Mapping Territorial Competitiveness and Circular Economy Through Inclusive Management: A Bibliometric Analysis and Case Study of the CirculEC Project

Madina Yussubaliyeva(✉), Zhadyra Konurbayeva, Madina Rakhimberdinova, Oxana Denissova, Allfiya Zakimova, and Darya Surova

D. Serikbayev East Kazakhstan Technical University, Ust-Kamenogorsk, Kazakhstan
{myussubaliyeva,zhkonurbaeva,mrakhimberdinova,odenisova, azakimova,dsurova}@edu.ektu.kz

Abstract. This article explores how Central Asian states are shifting from resource-based economies to knowledge-based economies. As a crucial prerequisite for regional resilience and sustainable growth, the study investigates territorial competitiveness alongside the principles of circular economy. By incorporating academia into governance structures, the Triple Helix model reshapes the functions of universities, industry, and government as mutually linked actors that drive innovation. To foster regional innovation clusters-particularly in mining and agriculture-universities need to evolve into entrepreneurial ecosystems and strategic intermediaries. To identify thematic developments and clusters for 20202025, we conducted a Scopus-based bibliometric analysis using VOSviewer and Biblioshiny. The real-world application of these concepts is demonstrated through the Erasmus+ CirculEC project (20232026), which seeks to update curricula and strengthen competencies in circular economy in universities in Kazakhstan, Uzbekistan, Tajikistan and Turkmenistan, aligning education with regional labour market needs. The study introduces a new paradigm-"circular territorial competitiveness"-in which sustainable development is embedded in economic policy. Long-term regional growth is closely related to the success of digital and green transformations, which activate scientific capacity and enhance human capital.

Keywords: Territorial competitiveness · Circular economy · Inclusive management · Triple helix model · Bibliometric analysis · Central Asia

1 Introduction

In the new global economy, territorial competitiveness has become a central issue for emerging economies in the Central Asian region, as they navigate the systemic structural transformation necessitated by the inevitable conclusion of the

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"oil era". In this context, the competitiveness of a region is no longer defined solely by its economic output, but emerges from the dynamic interaction between spatial development, innovation systems, and circular resource use. For these resource-dependent nations, the adoption of the principles of a circular economy (CE) has emerged as a key strategy to improve economic resilience, reduce dependence on imports of raw materials, and foster regional innovation. Recent bibliographic trends indicate that research on territorial competitiveness and the circular economy in Central Asia has practically merged into a single trajectory focused on sustainable development, where innovation acts as the unifying foundation. This convergence establishes the basis for a new integrated paradigm known as "circular territorial competitiveness," where economic performance and sustainability are co-developed within a unified regional system. However, achieving such a systemic transformation requires a radical departure from conventional business and educational practices to address the persistent "skills mismatch" between academic outputs and the needs of a transitioning "green" labour market. Higher education institutions (HEIs) have consequently assumed expanded roles as central nodes in regional innovation ecosystems, acting as "strategic generators of knowledge" that bridge the gap between academic research, industrial application, and national sustainability goals. Through the implementation of international capacity-building projects like **Erasmus+ CirculEC** (Project No. 101129169), universities are transforming into catalysts for reform, developing the interdisciplinary human capital and "heterogeneous engineers" necessary to drive the regional transition toward a climate-neutral and resource-efficient economy. The project relies on the Triple Helix model of university-industry-government interaction, redefining these actors as collaborative engines of innovation capable of breaking territories free from "low-growth traps".

A critical success factor in this transformation is **inclusive academic management** - a governance approach grounded in distributed leadership, participatory decision-making, and universal design principles. Inclusive governance serves as the essential "bridge" that converts Triple Helix trilateral interactions into sustainable regional outcomes, ensuring that academia remains agile and responsive to labour market signals. This study argues that inclusive management is not peripheral to territorial competitiveness but constitutes its institutional foundation: without the capacity of HEIs to govern inclusively and engage diverse stakeholders, the transition to a circular, knowledge-based regional economy cannot be sustained. The CirculEC project is examined as empirical evidence of this proposition, illustrating how inclusive academic governance translates bibliometrically-identified research priorities into measurable capacity-building outcomes across Central Asia.

2 Theoretical Background

Innovation as a joint product of innovation between universities, industry, and government is the basis for the Triple Helix model and is the primary framework for this study. In this model, they co-create new knowledge, technologies

and regional strategies [13,26,35]. Entrepreneurial universities, as described by Etzkowitz, go beyond traditional education by creating spinoffs and licencing patents. Gleichzeitig notes that governments act as "public entrepreneurs" and venture capitalists, synchronising national strategies with the needs of a knowledge-based economy. Modern scientific discussions significantly expand the classical triple helix system model, interpreting it as a complex innovation system [35] that integrates ecological and social dimensions through the quadruple/quadruple helix concepts [7,48]. This theoretical reasoning aligns with the central emphasis on the intersection between territorial competitiveness and the circular economy in Central Asia, where sustainable development is no longer viewed as an external limitation but is integrated as a foundational component of economic policy. Within the broader shift of the region from a resource-based to a knowledge-driven economy, the Triple Helix framework supports a reimagining of universities not as standalone entities, but as strategic actors that can help territories break free from "low-growth traps" [31]. Nurmukhanova et al. argue that strategic governance of higher education institutions is crucial for territorial competitiveness because these institutions create and sustain entrepreneurial ecosystems within regional business support networks [32]. In Central Asia, this appears in the creation of industrial clusters around regional universities, especially in mining and agriculture. According to Taikulakova et al., these clusters speed up the application of scientific developments and improve resource efficiency in the real economy [42]. Akhmedov et al. emphasise that as resource revenues decrease, it becomes crucial to actively improve competitiveness indicators [1]. The Triple Helix model of universityindustrygovernment interaction facilitates the transition to a knowledge-based economy, in which universities function as the main producers and disseminators of knowledge that underpin regional green and digital transformations. Yessenbek et al. argue that effective mobilisation and utilisation of this scientific potential constitute a critical determinant of national resilience and long-term viability in emerging economies [47]. Inclusive academic management is the key "bridge" to turn these trilateral interactions into sustainable regional outcomes. Reorganises university leadership, policies, and daily practices so that all students and staff can participate and succeed, regardless of disability, age, background, or status. For academic reforms to drive territorial development, the gap between declarations and implementation must be closed. Therefore, researchers propose frameworks at national, regional and institutional levels to align inclusive strategies with curricula [14,33]. Specific strategic roadmaps are proposed to harmonise management practices, universal design principles, and service provision, a process that is critically important for the effective integration of interdisciplinary programmes within the framework of the circular economy [37]. Effective governance that reconciles environmental and economic objectives requires a specific constellation of leadership competencies. High-quality inclusive management requires leaders to integrate pedagogical, psychological, and innovation-related competencies and to employ a democratic leadership style [30]. Management grounded in innovative technologies facilitates participatory governance models, actively engaging faculty members

and subject-matter experts in decision-making processes to ensure timely and effective responses to external challenges [44]. Inclusive management reimagines the university as a "growth pole" able to compete effectively in the global academic and scientific arena. In this sense, inclusive education serves as a strategic catalyst for international cooperation, strengthening and diversifying the external ties of the region and its integration into transnational networks [22]. The systematic application of Universal Design for Learning (UDL) principles in the redesign of academic procedures and policies mitigates alienation experiences and improves the probability of successful outcomes for all stakeholders involved in these processes [9]. An inclusive organisational culture is grounded in explicitly articulated values and a pronounced sense of social responsibility, thus establishing an ethical framework that underpins sustainable regional development. [17,41].

3 Methodology

The methodology of this study incorporates bibliometric analysis and science mapping, specifically employing VOSviewer [10] for keyword co-occurrence analysis and Biblioshiny [4] for thematic mapping and trend identification. The Scopus database by Elsevier was used to collect the research literature on territorial competitiveness and the circular economy in the context of Central Asia, as it is a widely used source for bibliometric analyses in management education and the social sciences [15]. To focus on research related to territorial competitiveness and circular economy in Central Asia, we conducted two searches, concentrating on subject areas within Social Sciences, Business, Management, and Accounting, Economics, Econometrics and Finance and Engineering. The scope covered research in the last five years. Our literature search strategy was implemented in two stages. The first search aimed to find publications that contain the terms "territorial competitiveness," "regional competitiveness" or "economic competitiveness." The second search combined "Circular Economy" AND "Central Asia" AND ("territorial competitiveness" OR "regional competitiveness" OR "economic competitiveness"). We used the PRISMA 2020 framework [34], thereby ensuring that the research design was systematic, transparent, and reproducible. Bibliometric techniques were applied to generate quantitative evidence on the degree of convergence between the investigated research domains. Overall, we reviewed 54 academic works on territorial competitiveness and 69 on the circular economy in Central Asia. This combined methodological approach makes it possible to detect intersecting thematic clusters and facilitates the framing of circular territorial competitiveness as a developing interdisciplinary field of inquiry. The study goes beyond a bibliometric assessment by also using an exploratory single case study design to obtain an in-depth view of how theoretical concepts are implemented in practice. The case examined concerns the implementation of the project "Development of innovative curricula and modules in the field of circular economy and sustainable development," a three?year initiative (20232026) designed to strengthen human capital in universities in Kazakhstan, Tajikistan,

Uzbekistan, and Turkmenistan by embedding circular economy (CE) principles into academic programmes. The project is directed towards updating curricula and fostering interdisciplinary skills that align with global sustainable development priorities as well as the demands of regional labour markets. The CirculEC project is selected as an illustrative case because it reflects the integration of circular economy principles, innovation systems, and regional development strategies in Central Asia. This approach enables the analysis of complex interactions between institutional stakeholders and supports the validation of the proposed concept of circular territorial competitiveness.

4 Results and Discussion

4.1 Trend Topics

Territorial competitiveness is a decisive factor for the survival of emerging economies in the context of global uncertainty and the structural transformation of world markets [18,47]. Territorial competitiveness is a key tool for Central Asian countries in overcoming resource dependence and diversifying their economic structure [1,18].

A comparative bibliometric analysis was conducted using Biblioshiny, and Figs. 1 and 2 present the main trends (20202025) identified regarding Territorial Competitiveness and the Circular Economy in the context of Central Asia.

The topics of trend in territorial competitiveness evolved from the concept of innovation moving to research on competitiveness indices to tools for regional planning and sustainable development. Although Krammer and Jimenez noted that the institutional environment defines the type of innovation in the region [16,24] emphasise a stable influx of investment to small and medium enterprises. Androniceanu et al. used correlation analysis to demonstrate a strong and direct link between innovation, product competitiveness, and the well-being of the population [3]. Their research indicates that countries investing in research and development and human capital tend to have higher GDP levels and a better quality of life for their citizens. Mukhametzhan et al. created an econometric model to assess urban development disparities in Kazakhstan, revealing that spatial inequality and wealth concentration in major cities such as Almaty and Astana significantly affect regional economic growth [28]. Akhmedov et al. focused on examining the key parameters of the Global Competitiveness Index (GCI) for oil-producing nations such as Kazakhstan. They concluded that, with the end of the "oil era,"institutions, higher education, market efficiency, and business sophistication are essential for competitiveness [1]. Nurmukhanova et al. emphasise the importance of strategic management in universities as a crucial element in territorial development, advocating for universities to establish entrepreneurial ecosystems integrated into the regional business support system [32].

The concept of green competitiveness connects a company's performance with stakeholder engagement and the incorporation of environmental factors into development policy. Meanwhile, Chechelashvili et al. underscore the need

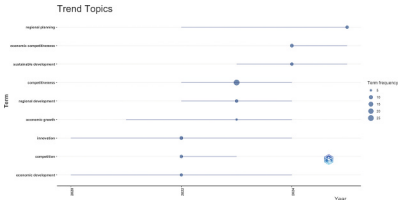

Fig. 1. Trend topics on Territorial Competitiveness.

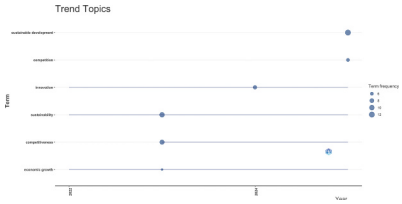

Fig. 2. Trend topics on Circular Economy.

to transition from tactical to strategic management of social responsibility, incorporating ESG principles into corporate strategies to ensure sustainable growth [8]. Muratbekova conducted a comprehensive analysis of digital transformation in Central Asian countries, highlighting that regional governments need to increase infrastructure investment and eliminate connectivity barriers to accelerate digital advancement [29]. The Enterprise Digital Competitiveness Index (EDCI) was developed, showing that nations with the highest levels of business digitalisation rank among the top five in GDP per capita [38]. In their 2025 study, Taikulakova et al. concentrate on strategic planning through the creation of industrial clusters around universities. This partnership accelerates the commercialisation of scientific innovations and significantly improves the efficiency of production resources [42]. Recent research by Yessenbek et al. considers the mobilisation of scientific potential as a crucial factor for economic survival amid global changes [47]. The authors confirm a positive relationship between the regional RandD and national competitiveness indicators. The traditional analysis of territorial competitiveness in Central Asian countries is shifting from monitoring macroeconomic indicators to the search for new models of sustainable growth [1,36]. This transition being carried out through the integration of the principles of circular economy as a key driver of "green"competitiveness, where production efficiency and environmental responsibility in business become mandatory elements of the regional strategy [27]. Green taxation is examined as a key instrument for steering EGG management in environmentally orientated companies ("green") in the region, taking into account the need to revise management strategies in response to the imperatives of decarbonisation and the promotion of a circular economy within the EAEU [5]. Ergasheva recognises the use of digital technologies to automate "green"accounting [11]. Finally, integrating regional higher education systems to train specialists in the fields of digital and circular economy is widely discussed [45].

4.2 Thematic Map

To identify the motor, basic, niche and emerging/declining themes of the research from 2020–2025, we performed an analysis and created a thematic map using Biblioshiny, as shown in Fig. 3 and Fig. 4. The analysis of the thematic map revealed the primary themes: Economic Competitiveness and Innovation, as well

as International Trade and Regionalisation. Research proves the direct connection to innovation, Research confirms a direct link between innovation, product competitiveness, and the well-being of the population [3]. The mobilisation of scientific potential is considered a decisive factor for the survival of economies during the transition to a knowledge-based economy [47]. Stratan et al. emphasise the relationship between the innovation environment, productivity, and the development of infrastructure [40]. The study examines trade patterns in specific sectors, such as automobile manufacturing [39], as well as the impact of geopolitics on major transit corridors such as the Belt and Road Initiative [46]. Territorial competitiveness is considered a factor in improving production culture in integrated sectors of the economy [43] and a tool in the regional tourism industry [6].

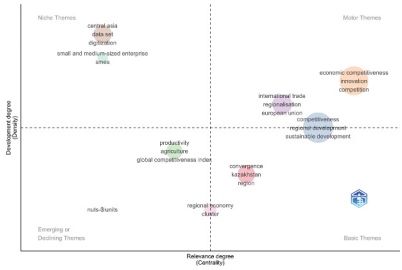

Fig. 3. Thematic map of the research literature on Territorial Competitiveness.

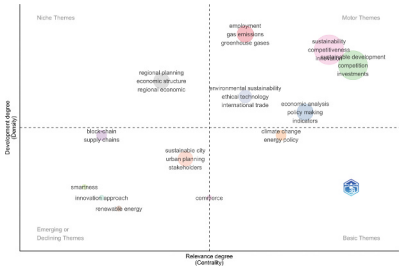

Fig. 4. Thematic map of the research literature on Circular Economy in Central Asia.

The second set of themes covers regional development and inequality, sustainable development, and clusters and convergence. Territorial competitiveness is examined through spatial inequality and wealth concentration in cities [36]. Competitiveness planning now routinely integrates economic goals with social responsibility and environmental safety [23]. Studies address the asymmetry of urban development in Kazakhstan [28], the role of entrepreneurial universities [32], and the use of deep learning technologies [21].

The research of Andekina et al. occupies a central place in circular economy research in Central Asia focusing on human capital analysis, substantiating the transformation of Kazakhstani universities into entrepreneurial universities, which serve as strategic generators of knowledge for the transition to new economic models [2]. The author views universities as catalysts for reform, which, through the implementation of international projects (such as Erasmus+ capacity bulding in higher education), introduce interdisciplinary programmes on the circular economy and cultivate an adaptive workforce. According to Lambekova and Andekina, creating such an innovative environment within higher education institutions is a necessary condition to ensure the territorial competitiveness of Central Asian countries [25]. Nosirov links macroeconomic instruments (taxes)

with micro-level innovations (ESG), which serves as the foundation for enhancing territorial competitiveness through the lens of the circular economy [5]. The financial stability of companies [12] and the stability of public finances [43] create the necessary conditions for the implementation of territorial competitiveness strategies and the transition to a circular economy in the region. In Central Asia, the emphasis is on the creation of cluster structures in the food and agriculture sectors to implement circular technologies [19,20]. By 2024–2025, research on territorial competitiveness and the circular economy in Central Asia has converged into a unified sustainable development trajectory, with innovation as the common foundation. Both fields have shifted toward applied regional planning: territorial competitiveness as a tool to overcome resource dependence, and the circular economy as the primary diversification mechanism. Key instruments include the GCI for benchmarking institutional constraints [1], digital competitiveness indices [38], green taxation within the EAEU [5], and university-led industrial clusters in agriculture and mining [42].

Table 1 presents a synthesis of Territorial Competitiveness and Circular Economy Development in Central Asia.

Table 1. Synthesis of Territorial Competitiveness and Circular Economy in Central Asian Development

Characteristic	Territorial competitiveness	Circular economy
Driver	Innovation and SMEs	Innovation and SMEs
Current focus	Sustainable Development (ESG)	Sustainable Development (ESG)
Aim in Central Asia	Diversification of the economy	Overcoming dependence on natural resources
Implementation tool	Implementation tool	System Resource Management

The comparison demonstrates that territorial competitiveness and the circular economy are structurally interconnected and mutually strengthening. Their convergence creates the foundation for an integrated development model, where economic diversification, resource efficiency, and innovation jointly contribute to sustainable regional transformation. This alignment further supports the emergence of the concept of circular territorial competitiveness. The intersection of territorial competitiveness and circular economy forms the basis of a new integrated paradigm, circular territorial competitiveness, where economic performance, sustainability, and innovation are co-developed within a unified regional system.

In addition to examining which topics are most relevant to regional competitiveness and circular economies, as well as how interest in these topics has changed over time (trend analysis), it is crucial to comprehend how these topics interact. By using VOSViewer to analyse co-occurrence, we were able to group them into stable thematic blocks, clusters. In contrast to trend analysis, which shows “when” and “what” became popular, Fig. 5 and Fig. 6 reveal the internal structure of research: which ideas always go together and form the basis for regional development today.

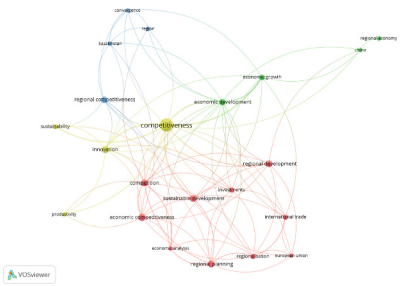

Fig. 5. Map of co-occurrence of author keywords on research territorial competitiveness in Central Asia.



Fig. 6. Map of co-occurrence of author keywords on Circular Economy in Central Asia.

To cluster current research on territorial competitiveness, we made analysis of author keywords co-occurrence using VoSviewer and created map. With minimum occurrence of author keywords kept at 6. Table 2 Summary of identified clusters in the field of territorial competitiveness (Fig. 7 and Table 3).

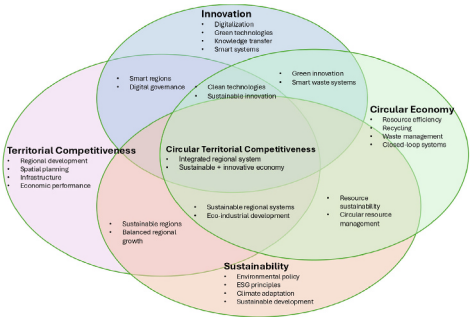

Fig. 7. Cluster Overlap and Knowledge Convergence. Source: Own elaboration.

The overlap of research clusters identified through bibliometric analysis provides strong evidence of an ongoing transformation in the knowledge structure of the field. The blurring of the boundaries between thematic areas signals the emergence of a new interdisciplinary domain, where territorial competitiveness is increasingly shaped by the integration of circular economy principles, innovation systems, and sustainability frameworks. This convergence reflects a transition from fragmented research perspectives to a holistic and system-orientated understanding of regional development.

Table 2. Summary of identified clusters in the field of territorial competitiveness

Cluster	Analysis/Remarks
Regional planning and sustainable development	Researchers emphasize that environmental responsibility and the implementation of ESG principles are becoming mandatory elements of regional competitive strategy. Within this area, the processes of regionalization and the impact of international trade on the competitiveness of territories are also studied, including the experience of the European Union
Competitiveness and innovation	Research confirms that a region's capacity for innovation directly determines the population's welfare and overall productivity. Special importance in this cluster is given to mobilizing scientific potential and to the role of "entrepreneurial universities" as the main generators of knowledge for business
Macroeconomic dynamics and the influence of external markets	In this field, the factors ensuring stable economic growth and development are studied. An important aspect is the role of China and its influence on the regional economy through initiatives such as the "One Belt, One Road". Scholars emphasize the need for balanced development of infrastructure and productivity to maintain positive momentum in national economies amid the global transformation of markets.

4.3 Case Discussion: Practical Implementation of the "Triple Helix" Model and Inclusive Academic Governance: The CirculEC Project Case for Enhancing Territorial Competitiveness. The initiatives of the European Union to modernise higher education systems in third countries are associated with the European Green Deal and the United Nations Sustainable Development Goals (SDGs) and emphasise projects advancing transition to circular economy. Capacity building in higher education action aims to transfer knowledge to build a "green" workforce and to bridge academia and the labour markets to market skills. The "Development of Innovative Curricula and Modules on Circular Economy and Sustainable Development" project (CirculEC) (2023–2026) is being implemented by the Consortium of 10 leading universities in Kazakhstan, Uzbekistan, Tajikistan, and Turkmenistan and 3 European universities from Germany, Italy, and Spain since 2023. The project aims to build the capacity for human capital in HEIs of Central Asian countries in a circular economy to provide staff, students, and the general public with skills and competencies aligned with the needs of local labour markets and environmental challenges faced by CA countries. The principles of circular economy are integrated into the undergraduate, graduate degree programmes and life-long learning programmes and are adapted to the needs of Kazakhstan, Uzbekistan, Tajikistan and Turkmemistan. The project relies on collaboration of academia, industry and government entities, which provides approach of Triple Helix model. The universities in Central Asia aimed to become regional innovation ecosystems driving

Table 3. Summary of identified clusters in the field of Circular Economy in Central Asia

Cluster	Remarks
Innovation cluster	The most closely connected keywords deal with the innovative-economic cluster of territorial development. The research in this cluster shows the direct relationship between technological progress, productivity, and the population's standard of living. They analyze business sustainability as an internal driver of competitiveness, where investments and the adoption of ESG principles become the foundation for long-term growth.
Sustainable development cluster	Research in this cluster deals with institutional frameworks and strategic planning. The research literature explores mechanisms for implementing sustainable development goals through tools of government regulation and regional planning (Kapesa, 2025; Muratbekova, 2024). Authors evaluate how effectively the Triple Helix model interacts and the universities as strategic drivers capable of leading regions out of "low-growth traps" (Andekina et al., 2024; Nurmukhanova et al., 2021; Taikulakova et al., 2024).

regional competitiveness through implementing new courses adopting the principles of circulation economy, building the capacity of academic staff, preparing innovative decisions for the demands of the real private sector during regional hackathons, disseminating knowledge and sustainable development. CirculEC provides a comprehensive market analysis that was incorporated into 27 newly developed courses comprising modules on Environmental Management, Sustainable Competetiveness, and Environmental Entrepreneurship. The modules cover resource efficiency and environmental risk management, market value, transformative management, and sustainable business models. We achieved a wide range of inclusion by updating undergraduate, graduate, and lifelong learning programmes where the 27 courses were interrelated. The needs analysis involved 130 stakeholders from industry, government entities, and academia to meet the demands of the labour market in mining, agriculture, and construction in the domain of regional economies. One of the examples of an engaging private sector company is Izoplus Central Asia LLP that actively participated in workshop validation, content design, and participating in European trainings on their own expense. The core initiative of the project is to build capacity in higher education in Central Asia by transfer of knowledge from European partner universities. The capacity building initiative included training of 78 academic staff from 10 Central Asian universities. The format of "Train the Trainer" workshops ensures that trained trainers act as local disseminators of knowledge and uphold content quality standards. Post-training evaluations confirmed high perceived relevance, with participants reporting increased confidence in delivering circular economy topics and readiness to contextualise materials for their institutional settings.

Table 4 maps the bibliometric clusters identified through VOSviewer analysis (Figs. 5–6) to the three core module groups of the CirculEC project, illustrating how curriculum design is grounded in the state-of-the-art literature.

Table 4. Mapping of Bibliometric Clusters (Figs. 5–6) to CirculEC Curriculum Modules

Bibliometric Cluster	CirculEC Module Group	Rationale for Alignment
Innovation cluster (TC): technological progress, productivity, ESG investment	Sustainable Competitiveness	Cluster themes on innovation-driven competitiveness and ESG principles directly informed modules on sustainable business models and market value creation.
Sustainable development cluster (TC): Triple Helix, regional planning, institutional frameworks	Environmental Management	The focus on university–industry–government interaction and strategic regional planning shaped modules on environmental risk management and resource efficiency governance.
Innovation-economic cluster (CE): circular business models, green entrepreneurship	Environmental Entrepreneurship	Cluster keywords on circular business design, green startups, and stakeholder engagement are reflected in eco-auditing modules and regional hackathon activities.

The final phase of the project was to test the developed courses within the undergraduate, graduate and LLL programmes. The original target of 1,100 students was exceeded and 3882 students were reached, namely from Kazakhstan 2008, Uzbekistan 880, Turkmenistan 781 and Tajikistan 213. The implementation of pilot phase followed by the developed guidelines establishing the assessment of interdisciplinary modules, continuous monitoring, making adjustments to align with regional contexts. The visibility of the project is ensured by digital presence on the Internet platform and social media with 1800 users, which is a valuable contribution to interaction and dissemination between industries, government and academia. The project maintains its digital ecosystem to engage the stakeholders when academia, industry, and government are able to continuously interact. The innovative projects developed by graduates of the programmes were presented during regional Hackathons and focused on regional demands such as agro-processing, sustainable construction, circular business models, energy and waste management. This initiative improves the employability of graduates and the rise of environmentally conscious startups, increasing the competitiveness of universities in Central Asia. One of the key elements of the project is the sustainability plan which aims to enhance collaboration internationally, monetise academic expertise to move to self-sustaining development. For long term

sustainability and alignment with regional development goals, the sustainability plan is structured around financial, institutional, and operational dimensions. The project supports the off-budget revenues through the commercialisation of LLL programmes and consulting services in eco-auditing and circular economy to businesses. In the context of Triple Helix model universities act as enterprenuers. As a result, these mechanisms collectively contribute to territorial competitiveness by enhancing innovation capacity, knowledge transfer, and circular solutions that are embedded locally. The CirculEC project illustrates how the Triple Helix model is used to promote sustainable development driven by innovation. The project becomes a scalable model for converting ecological values into economic assets and transforms higher education that shapes a sustainable future.

4.3 Conclusion

The core finding is a thematic convergence: sustainability is no longer an external constraint but an integral part of competitiveness, and inclusive academic management is its institutional driver. Universities in Central Asia are transitioning from isolated education centres to active nodes in regional innovation networks - a transformation made possible by governance structures that are participatory, responsive, and grounded in Triple Helix collaboration. The bibliometric analysis confirms that research on territorial competitiveness and circular economy in Central Asia has merged into a unified sustainable development trajectory, with inclusive HEI governance emerging as the critical enabling condition. The CirculEC project demonstrates that when universities govern inclusively - engaging 130 stakeholders, training 78 staff, and reaching 3,882 students across four countries - the result is not only curriculum reform but a measurable strengthening of regional circular territorial competitiveness. Future research should examine how digital accessibility and inclusive governance frameworks within HEIs can be systematically scaled to further accelerate this regional transition.

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