PUBLIC-PRIVATE PARTNERSHIP TO SCALE UP CIRCULAR ECONOMY (THE GEORGIA CASE)

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Public-private partnerships (PPPs) are considered an important enabling mechanism for promoting a circular economy. The paper aims to study PPP tools to scale up the circular economy, present Georgia's position, identify opportunities, and develop relevant recommendations. Georgia currently operates at a circularity level of 1.3%, indicating a significant circularity gap of 98.7%. Despite several steps successfully taken in Georgia already, more opportunities should be opened up and turned into assets to promote circularity and promote sustainable development. There is low interest from businesses in the innovative approaches required to transition to circularity, indicating that extensive measures need to be taken. Their potential to raise their company reputation should be accented, and the appropriate campaign directed with this emphasis, so as to raise awareness among both the businesses and the public (as potential customers). As the state has the most important role in the growth of circularity, there is a need to expand the relevant legal framework. Georgia's future steps in scaling up its circular economy should be actively connected with the private sector through identifying, implementing, and evaluating processes, and through the institutional duties of PPP projects.

Keywords:
Public-Private Partnership, PPPs, public policy, circular economy, Georgia

JEL:
Q01, Q58, M1

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1 Introduction

Public-private partnerships (PPPs) are considered an important enabling mechanism for promoting a circular economy, involving collaboration between government institutions and private sector groups to scale up sustainable and circular practices.

There are different definitions of PPPs. According to the World Bank, a PPP is a long-term contract between a private party and a government entity, seeing the provision of a public asset or service, in which the private party bears significant risk and management responsibility, and where remuneration is linked to performance (PPP Reference Guide, 2017).

The toolkit of PPPs in the circular economy covers a wide range, and includes:

- Waste management - creating cooperation for more efficient collection, processing, and disposal of waste; implementing Extended Producer Responsibility (EPR) programs;
- Resource efficiency - collaborating on projects to improve resource efficiency and eliminate waste, which promotes the use of circular design ideas in product development;
- Circular supply chain - developing partnerships to create circular supply chains that reduce resource consumption and waste, and which promote circular buying techniques;
- Cooperation in the field of innovation and technology, which includes the promotion of disruptive technologies supporting circularity, and the use of digital technologies to track and manage circular supply chains;
- Involvement of the private sector in policy development for the realization of circular economy goals, and the adjustment of regulations and incentive mechanisms to promote circular practices;
- Creation of financial structures and investment models to support circular economy initiatives;
- Broadening the educational potential through uniting educational programs to improve understanding of circular economy ideas;

- Increasing public engagement in the circular economy, including encouraging knowledge-sharing, capacity-building activities, and promoting sustainable consumption behavior;
- Investing in infrastructure that enables circular economy initiatives such as recycling centers and green logistics;
- Creating methods to track and report progress towards circular economy goals; creating indicators to evaluate the effectiveness of circular projects;
- Encouraging cross-sector collaboration spanning several stages of a product's life-cycle to develop holistic solutions and achieve synergistic effects.

The use of public-private partnerships to expand the circular economy has a multidimensional nature, and, as such, there are yet a number of gaps from the point of scientific study of the fact. According to the previous literature analyses, effective multi-stakeholder collaboration being among the opportunities needing utilization so as to better transition to a circular economy has been less often highlighted in scientific research (Papachashvili et al., 2023). This finding gave us a certain incentive to explore the role of public-private partnerships in expanding the circular economy. It is also worth noting that neoliberal governance is often vulnerable to achieving sustainable development goals, and the active cooperation of stakeholders to achieve synergistic effects is thus becoming increasingly popular.

Despite several successful steps that have already been taken in Georgia toward the circular economy and some private sector involvement in waste management, the public-private partnership policy has not yet been fully formed (Pavliashvili et al., 2022).

The paper aims to study public-private partnership (PPP) tools to scale up the circular economy, present Georgia's case in this theoretical context, identify opportunities, and develop recommendations for the use of the PPP mechanism in the transition to a circular economy.

To address the research question of the paper, a case study and a review of the literature were chosen as the methodological techniques. Using pertinent key terms, we primarily conducted searches in the EBSCO database for relevant material and

then examined the relevant scientific literature. For the analysis of the specific situation in Georgia, the work is based on the official material of the Ministry of Environmental Protection and Agriculture of Georgia, Georgia's Circularity Mapping Report, statistical analysis based on the quantitative research conducted by Geostat, and analyzing the reflections of the issue in various Georgian publications.

2 Literature Review

To study the role of public-private cooperation in the expansion of the circular economy, it is possible to use a general framework (PPP Reference Guide, 2017) that defines the main components of PPPs, typically including:

Policy - articulating the objectives and reasons for using PPPs to deliver public services;

The scope and implementation principles of the PPP program - the legal framework that sets the rules for the participation of the government in PPPs, and which establishes the norms and restrictions for their implementation. This includes PPP-specific legislation, public financial management rules, and sector-specific regulations;

Processes and institutional duties for PPP projects, which include identification, development, appraisal, implementation, and management within the Public Investment Management system, and the roles of the various institutions involved. A well-managed PPP process ensures efficiency, transparency, and consistency in project quality.

The public financial management strategy involves controlling, reporting, and budgeting fiscal commitments under PPPs to assure value for money, minimize the burden on future generations, and manage fiscal risk;

Other arrangements include involving auditing entities, the legislature, and the public in the PPP initiative, and holding responsible parties accountable for their activities. This program covers the elements of a PPP framework, including examples and recommendations for practitioners.

Analyzing and evaluating the effectiveness of public-private partnerships in various fields is a subject of wide interest. Still, academic publications specifically evaluating PPPs in the circular economy context tend to be scarce.

We present some research findings from studies conducted on the EBSCO base:

Perceptions of the importance of public-private partnerships in expanding the circular economy were studied in Croatia. Researchers consider such perceptions as important social capital. Interestingly, it was found that there are misconceptions about the effectiveness of such cooperation, of note the fact that students who had been taught about public-private partnership models at university were more likely to recognize certain misconceptions about public-private partnerships, and were more likely to think it possible to successfully implement such projects in Croatia (Bogovac et al., 2021).

In the context of the circular economy and the EU Green Deal, for the development of adequate PPP models, the case study of Bulgarian cosmetic and fragrance SMEs is interesting. Researchers demonstrated that Bulgarian SMEs could extract greater economic value. The study highlights the importance of public-private partnership contracts, which give R&D centers a legal chance to deliver valuable technologies to the market (Vladikov & Raychev, 2021).

A lot of research has been devoted to finding ways to efficiently manage waste to achieve the goal of expanding the circular economy. Researchers indicate that capacity-building seminars and round-tables should be organized to improve communication and cooperation with stakeholders within the frames of public-private partnerships; the municipal government should lead the management of solid waste; and a steering committee composed of representatives of all other stakeholders should be established to oversee the work of the municipal government. The feasibility of creating a private-public partnership should be considered in light of local stakeholders' level of knowledge and trust (Koiwanit & Filimonau, 2023).

To achieve inclusive effects in public-private cooperation, researchers suggest that it is preferable to improve producer involvement from the design stage so as to build projects that meet their actual needs; that project implementation and decision-

making should be shared more evenly among partners, requiring regular feedback; and that project results and evaluation should be viewed as additional support for ongoing local dynamics. To strengthen recycler involvement and project evaluation, the successes of recycling organizations should be better recognized, and project outcomes can then be more focused on the project's added value (Giovannini & Huybrechts, 2017).

Understanding approaches to environmental governance is essential to the transition to a more circular economy in the waste and resource management industry. Voluntary quality assurance standards covering waste and resource flows around the world are increasingly centralized. As the transition to a circular economy takes place against the backdrop of neoliberal environmental governance, the question of achieving meaningful results through voluntary standards is being critically discussed. For example, based on qualitative research findings, researchers note that while proponents of standards and the circular economy see improving the quality of recycled materials as critical to building trust in existing and emerging markets, they point to the assumption that markets always prioritize cost over quality, and that standards are secondary. Furthermore, policy instruments such as standards should question existing neoliberal market relations rather than just follow them (Flynn & Hacking, 2019).

A study conducted in China found that sustainable public procurement has a considerable beneficial impact on the attainment of business-sustainable production targets, and thus should be included in public policy instruments. Researchers indicate that public procurement serves as a crucial link between public demand and market supply, potentially influencing company behavior. Furthermore, the government should implement differentiated policies tailored to the region's economic development conditions and corporate development characteristics, as well as establish a long-term evaluation mechanism that will allow the government to play a longer-term demonstration and leadership role (Li & Cao, 2023).

Another study conducted in China also points to the importance of public-private partnerships in the transition to a circular economy and, based on a case study, concludes that innovative approaches are needed to overcome problems such as "long negotiation time", "lack of transparency", and "uneven risk and return

allocation", which in turn lead to "ineffective delivery" and "poor value for money" (Bao et al., 2019).

Research in the renewable energy sector has demonstrated the relevance of public-private cohesion in interactions, which is required to establish a trust and consultation framework that promotes the success of territorial initiatives. The measure of centrality of the interacting players reveals that the project leader serves as a facilitator to the interaction networks, allowing for the exchange of information, knowledge, and collective learning (Niang et al., 2022).

Yet another study concludes that public procurement can promote circular economy and related business models by establishing criteria and requirements for extending product lifespans, improving efficiency and/or intensity of use, and efficiently cycling biological or technical materials, as well as ensuring clean and risk-free cycles. Circular procurement might involve purchasing high-quality circular items, developing new circular products, using CE-friendly business models, and investing in circular ecosystems (Alhola et al., 2019).

3 Georgia's Case

Developing sustainable business models is a complex challenge that must address profit-making and environmental challenges simultaneously, while maintaining awareness of business interests and benefits.

Research has found that there are ecological benefits for those enterprises that introduce innovations, and up to 10% of enterprises in Georgia have been found to already be taking advantage of such benefits-through-innovation. Fig.1 demonstrates the level of importance given to the received ecological benefits by those innovating Georgian enterprises, while Fig.2 shows what it was that pushed those Georgian enterprises to the decision to produce innovations with ecological benefits (by impact level).

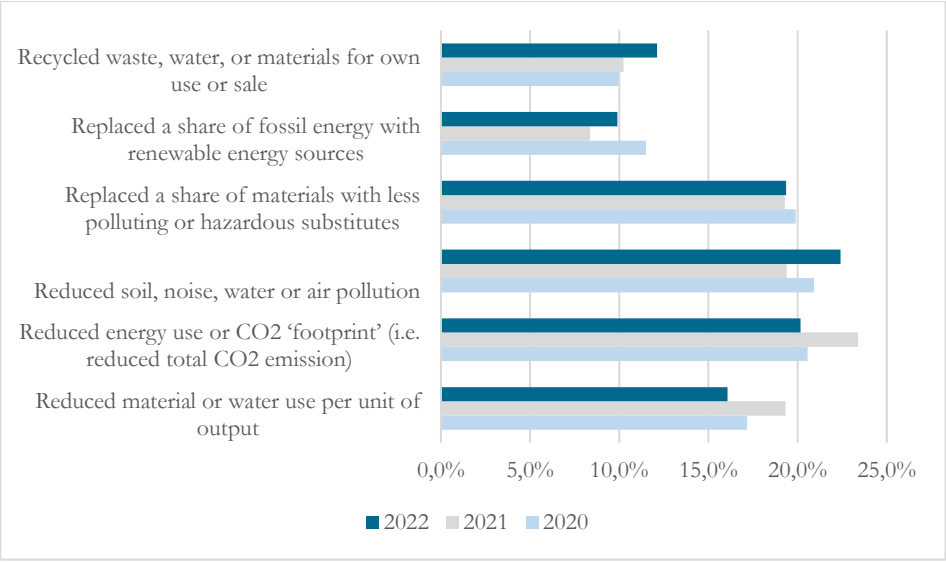

Figure 1: The level of importance given to the received ecological benefits by innovating Georgian enterprises, according to the types of benefit, %, 2020-2022
Source: Innovation Activity of Enterprises, 2016-2022, Georgia.

Georgia recently embarked on an expedited journey toward transitioning to a circular economy. Through collaborative efforts involving the government, civil society organizations, and international partners, Georgia has initiated the formulation of a circular economy strategy. Notable progress has been made, including the introduction of Extended Producer Responsibility (EPR) into the national Waste Management Code. As Georgia progresses on its circularity journey, it stands to gain from the experiences of more advanced economies, and to forge robust partnerships. Leveraging initiatives such as the ongoing program supported by the Government of Sweden, Georgia can discern the most effective pathway toward achieving a circular economy (Pavliashvili & Prasek, 2020).

Between 2019 and 2022, the Georgian Society of Nature Explorers (GSNE) "Orchis" collaborated closely with the Ministry of Environmental Protection and Agriculture (MEPA) to execute the Circular Economy Program in Georgia, generously funded by the Government of Sweden. This initiative comprised two main components. The first component focused on raising awareness about the Circular Economy and furnishing recommendations to diverse groups of key stakeholders, aiming to expedite the integration of circular economy principles

across various economic sectors. To achieve this goal, eight conferences were convened, targeting policymakers, businesses, the financial sector, municipalities, universities, academia, project promoters, and SMEs. Additionally, special sessions were held for the Parliament of Georgia as part of these efforts. Two manuals were developed on the topic of circular economy: one tailored for policymakers and project promoters, and another designed for universities. Additionally, a collection of thematic articles was compiled and made available to the public. Another significant aspect of the program involved assessing the level of circularity within Georgia's economy. This endeavor was undertaken in close collaboration with the Government of Georgia. To facilitate this assessment, the government formed an Inter-Ministerial Coordination Board made up of 36 representatives from various ministries and governmental agencies. This board was chaired by Deputy Minister Acad. Solomon Pavliashvili from the Ministry of Environmental Protection and Agriculture of Georgia (MEPA Information, 2024).

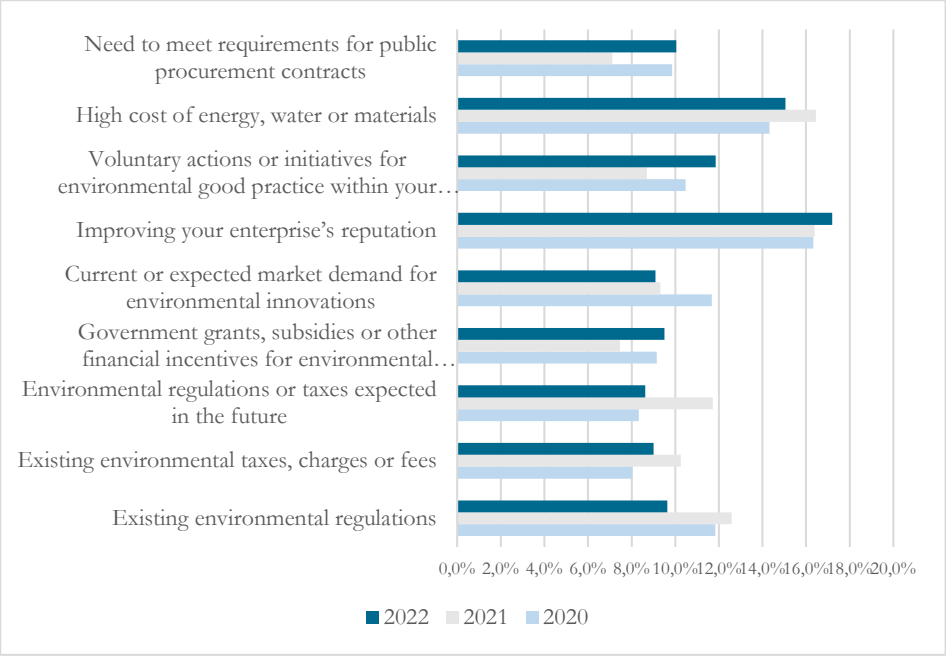

Fig. 2. The distribution of impact categories that drove those Georgian enterprises to decide to introduce innovations with environmental benefits, %, 2020-2022
Source: Innovation Activity of Enterprises, 2016-2022, Georgia.

The process of circularity mapping entailed two years of dedicated effort and close collaboration between the team at GSNE "Orchis," comprising 13 experts, and the Inter-Ministerial Coordination Board of the Government of Georgia. An initial assessment of all 90 economic sectors registered in Georgia was carried out to conduct the circularity mapping, focusing on economic criteria and the volume of waste generated. Subsequently, 14 sectors were singled out for in-depth analysis of their circularity potential. This involved compiling detailed profiles for each sector, including material flows (such as raw materials, products, by-products, and waste), losses, and waste generation. The analysis also assessed the proportion of recycled waste and estimated the potential for recycling using the RESOLVE framework. Furthermore, the mapping process included formulating recommendations for national quantitative circular economy policy targets and ambitions, identifying sector-specific opportunities, and outlining policy options tailored to each sector. Ultimately, recommendations for the Circular Economy Road Map and Strategy for Georgia were developed (Pavliashvili et al., 2022).

A crucial aspect of the mapping process was clustering industries into groups based on similar circularity criteria, key player indicators, and sector administration processes. The results of the circularity mapping revealed that Georgia currently operates at a circularity level of 1.3%, indicating a significant circularity gap of 98.7% that underscored the substantial potential for enhancing the circularity of Georgia's economy simultaneously (Prasek & Tchelidze, 2023).

As part of their in-kind contribution, the circular economy program team at GSNE "Orchis" identified 15 potential circular economy pilot projects. They meticulously developed concept notes and business plans for these projects, intending them to be financed by financial institutions and other donors. This proactive approach aimed to showcase practical examples of circular economy principles in action, fostering investment and support for sustainable initiatives within Georgia's economy (GSNE "Orchis", 2024).

Now the UNDP's Governance Reform Fund (GRF), which is funded by the Government of Sweden, supports the Georgian government in the development of a National Roadmap to a Circular Economy, and capacity building. These activities are also implemented by GSNE "Orchis" in close collaboration with the government, specifically with the MEPA and Ministry of Economy and Sustainable

Development, within the frames of the 'Supporting the Government of Georgia in Enhancing Governance and Policies for a Transition to a Circular Economy' program. The key objectives of the roadmap development are designing recommendations regarding the national ambition level, targets for circularity, and metrics for the desired impacts; analysis of the potential focus areas and key policy gaps; and generating recommendations for potential incentives so as to accelerate the progress to circularity, and eventually to develop a national strategy and action plan for circular economy for Georgia. Together with the preparation of the circularity roadmap, the mentioned sub-project includes building the capacity of governmental agencies that have a key role in the transition to a circular economy. This capacity building includes five thematic seminars, in Circular Economy, Environmental, Social, and Governance (ESG), and Green Public Procurement, to ensure informed participation of these key stakeholders in the development and implementation of the National Roadmap to a Circular Economy (MEPA Information, 2024).

4 Conclusions

The theoretical study of the issue reaffirmed the vital need for the comprehensive and collaborative approaches of stakeholders to address the challenges and opportunities associated with the transition to a more circular and sustainable economic model.

Despite the several steps that have already been successfully taken in Georgia, more opportunities should be opened up and turned into assets to promote circularity and sustainable development.

The small indicator of the circularity of the Georgian economy, and the low interest of businesses in the relevant innovative approaches for the transition to circularity, indicates that extensive measures need to be taken.

The results of the research show particular interest from businesses in raising their company reputation, and, as such, campaigns should be directed with this emphasis, so as to raise the awareness of both the business sector and the public (as potential customers).

Both the theoretical and case study of Georgia revealed that the state has a key role to play in the growth of circularity, and there is a need to expand the relevant legal framework, including public finance management rules and sector-specific regulations.

Georgia has taken some steps towards the development of regulations, but future work must be related to the provision of public services to achieve a broader circular economy.

Further, it is important to reflect the transition to circularity in the strategy of public financial management, which accordingly reflects the control, reporting, and budgeting of fiscal obligations within PPPs.

It is vital for Georgia to support and take onboard the knowledge of international organizations and developed countries with successful practices.

The future steps of Georgia to scale up its circular economy should be actively connected with the private sector through identifying, implementing, and evaluating processes, as well as establishing the institutional duties of PPP projects for further effective cooperation. As the private sector can increasingly deliver results through public-private initiatives, this collaboration must be strengthened.

Expanding the connection between higher education institutions and businesses based on public-private partnership contracts will open the most important potential asset.

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