Exploring the link between circular economy behaviours and resilience in rural and urban communities: A national survey analysis

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Theoretical background

The recent discourse on resilience has highlighted its significance at regional, but also, individual, and community levels, prompting discussions on the drivers of resilience capacity across various systems. While regional resilience studies have predominantly explored the relationships between resilience capacity, innovation performance, accessibility, and economic strength, individual resilience research has largely focused on psychological factors. However, some studies have begun to investigate whether individual and community resilience can also be linked to behavioural indicators, most importantly, circular economy behaviours, suggesting a broader approach to understanding resilience. The relationship between circular economy behaviours, such as recycling, reusing, or resource conservation, and resilience has gained, therefore, some scientific traction. Circular economy behaviours are designed to minimize waste and make the most of available resources, thus contributing to sustainability and environmental health (Ghisellini et al., 2016), but also to fostering resilience (Walker & Salt, 2012). It is believed that individuals engaged in circular behaviours are more likely to exhibit resilience due to their proactive approach to resource management and problem-solving (Luthar et al., 2000). Circular behaviours require a mindset oriented towards sustainability and future planning, which is closely related to psychological resilience—the capacity to cope with and recover from stress or hardship (Masten, 2018). Moreover, communities that embrace circular economy principles tend to be more resilient as they foster social cohesion, reduce dependency on external resources, and promote local economic development (Klein et al., 2003; Kirchherr et al., 2017). Thus, the integration of circular economy behaviours is hypothesized to enhance both individual and community resilience by fostering sustainability, reducing vulnerability to resource depletion, and enhancing social capital (Rockström et al., 2009). Our research aims to explore these relations, examining the differences between rural and urban areas and the implications for policy and community development.

Methodology

This study employed a cross-sectional survey methodology to investigate the relationship between circular economy behaviours and resilience among individuals and communities in a national

context. The survey targeted a representative sample of over 1200 respondents from Romania, ensuring a balanced representation of both rural and urban areas, as well as across age groups, gender, and regions. Participants were asked to assess their level of well-being, self-reported circular economy behaviours (recycling, reusing), as well as perceived level of individual and community resilience. Furthermore, participants were asked to assess their level of trust in local and national institutions. Data collection involved telephone interviews (CATI), with an average duration of 22 minutes. The data were analysed using statistical techniques such as multiple regression analysis and structural equation modelling (SEM) to explore the relationships between circular behaviours, resilience, and community engagement.

Findings and discussions

The findings of this study reveal a significant positive correlation between engagement in circular economy behaviours and individual resilience scores. Furthermore, the analysis highlighted notable differences between rural and urban respondents, which raised the question of the access to dedicated resources and infrastructure, as main drivers of circular behaviours. In contrast, rural respondents were more likely to engage in informal circular practices, such as reusing materials and reducing waste, driven by economic necessity and a closer connection to natural resources. While rural participants displayed higher community resilience scores, reflecting stronger social networks and a greater reliance on community solidarity, this relation is not valid across all regions. The study also found a significant association between circular behaviours and community involvement. Individuals who actively participated in circular economy practices were more likely to be engaged in community activities and exhibited higher levels of trust in local institutions. This suggests that circular behaviours may serve as a proxy for broader civic engagement and social responsibility, contributing to the overall resilience of communities. Interestingly, the relations between circular economy behaviours and resilience, as well as the rural-urban divide, seem to change from region to region. Given that no Romanian region had, until the moment of the survey, a dedicated circular strategy, this raises the issues of the importance of cultural or historical factors, which requires further investigation.

The implications of this study are significant for policymakers and community leaders. The positive correlation between circular behaviours and resilience underscores the need for policies that promote and facilitate circular practices across different contexts. Encouraging circular behaviours can enhance individual resilience, reduce vulnerability to environmental and economic shocks, and foster community solidarity and trust. Furthermore, addressing rural-urban discrepancies in access to circular economy infrastructure and resources is essential for promoting equitable resilience outcomes across different regions.

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