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The role of universities in developing strategic leadership competencies

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Abstract

Leadership and strategic leadership competencies in self-government is an important topic all over the world. It is the Universities that aim to educate and nurture leaders who can connect the results of current research to the use of innovative elements of management and further lead society in the context of sustainable development. Foreign approaches to designing standards and requirements for leaders in self-government environment are well developed, but they deal less with strategic leadership competencies. The paper deals with the identification of the perception of the importance of the strategic competences of the leader in self-government as a conceptual framework for defining the leadership competencies of leaders in the specific environment of municipal self-government. For identification, we were based on the original methodological procedure of perception of the competency model according to Porvazník (Porvazník et al., 2017). After defining goals and analyzing foreign and domestic approaches, competence standards and researches of effective leadership for strategic management, we identified the perception of the importance of the leader's strategic conferences at the level of municipal self-government.

Keywords: Leader, Strategic Competences, Self-Government, Municipality, Universities, Innovation
Jel codes: B00



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1. Introduction

In the era of globalisation, knowledge is considered a strategic commodity in the knowledge economy worldwide. According to various authors, such as Campbell and Carayannis (2013b), "universities and institutions of higher education generally have three main functions: teaching and education, research (research and experimental development, R&D), as well as the so-called 'third mission' or 'third role,' including enlightenment activities and initiatives such as innovation, the creation of democracy, and civic education" (Campbell and Carayannis, 2013b, p. 5). It raises the question of the extent to which universities influence, particularly emphasising the significance of democracy creation and innovation for democratic governance. Universities and higher education institutions are closely interconnected with national innovation systems and multi-level innovation systems. It expands the interdisciplinary and transdisciplinary spectrum of the influence of higher education institutions. Universities can collaborate in research, and these collaborations can propose new organisational structures to foster creativity for innovations in democratic governance (Campbell and Carayannis, 2013a; Carayannis & Campbell, 2015). Dahlberg and Söderberg (2022) emphasise that the "strong international trend towards democratic decentralisation is often referred to as a shift from government (central government, hierarchical, formal institutional systems) to governance (multi-level, multilateral, networked, informal institutional systems)."

Traditionally understood academic research has typically focused on basic research, usually in relation to academic disciplines, without a specific interest in the practical application of knowledge or innovation (Gibbons et al., 1994). Initially, basic research occurred within the university setting and gradually expanded to the economy and society. The economy and society (sometimes politics) referred to these basic research activities and university results, transforming them into applications and innovations, often with an economic interest in generating income or profit. One of the recent motivations was the creation of financial and commercial successes and market successes, specifically outside (or beyond) the higher education system. This linear innovation approach is based on the so-called "sequential cause-and-effect relationship," where basic research (knowledge creation) occurs first within universities (the higher education system), and then innovations (application of knowledge) occur outside universities. However, the application and innovations unequivocally follow basic university research (Carayannis, Campbell, Grigoroudis, 2022).

According to this author, the more significant aspect is the production of knowledge intended for problem-solving, involving five specific principles: "knowledge production in an application context," "transdisciplinarity," "heterogeneity and organisational diversity," "social responsibility and reflexivity," and "quality control" (Carayannis et al., 2017). The priority lies in focusing on knowledge production with implications for practical goals in the context of the significance and support of innovations and innovative activities. There is a notable interest in more directly connecting knowledge production with specific and targeted knowledge applications (innovations), mainly through the direct linkage of basic research and innovations. In this perspective, they are not perceived as successive steps but rather as parallel advancements.

Moreover, Etzkowitz and Leydesdorff (2000) advocate for emphasising the importance of "trilateral networks and hybrid organisations," promoting relationships and networks between universities, industry, and government, and creating a hybrid linkage between the individual helices (triple helix). According to them, the triple helix represents a model that interprets the connection of knowledge production designed for problem-solving as a change (or transformation) in the ways of producing scientific knowledge. The triple helix itself can be considered a superstructure in a societal sense, placing these processes of knowledge production and transformation at its "apex."

The production and application of knowledge within universities and other higher education institutions are, therefore, defined as "academic excellence," which is a comprehensive understanding of the world (and society) based on "fundamental principles," as assessed by knowledge-producing communities (academic communities structured according to a discipline-defined system of mutual evaluation). Quality and success can be defined as "problem-solving that provides a useful (efficient, effective) solution for the world (and society), as judged by knowledge-producing communities and, particularly, knowledge users" (Campbell and Carayannis, 2013b; Campbell and Carayannis, 2013a).

Higher education institutions thus represent a type of organization, institution, or even a system that is interested in connecting, integrating, and combining various ways or principles of knowledge production (research) and knowledge application (innovation). In doing so, they fully enable and support diversity and heterogeneity in knowledge and innovations, thus promoting the creation of creative

contexts for research and innovation within organizations in line with the promotion of a "creative knowledge environment" (Hemlin et al., 2004).

Carayannis and Campbell also point out that "competitiveness and superiority of the knowledge system or the level of development of the knowledge system are primarily determined by their adaptive capacity and the ability to combine and integrate multiple and diverse ways of knowledge and innovations through coevolution, co-specialization, and co-competition (collaboration and competition), as well as the dynamics of stocks and flows" (Carayannis & Campbell, 2009, p. 201). There is a proposal (and assumption) of the joint development and coevolution of knowledge diversity and heterogeneity in an advanced knowledge society and knowledge economy, along with political pluralism and the quality of democracy in an advanced democracy (knowledge democracy) (Campbell, 2019). Democracy of knowledge also intersects with such processes of shared development.

The concept of connecting innovations with the Quadruple Helix, according to Carayannis and Campbell (2009), represents a model of interaction between government, civil society, the academic community, and business entities. If we acknowledge that innovation results from interaction among various social sectors aimed at systemic change (Howaldt et al., 2016), its importance is heightened by specific or general manifestations of the so-called wicked problems of the 21st century, as mentioned in the introduction to this special edition. Collaborative and interactive exchanges among actors from the business, government, civil, and academic spheres can effectively support the realisation of innovations (Domanski et al., 2019).

In line with the authors' views, we want to emphasise the importance of understanding the collaboration dynamics in partnerships involving multiple actors for successful leadership within the hybrid governance of public affairs. In our contribution, we aim to underscore the significance of identifying, evaluating, and utilising tools for hybrid governance to examine the driving mechanisms, obstacles, and complications in creating value in various mixed contexts: state or public enterprises, the establishment of intelligent public affairs management, and policies for smart cities. Based on recent findings indicating the potential emergence of institutional barriers, conflicts of interest, and discord within the Quadruple Helix (Bellandi et al., 2021; Bellandi et al., 2019), our goal is to identify roles and highlight the potential contributions of universities when engaged in Quadruple Helix partnerships oriented towards innovation, particularly in knowledge creation for the strategic management of such partnerships.

We aim to address the following research questions:

- What roles do universities play, and what are their contributions to innovative partnerships?
- What strategic competencies are significant for leaders in managing innovative partnerships?

To conceptually answer these questions, we undertake a case study at the level of the Slovak Republic. Addressing the issue of university involvement in Quadruple Helix partnerships oriented towards innovation, particularly in knowledge creation for the strategic management of such partnerships, requires defining a methodological framework, including an information base and selecting suitable methods for information processing and problem-solving. Besides theoretical foundations from scientific studies, the problem-solving database also involves an empirical survey conducted in the form of a questionnaire.

2. Actual issues of local governance

In recent decades, an essential shift in development policy has been the collaboration with various actors beyond the national state, ranging from corporations and non-governmental organisations to religious groups and community organisations. Influenced by neoliberal thinking and an emphasis on participatory development, multilateral agencies increasingly involve these stakeholders as development partners and direct assistance towards them rather than state bureaucracies. Consequently, literature on governance and administration, as well as development studies, have started to focus more broadly on the role of non-state actors in public affairs. In the context of the EU, according to Plichtova and Sestakova (2020), the dominant influence has been the concept of open, cooperative, and multilevel governance, which refers to the connection of the central authority of the EU with individual member states (horizontal level) as well as with non-state actors (vertical level). Depending on the context, terms such as collaborative governance, network governance, multi-level governance, and the like describe governance based on cooperation and partnership among institutions. Participation, considered a central characteristic of good governance, is anchored in several international documents (e.g., the Aarhus Convention) and European directives (e.g., 2003/35/EC). The Aarhus Convention (1998) introduced the concept of the

interested public, defining it as the part of the public with a particular relationship to the decision-making process.

Only recently have some authors begun to question the distinction between state and non-state actors and attempted to define their interconnectedness within governance processes through the concept of hybridity. For instance, the idea of hybrid governance has been theorised in various ways by authors working in the interdisciplinary field of development studies, as exemplified by Colona (2016). In general, hybrid governance can be defined as measures in which non-state actors assume functions traditionally attributed to the state, intertwining with formal state actors and agencies to such an extent that it becomes challenging to clarify the difference between state and non-state. These are actions in which various government entities become co-governors, sharing control over territories and populations. Among the state functions that have been taken over or entrusted to new actors in public administration are the provision of public goods, services, and infrastructure, such as access to water, electricity, education, and security. They may also include upholding the principles of the rule of law, conflict resolution, and various forms of taxation. While there are many contexts where non-state actors replace the state entirely in performing these functions, hybrid governance mechanisms explicitly refer to contexts in which state and non-state actors are highly interconnected or merged, often to such an extent that we can speak of a new or emerging political formation that is neither state nor non-state.

Authors Toxopeus et al. (2020) also anticipate that hybrid public management – and collaborative public management, as described in related concepts (such as level governance, polycentric governance, or mosaic governance) – will lead to innovation and bring shared benefits to multiple stakeholders, representing demand-driven and cost-effective implementation of sustainable urban infrastructure. According to them, hybrid governance encompasses civic entrepreneurship/stewardship and network management as efficient participatory means of managing the urban environment. The foundation of this effort is the explicit inclusion of profit-making actors, stakeholders, and citizens as co-governing bodies, as well as applying this term to the context of urban sustainability differently (Toxopeus et al., 2020). According to authors Colona and Jaffe (2016), hybrid public management was designed to describe only situations where non-state actors take on responsibilities traditionally attributed to the state. They respond to the original understanding of this term, meaning that all situations where non-state institutions play an important role are then referred to as hybrid, even if these two separate institutions do not interact or collaborate (Dahlberg, Söderberg, 2022).



Figure 1. Conceptual model of the hybrid governance network

Source: Kieninger a kol. (2016)

Authors Secinaro et al. (2021) point out that public organisations aiming for a hybrid structure adopt this form for various reasons. Firstly, hybrid structures can bring together public and private interests, with partnership or mutuality among the most important motivations for creating a hybrid organisation. Secondly, trust in well-defined goals and possible actions reduces the uncertainty often a problem in public affairs. Finally, the third reason is the frequency of connections between partners in the hybrid organisation and the definition of the structure itself. Nevertheless, the most significant reason is to involve all stakeholders in the decision-making process of strategic decisions, thus sharing financial risks.

At the same time, the authors note that these characteristics are most pronounced in smart cities, where critical success factors include new forms of business based on leadership and dynamic collaboration between institutions and citizens (Kummitha, 2019). According to a study by Araral (2020), the need for more leadership, older systems, and an understanding of technologies limit smart city development. According to the same research, technologies have recently become a leading aspect of smart city management.

Moreover, as Hollands (2008) stated, a smart city "is the implementation and deployment of information and communication technology infrastructures to foster social and urban growth through improving the economy, engaging citizens, and increasing government efficiency."

Therefore, introducing innovations, such as utilising new technologies in city management, requires new government initiatives that bring together institutions belonging to different legal entities (Alexius, Furusten, 2019). Moreover, implementing new technologies in cities and regions logically brings new challenges (or problems). These include, among others, managing various realities with multiple stakeholders, the need for interdependence, coherence of vision and goals, and political difficulties. In this regard, the theory of actor networks could provide tools to investigate whether hybridity is even possible in managing specific smart city initiatives.

Nevertheless, it is essential to realize that the opportunities for applying innovative solutions in Slovak cities bring benefits to all stakeholders involved. For business entities, a new innovative environment opens up, providing opportunities to enter various business networks and foreign markets, activate businesses through participation in pilot projects, and gain competitive advantages. From the perspective of the city/region and its administration, there is room for increased investment, higher employment rates, and regional economic growth. Simultaneously, the attractiveness for investments rises, and it becomes a better place to live. New operational models and tools for better process management can be utilized and tested, turning cities into platforms for testing smart and sustainable solutions, while achieving environmental parameters. For the state as a participating actor, the level of local economy rises, significantly improving competitiveness, and resources are allocated more specifically to research and development activities. Ultimately, this affects regional universities and research institutions, enabling them to focus their research potential on social and environmental challenges, gaining more allocated resources for science and research as a result of cooperation with private businesses. There is a direct connection between research and experimentation in a real urban environment, and socially significant challenges are often introduced into educational activities, including collaboration with foreign universities and cities. Lastly, there is a tremendous benefit for the residents of cities and regions, providing them with the opportunity to participate in city development activities and utilize its potential.

Nevertheless, the governance approach reduced to the selection of economic (efficient) tools and the smart concept has been subjected to significant criticism. Governance is now seen as an iterative process wherein the state, citizens, and mediating institutions formulate an overall vision of society and specific policy objectives. Moving from a static definition of the governance concept to a dynamic understanding that recognises long-term trends and partial successes is essential. The optimal governance approach in the 21st century relies on combining conventional and innovative institutions, instruments, and processes that seek to minimise their weaknesses while compensating for their shortcomings. This is where universities come into play, serving as significant actors driving innovation and as a source of leaders capable of strategically and iteratively managing collaboration among diverse stakeholders, often with significantly different needs and requirements.

3. The role of universities in building strategic leadership competencies

3.1..Data and Methods

Published in journals indexed in the WOS and Scopus databases. In the survey, we focused on the significance of strategic management competencies in university graduates for their meaningful engagement in the management of networks of regional actors. The empirical analysis covered all cities in Slovakia (141 cities). Our data are derived from a survey conducted in the Slovak Republic from September 2022 to January 2023. We employed a quasi-random sampling technique using elements of snowball sampling. Survey participants were acquired in person through social networks, reaching out, for example, through profiles of interest associations in specific cities or profiles of cities on social networks – we selected only closed groups where it was assumed that the members were residents of those cities. We obtained a sample of 4,317 respondents from Slovakia (38.6% women and 61.4% men, median age 47 years), who voluntarily and anonymously completed our questionnaire. All respondents lived in cities, except for the two largest cities, Bratislava and Košice, on a European scale (over 100,000 inhabitants). Questions were formulated on a 5-point scale from 1 (completely agree) to 5 (completely disagree). Incompletely filled questionnaires were not included in the research statistics.

To summarise the theoretical foundations, we processed relevant research studies published in journals indexed in the WOS and Scopus databases. In the survey, we focused on the significance of strategic management

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3.2. Results

The impact of universities is currently much more diverse and broader than in the past, and these institutions are significant active contributors to regional development. Through active collaboration with local and regional authorities, university employees and students can participate in identifying societal issues and finding suitable solutions by applying their theoretical knowledge. Lastly, this approach can also be used in cooperation with small, medium, and large businesses, which, through innovation and collaboration with the academic community, can expand their operations and maintain their competitiveness.

The collaboration between universities and the business sector in science, research, and development can take various forms. It can be realised through joint research and development, agreement on specific research based on a contract, or collaboration in implementing innovations. Moreover, such collaboration can be a welcomed contribution to both retaining and attracting new residents to regions that may be considered less developed, thereby assisting in their development.

In addition to the basic categories of university tasks that primarily influence the region's economic development, universities also undertake new roles. These can be mainly categorised as direct engagement in regional development, impacting the region from a social perspective and thereby increasing the quality of life for residents and the efficiency of provided public services in the region in which they operate (Turčeková, Martinát, 2016).

However, this relationship should exist in a form and quality that leads to the prosperity of the environment in which it operates. If it primarily stems from exchanging knowledge, it becomes a prerequisite for the regional innovation system. The transfer of knowledge between public universities and industry can, therefore, take the form of joint research, as well as incubators, scientific parks, hubs, licenses, spin-off companies, professional organisations, local markets for scientific workers, local markets for graduates, or consulting activities, university facilities, and publications. The utilisation of these forms of knowledge transfer presupposes the involvement of primarily two main actors: universities and businesses. However, the government, local or regional authorities, and the public also play equally significant roles. This relationship is graphically represented through the aforementioned "quadruple helix" model (after adding the natural environment, the model becomes the Quintuple Helix).



Figure 2. Quadruple Helix and the Roles of Actors

Source: Finne (2013)

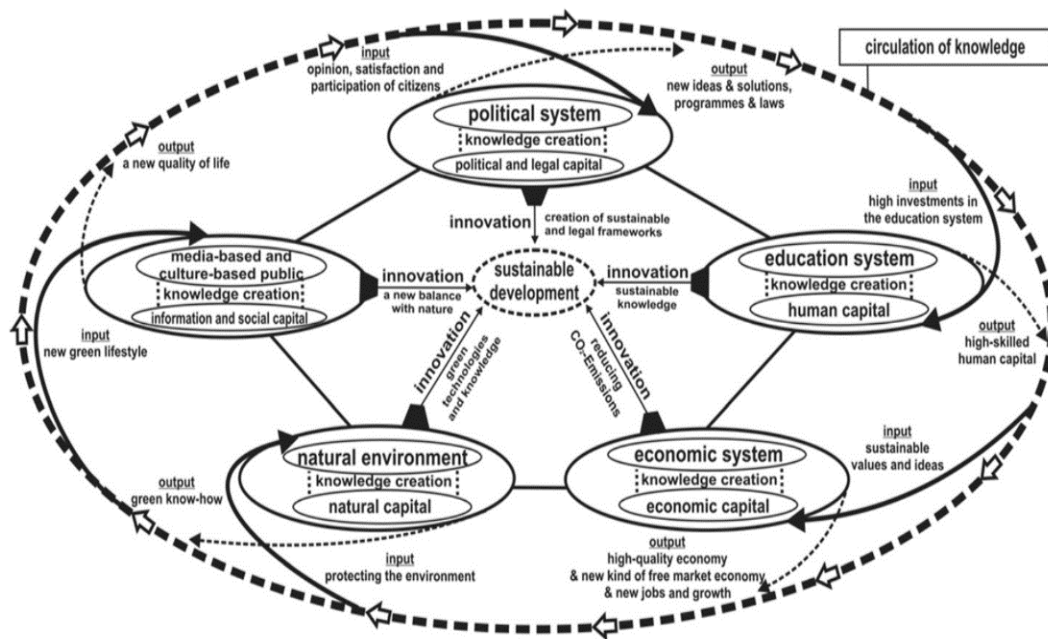


Figure 3. Quintuple Helix Model and the Roles of Actors

Source: Carayannis, Barth, Campbell, (2012).

Collaboration among the public sector, universities, businesses, and the non-profit sector (or the public as a whole) fundamentally impacts the creation and dynamics of knowledge in the region, thereby influencing further regional development. The university's primary role is the creation of knowledge and contribution to innovation. However, incorporating academia into the model as an actor gives it the best opportunity to prepare leaders with strategic competencies for the relevant management of regional networks.

According to the World Bank (2000), the norms, values, attitudes, ethics, and knowledge that higher education institutions can provide to students represent the social capital necessary for building healthy civic societies and socially cohesive cultures (World Bank, 2000). Therefore, the role of universities in building a knowledge economy is:

- Develop strategic thinking essential for young people and researchers to find solutions to our society's challenges and foster innovative study and joint research programs.
- Set up research measures to reduce human uncertainty and provide professional training programs to educate the next generation of teachers.
- Provide professionals with opportunities for continuous professional development and lifelong learning opportunities.
- Support public engagement, thereby creating social well-being and active civic skills.

University education plays a role in teaching and research, including developing strategic thinking and knowledge transfer in line with the requirements to support innovation and address the education system's challenges. Current challenges/problems include insufficient funding, a lack of human capacity, inadequate teaching staff, weak policy implementation, insufficient resources, brain drain in many countries, and weak leadership and management. This means that, on the one hand, we have answered the first research question: what roles do universities play, and what are their contributions to innovative partnerships? However, on the other hand, questions arise for further research on addressing the problems that Slovak universities face.

The current problem in networking regional stakeholders to ensure relevant hybrid governance is the saturation of experts, particularly the public, with information. There needs to be more substantial filtration of data, an inability to distinguish between important and unimportant information, and, at the same time, weak strategic thinking. This fact is alarmingly confirmed by the relatively high number of responses at the "no" and "I don't know" levels when answering whether educating and training future regional and local leaders in strategic management is necessary. However, if regions want to grow innovatively today, they must be equipped with

strategic thinking and strategically skilled, trained leaders. These leaders primarily need knowledge that forms inputs into coordinating actions, which are fundamental prerequisites for strategic management and maximising the implementation of innovations.

Building on the findings of the authors Secinaro et al. (2021) and our own survey, the strength of strategic hybrid management lies in managing new relationships among stakeholders and not just in addressing the latest needs of society. Public participation refers to the commitment of the government (including local or regional) to engage the affected public. Using theory allowed us to analyse a case study focusing on actors, namely their leaders and their role in strategic management. This enabled us to define the significance of strategic management competencies for innovation partnerships to ensure active collaboration between public and private entities, thus addressing the second research question. Standard policy for identifying goals and recruiting heterogeneous stakeholders as participants can represent fundamental strategic tools within hybrid management.

4. Conclusion

Various public policies, market instruments, and civil society have created a multi-level hybrid governance structure with multiple actors. These three domains are complementary. Policy and civil society must ensure ecological and social resilience, especially when market mechanisms, such as geographical indications and regional labelling, function very well. The creation and utilisation of knowledge in economic activities lead to innovations, thereby increasing the likelihood of financial success in this competitive and globalised world economy. Technological progress resulting from research and development activities is a significant source of productivity growth and adequate environmental protection. An educated and qualified population is essential for efficiently creating, acquiring, and utilising knowledge. Both tertiary and lifelong education enhance competitiveness as they are crucial for developing human capital, a fundamental source of a country's competitiveness. There is an urgent need to stimulate innovation by supporting networking among regional actors for research and development activities, which requires adequate and qualified strategic management of such partnerships. Research and development activities must become a priority on the policy agenda because innovation in the context of a well-developed knowledge economy is a significant determinant of a country's competitiveness. Therefore, the role of universities is indispensable and irreplaceable in this context. At the same time, the relevant management of such heterogeneous actors with diverse needs to ensure the preparation of professionals with relevant strategic competencies precisely because many respondents are unaware of this fact based on their responses.

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