneficiary enterprises, this effect diminishes over time.

The empirical results of the study revealed several key issues:

1. The long-term impact of subsidies on enterprises' financial stability is negative, as reflected in the rising debt-to-asset ratio.
2. No statistically significant correlation was observed between subsidies and employment levels.
3. The program's monitoring and transparency mechanisms are insufficient, leading to inefficient resource allocation and increasing the risk of creating "zombie companies".

Therefore, reforming state support mechanisms is essential. Future policy should focus on:

- Increasing the targeting of subsidies by introducing transparent and measurable criteria.
- Focusing on long-term structural outcomes (innovation, exports, productivity), rather than solely on financial indicators.
- Establishing a robust monitoring and evaluation system to track the program’s real impact and ensure transparency.

Only with such reforms can state subsidies become an effective instrument for the sustainable development of SMEs and the enhancement of Georgia’s economic competitiveness, rather than a source of a “zombie economy.”

6. Research Limitations

Although state subsidy programs cover various economic sectors, access to relevant information remains limited, which constrains the comprehensiveness of the study. For this reason, the paper focuses specifically on projects implemented under the "Enterprise Georgia" program. The research subjects were beneficiaries who participated in the program between 2016 and 2024, and the results were subsequently generalized to form the study's overall conclusions.

7. The Statement Regarding the Usage of AI

During the preparation of this article, the authors used AI assistance: Deepseek for translating the text from Georgian into English and Grammarly for grammar and style checking. Authors confirm the originality of this work.

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