



THE ROLE OF ACADEMIA IN THE ENTREPRENEURIAL DISCOVERY PROCESS AND THE DEVELOPMENT OF A CULTURE OF COOPERATION IN SERBIA: THE CASE OF COOPERATION WITH THE NGO SECTOR

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Abstract: The aim of this paper is to examine the capacity of the academic community in the region of Šumadija and Western Serbia, defined as a NUTS 2 statistical region, to act as a potential driver of S3, particularly within the EDP. The study is based on a quantitative survey conducted in 2024 on a sample of 59 respondents employed at the University of Kragujevac. Hofstede's dimension of power distance was examined through three items, while satisfaction with cooperation with NGOs was treated as the dependent variable. The findings showed that fear of expressing disagreement with superiors was significantly associated with satisfaction with cooperation ($p = 0.019$). A statistically significant association was also found between satisfaction with cooperation and current managerial style ($p = 0.005$; Cramer's $V = 0.468$): satisfactory cooperation was most frequently associated with the consultative managerial style. Self-assessed material status was significantly associated with satisfaction with cooperation ($p = 0.008$; Cramer's $V = 0.481$), as respondents satisfied with cooperation more frequently reported a more favourable material position. The paper contributes to the literature by identifying factors that support the development of a culture of cooperation between academia and NGOs in Serbia.

Keywords: academic community; NGOs; Smart Specialisation; Entrepreneurial Discovery Process; power distance; regional innovation system; Serbia.

JEL classification: R11; O31; I23; L31

1. Introduction

The development of regional development theories has been marked by a clear shift from approaches in which regional disparities are observed primarily through the spatial concentration of growth to approaches in which the region is conceptualised as a space of learning. Whereas François Perroux (Perroux, 1995) and Gunnar Myrdal (Myrdal, 1957) sought to explain why development becomes concentrated and why regional inequalities tend to be reproduced, research attention during the 1980s and 1990s was increasingly redirected towards how knowledge, learning, and development capacities are organised within regions. Within this theoretical trajectory, particular significance has been attributed to the innovative milieu and the learning region approach, especially in the works of Roberto Camagni (Camagni, 1996), Richard Florida (Florida, 1995), Bjørn T. Asheim (Asheim, 1996), and Kevin Morgan (Morgan, 1997), through which the region came to be understood as an institutionally embedded space of interactive learning and innovation. Within this context, the concept of Regional Innovation Systems (RIS) was introduced by Cooke (Cooke, 1992) and further elaborated by Cooke et al. (1997) as a framework for explaining how firms, universities, and public institutions interact at the subnational level in the production, diffusion, and utilisation of knowledge. Regional Innovation Systems were thus advanced in response to the need to explain not only why regions are unevenly developed, but also how different institutional configurations and knowledge flows generate divergent innovation outcomes. Recent literature reviews have further shown that RIS is no longer interpreted solely as a framework for analysing innovation capacities, but is increasingly reconsidered in relation to transitions, societal challenges, and changing actor roles in regional development processes (Bai et al., 2024).

The subsequent development of the literature has demonstrated, however, that RIS is itself insufficient if reduced merely to an institutional mapping of actors. For this reason, growing scholarly attention has, since the 2000s, been directed to the social, relational, and cultural foundations of regional innovativeness. The concept of regional innovation culture emerged as an attempt to explain those dimensions of regional innovativeness that could not be sufficiently captured by the institutional mapping of RIS, including trust, local development narratives, and socially accepted coordination patterns (Trippel & Tödtling, 2008). In more recent scholarship, regional innovation culture has increasingly been viewed as a distinct analytical lens, rather than as a supplementary addition to RIS, particularly in analyses of narratives and socially embedded visions of development (Pfotenhauer et al., 2023; Katimertzopoulos et al., 2023). In the context of the present study, particular attention is devoted to the development of a culture of cooperation, since such a culture represents a key relational and institutional condition for more inclusive and participatory regional development.

Recent studies have extended the analytical framing of innovation actors beyond the Triple Helix configuration of universities, industry, and government to broader constellations in which civil society is recognised as an innovation-relevant sphere, as formalised in the Quadruple Helix approach (Etzkowitz & Leydesdorff, 2000; Cai & Etzkowitz, 2020; Carayannis et al., 2022). Within this broader category, the non-governmental organisation (NGO) sector may be treated as the organised and operational segment of civil society, and is therefore more analytically tractable in empirical research. Its relevance lies in the fact that NGOs can articulate societal needs, mediate between communities and institutions, and introduce forms of knowledge and legitimacy that are not reducible solely to techno-economic or administrative coordination. This is particularly relevant in regional innovation settings. The inclusion of civil society has been found to remain limited, despite its recognised importance for participatory governance, social innovation, and more inclusive forms of regional development (Roman et al., 2020; Morawska-Jancelewicz, 2022; González-Martínez et al., 2021; González-Martínez et al., 2023).

In the European context, particular attention should also be directed towards the policy expressions of these theoretical developments in the form of Smart Specialisation (S3). Foray (2015) emphasised that the central element of S3 is the Entrepreneurial Discovery Process (EDP), understood as a process through which actors from different spheres identify those areas in which a region or country may develop specific competitive and innovation advantages. It has further been shown by McCann and Soete (2020) and Ortega-Argilés and Serna (2020) that S3 may be understood as the operationalisation of innovation and place-based approaches in regional development, that is, as an attempt to ground regional transformation in existing capacities while simultaneously relying on interaction among heterogeneous actors. In the European Union, S3 has been developed primarily at the regional level, most commonly at the NUTS 2 level, and for EU Member States it has represented an ex ante conditionality for access to the European Structural and Investment (ESI) Funds (European Parliament & Council of the European Union, 2013; Foray et al., 2011; Gianelle et al., 2020). In this sense, S3 should not be regarded as a substitute for RIS; rather, it is more appropriately understood as a development-policy framework grounded in the logic of innovation systems, while EDP functions as the process-based mechanism through which such systems are activated, expanded, and steered. More recent studies have also indicated that S3 is increasingly being understood as a dynamic and participatory place-based framework in which EDP is assigned significance not only as a mechanism for identifying priorities, but also as a forum through which new and traditional innovation partnerships are governed (Moujaes, 2024; Bellandi et al., 2023). In the case of Serbia, S3 has been prepared at the national level rather than at the NUTS 2 level, and it has not formally assumed the status of an ex ante condition linked to access to ESI Funds, as Serbia is not an EU Member State. Nevertheless, it remains important to examine whether there is a capacity to organise EDP, as the core mechanism of S3, particularly at the regional

level, where cooperation between relevant actors may reveal both developmental potential and institutional constraints.

Of particular importance to the present study is the role of the academic community. Research has shown that universities and research organisations operating in peripheral and institutionally weaker regions do not function merely as producers of knowledge, but also as knowledge brokers, that is, actors through which dispersed participants are connected, the institutionalisation of innovation policy is facilitated and regional innovation ecosystems are supported. This is especially important in environments where intermediary organisations, dense innovation networks, or stable regional capacities are not sufficiently developed. Under such circumstances, the academic community may play an important role not only in the implementation of S3 and EDP, but also in the shaping of a culture of cooperation, particularly through opening spaces for cooperation with actors beyond the traditional university–industry–government triangle. It has further been demonstrated that universities play a significant role in linking dispersed actors, consolidating innovation networks, and supporting more inclusive regional innovation systems, especially where intermediary organisations and regional capacities remain weakly developed (Pinto, 2024).

In the case of Serbia, this issue acquires additional weight. The Smart Specialisation Strategy of the Republic of Serbia for the period 2020–2027 explicitly emphasises the role of the academic community in Serbia as increasingly perceived not only as a participant in S3, but also as an actor through which development priorities, scientific infrastructure, and broader cooperation networks are connected. Within this framework, cooperation with the NGO sector assumes particular importance, since it may contribute to the inclusion of additional forms of knowledge, the articulation of local needs, and the strengthening of the participatory and relational dimensions of a culture of cooperation.

Against this theoretical and empirical background, the research problem addressed in this paper concerns the insufficiently explored role of the academic community in EDP and in the development of a culture of cooperation in Serbia, particularly through cooperation with the NGO sector. The subject of this research is the role of the academic community in shaping a culture of cooperation within EDP and S3 in Serbia, with particular attention devoted to cooperation with the NGO sector as one mechanism through which a broader range of actors may be incorporated into development processes. The aim of this paper is to examine the significance of the academic community within EDP and to analyse the ways in which cooperation with the NGO sector contributes to the development of a culture of cooperation in Serbia. Accordingly, the central research question is formulated as follows: In what ways does cooperation between the academic community and the NGO sector contribute to EDP and to the development of a culture of cooperation in Serbia? The significance of the paper lies in the fact that insights from regional

science, the innovation systems literature, the Quadruple Helix approach, and contemporary debates on S3 are brought together, while attention is also directed towards the possibility of organising EDP-related cooperation in a country in which S3 has been introduced strategically, but not under the same institutional conditions as in EU Member States.

The paper proceeds from the theoretical framework to an analysis of the position of academia and NGOs within EDP/S3 in Serbia, followed by the methodology, findings, discussion, and conclusion.

2. Theoretical framework

This literature review takes the regional innovation system (RIS) as the broadest analytical framework for understanding regional innovativeness and then narrows the focus to the role of academia and non-governmental organisations (NGOs) as relevant actors within that system. In this context, smart specialisation and the Entrepreneurial Discovery Process (EDP) are viewed as a developmental and governance framework through which cooperation between actors is operationalised, while Hofstede's dimension of power distance is introduced as an analytical concept that enables to understand the cultural patterns that may either support or constrain such cooperation.

The concept of RIS explains regional development as the result of interactions between organisations, institutions, and networks that enable the creation, exchange, and application of knowledge for innovation (Cooke et al., 1997; Braczyk et al., 2004). Within this framework, universities and research institutions have been recognised, particularly in more developed regions and higher-income countries, as important drivers of economic development (Goldstein & Drucker, 2006; Drucker & Goldstein, 2007; Tijssen et al., 2021, p. 33). The literature suggests that a successful RIS depends not only on the involvement of individual actors, but also on the institutional infrastructure, organisational landscape, and structural connectedness among actors (Pyka et al., 2019, p. 1322), as well as on entrepreneurial practices, transformative capacity, and the ability to respond to broader societal challenges (Farinha et al., 2018; Isaksen et al., 2022). More broadly, regional success cannot be explained solely by economic indicators, but requires consideration of economic, social, political, environmental, and cultural dimensions of development (Pike et al., 2007, p. 1265).

In this sense, a developed RIS is associated with a culture of cooperation, associative learning, openness to change, trust among actors, innovativeness, inclusive policies, delegation, and consultative governance patterns, whereas an underdeveloped RIS is associated with a competitive culture, centralisation, authoritarian patterns, antagonistic relationships, and the isolation of actors (Cooke et al., 1998, p. 1580). Similarly, Pinto (2009, p. 307) shows that RIS rests on

territorial, institutional, intangible, and relational resources, with academia, business, public institutions, and NGOs representing key institutional resources, while a networking culture constitutes an important part of its intangible and relational capacity. Such an understanding of RIS is important for this paper because it enables the analysis of cooperation between academia and NGOs as part of the wider innovation potential of the region. The focus on the region of Šumadija and Western Serbia is further justified by findings suggesting that mature forms of RIS in Serbia may emerge even in regions lacking administrative capacity (Ivanić, 2023, p. 50).

Academia is consistently recognised in the literature as an important factor in regional development through knowledge production, human capital development, and knowledge transfer to other actors in the regional economy. Universities and research institutions are often described as key components of regional innovation policies, with particular emphasis placed on their developmental potential in peripheral regions (Huggins & Johnston, 2009; Huggins & Kitagawa, 2012; Brown, 2016). In less developed regions, universities and research organisations may act as “anchors” in the design and implementation of smart specialisation and in constructing the early stages of the regional innovation system (Krammer, 2017; Vallance et al., 2018; Kroll, 2019; Benner, 2019; Ferreira et al., 2021). Nevertheless, in the region of Šumadija and Western Serbia, although academia has significant potential as a driver of innovation activities, previous findings indicate that its level of awareness of and involvement in EDP remains relatively low (Ivanić, 2024a, p. 8; Ivanić, 2024b).

At the same time, civil society organisations are increasingly recognised as relevant actors in innovation and development. Their importance stems from the fact that they can contribute to identifying local needs, articulating the interests of less visible social groups, strengthening territorial inclusion, and connecting actors who otherwise remain weakly networked. In this sense, their role is not limited to social services or advocacy, but also includes contributions to social and institutional innovation. The literature indicates that the Quadruple Helix enables the development of a culture of trust between actors and the creation of added value through shared goals (Hasche et al., 2019), while Foray (2018), Gedminaitė-Raudonė et al. (2022), D’Adda et al. (2018), and Kroll (2015) emphasise that a culture of trust and cooperation represents an important precondition for developing regional innovation capacities. Despite this, the potential of NGOs often remains underutilised due to project fragmentation, the absence of permanent cooperation mechanisms, weak institutionalisation of partnerships, and low levels of trust between actors.

Smart Specialisation is recognised in the literature as a concept rooted in regional economics, and more specifically in the RIS theory (Gianelle et al., 2020, p. 1378). As an instrument of European Union cohesion policy, it was formally adopted as an *ex ante* condition for access to European Structural and Investment Funds (European

Parliament and Council of the European Union, 2013, p. 117). EDP is its methodological and conceptual pillar. Foray et al. (2011, p. 7) describe EDP as a process of discovering what a country or region is best at in terms of research, development, and innovation, while Capello (2014, p. 7) defines EDP as the conceptual pillar of smart specialisation. Coffano and Foray (2014) emphasise that EDP distinguishes smart specialisation from earlier innovation strategies by giving it a stronger bottom-up character, while Rodríguez-Pose and Wilkie (2015) argue that it is a process of collective learning among entrepreneurs, researchers, and policymakers. Nevertheless, the literature shows that EDP is not merely a matter of selecting actors, but also of the institutional context in which their interaction takes place. Rodríguez-Pose (2013) argues that institutions are crucial for innovation, growth, and economic performance, especially for the success of policies implemented at the local or subnational level. Rodríguez-Pose and Storper (2006, p. 6) further emphasise that formal and informal institutions act synergistically to reduce transaction costs and moral hazard and to create an environment that fosters trust in the development process. In less developed regions, this institutional aspect becomes even more important due to the innovation paradox, that is, the simultaneous need to develop the innovation system and the low absorptive capacity for the effective use of funds and investment in innovation (Gianelle et al., 2020, p. 1378).

In this context, Hofstede's model of national culture provides an important analytical framework for understanding the behaviour of actors within RIS, S3, and EDP processes. Hofstede (1985, p. 35) argues that the dimensions of national culture influence not only individuals and organisations, but also the interaction between them. For this paper, the dimension of power distance is particularly important because, according to Hofstede (2001), it is associated with ways of organising institutions, the centralisation of authority, and patterns of communication. Previous research suggests that high power distance makes cooperation between actors more difficult and reduces transparency and innovativeness, whereas low power distance tends to foster openness, trust, and cooperation within RIS (Escandon-Barbosa et al., 2021, p. 10; Alfredo et al., 2020; Amin & Thrift, 1995; Asheim & Gertler, 2005; Asheim et al., 2011). Similarly, the literature on smart specialisation emphasises that reducing power distance may improve implementation through better communication and a more balanced distribution of influence among actors (Klíma et al., 2023, p. 397; Beugelsdijk et al., 2015, p. 223; Balland et al., 2018; Capello, 2014).

The literature on EDP and organisational behaviour further suggests that lower power distance is more conducive to participation, cooperation, and equal decision-making, whereas higher power distance reinforces hierarchical patterns and constrains actor involvement (Hofstede, 2001; Schein, 2004; Alvesson, 2002; Bennis & Nanus, 1985; Smircich & Morgan, 1982; Handy, 1978; Agarwal et al., 1999; Morris & Pavett, 1992). The same logic appears in studies of the behaviour of Quadruple Helix actors, showing that high power distance may reinforce hierarchical

relations, hinder knowledge exchange and weaken cooperation, whereas low power distance enables more open discussion and knowledge sharing (Hofstede, 2001, p. 377; Steers et al., 2010; Newman & Nollen, 1996; Chow et al., 1991; Vertinsky et al., 1990; Mintzberg, 1979). Finally, the literature also points to a link between power distance and innovativeness: low power distance is associated with an environment in which the exchange of ideas and openness to new approaches is easier, whereas high power distance may inhibit innovation due to fear of criticism or conflict with authority (Pettigrew et al., 2001; Rees & Porter, 2008; Jaeger, 1986; Aguinis & Henle, 2003).

For this reason, it is particularly important that the Smart Specialisation Strategy of the Republic of Serbia identifies high power distance as an important feature of the implementation context. The Strategy states that Serbian society is characterised by high power distance. This indicates that managerial structures in organisations and public administration tend towards centralisation, that information for decision-making is largely concentrated at the top, and that there is a pronounced demand for control (Government of the Republic of Serbia, 2020, p. 17). This means that the issue of culture and the distribution of power is not secondary, but is directly related to the quality of participation, cooperation, and the organisation of EDP.

The literature reviewed above provides a sufficient basis for understanding RIS, the role of universities and civil society organisations, and the significance of smart specialisation and EDP. It also indicates that power distance may shape patterns of cooperation, participation, and innovative behaviour. However, little is known about how this operates in cooperation between academia and civil society organisations in the region of Šumadija and Western Serbia, particularly in the context of preparing and implementing smart specialisation and organising a continuous EDP process.

3. Research hypotheses

The literature reviewed suggests that the cultural dimension of power distance is highly relevant to cooperation, participation, and innovation in the context of regional development. More specifically, higher power distance has been associated with weaker cooperation among actors, lower transparency, and less favourable conditions for innovation within RIS, whereas lower power distance tends to support openness, trust, and collaboration (Escandon-Barbosa et al., 2021; Alfredo et al., 2020; Amin & Thrift, 1995; Asheim & Gertler, 2005; Asheim et al., 2011). Similar arguments have been advanced in the literature on S3, where lower power distance is linked to better communication and a more balanced distribution of influence among actors involved in implementation processes (Klíma et al., 2023; Beugelsdijk et al., 2015; Balland et al., 2018; Capello, 2014).

In the context of EDP, lower power distance is considered more compatible with participation, dialogue, and more equal decision-making, whereas higher power distance is more likely to reinforce hierarchy and constrain actor involvement (Hofstede, 2001; Alvesson, 2002; Bennis & Nanus, 1985; Agarwal et al., 1999; Morris & Pavett, 1992). The same logic applies to the behaviour of quadruple helix actors, since higher power distance may strengthen hierarchical relations and hinder knowledge sharing and cooperation, whereas lower power distance tends to enable more open interactions (Hofstede, 2001, p. 377; Steers et al., 2010; Newman & Nollen, 1996; Mintzberg, 1979). The literature also indicates that lower power distance is more conducive to innovativeness because it facilitates the exchange of ideas and openness to new approaches, while higher power distance may inhibit innovation through fear of criticism or conflict with authority (Pettigrew et al., 2001; Rees & Porter, 2008; Jaeger, 1986; Aguinis & Henle, 2003).

Taken together, these studies suggest that power distance may represent an important factor in evaluating cooperation between the academic community and NGOs. Given that power distance was examined through selected questionnaire items rather than through a composite index, the hypotheses were formulated at the level of individual items.

H1: Greater fear of expressing disagreement with superiors is associated with lower satisfaction with cooperation between the academic community and NGOs.

H2: Exploitative-authoritative and benevolent-authoritative managerial styles are associated with lower satisfaction with cooperation between the academic community and NGOs.

H3: Consultative and participative-group managerial styles are associated with higher satisfaction with cooperation between the academic community and NGOs.

4. Research methodology

This research was designed to examine the relationship between power distance, treated as the independent variable and satisfaction with cooperation between the academic community and NGOs, treated as the dependent variable, in the Republic of Serbia, with particular focus on the region of Šumadija and Western Serbia. The analytical framework of the research is situated within the broader context of Smart Specialisation (S3), EDP, and RIS. Satisfaction with cooperation was used as a proxy for the of RIS quality and for the potential to organise EDP and S3 at the NUTS II level, with the academic community expected to play a leading role in this process.

The quantitative part of the research was conducted in 2024 on a sample of 59 respondents from the academic community in the region of Šumadija and Western Serbia. The sample was obtained through snowball sampling, whereby initial respondents recommended other relevant participants from the academic

community. This sampling procedure was considered appropriate given the specific focus of the research on a relatively narrow group of actors involved in cooperation and regional development processes. Data were collected through an online questionnaire, which enabled the standardised collection of data and the use of Likert-type items for the measurement of attitudes and perceptions. In line with the literature, the collection of data on cooperation, trust, and partnerships among quadruple helix actors requires culturally sensitive approaches (Klíma et al., 2023, p. 397).

Among the six dimensions of Hofstede's model of culture, power distance was selected because it is particularly relevant for analysing cooperation between the academic community and NGOs, given that such cooperation largely depends on attitudes towards hierarchy, authority, and the expression of disagreement. In this research, power distance was operationalised through three Hofstede-based items. The first item referred to the extent to which employees are afraid to express disagreement with their superiors. The second item referred to the type of manager respondents would prefer to work with. The third item referred to the type of respondents' current manager (Hofstede, 2001, p. 501). These items were used to operationalise the cultural dimension of power distance by capturing hierarchical relations, attitudes towards authority, and openness within the organisational environment. Satisfaction with cooperation between the academic community and NGOs was operationalised through respondents' assessment of satisfaction with such cooperation.

The managerial typology used in this research is based on Likert's four management systems: M1 exploitative-authoritative, M2 benevolent-authoritative, M3 consultative, and M4 participative. These systems differ in the degree of control, centralisation, consultation, and participation they allow, ranging from highly centralised and coercive patterns to trust-based and participatory forms of management (Hofstede, 2001, p. 470). Power distance was understood as a cultural dimension indicating "the extent to which the less powerful members of institutions and organisations within a country expect and accept that power is distributed unequally" (Hofstede, 2001, p. 46).

The quantitative data were analysed using descriptive statistics, cross-tabulations, the Phi coefficient, Cramer's V, and independent-samples t-tests, depending on the nature of the variables. Descriptive statistics were used to provide a systematic overview of the main characteristics of the sample. Cross-tabulation, together with Phi and Cramer's V, was employed to examine the association between satisfaction with cooperation and categorical manifestations of power distance, particularly the perceived type of current manager.

5. Results

The results are presented according to the hypotheses formulated above. Since power distance was examined through individual questionnaire items rather than through a composite index, the findings are reported separately for each indicator. Particular attention is devoted to fear of expressing disagreement with superiors and the type of current manager. Self-assessed material status is reported separately as a contextual variable.

The relationship between fear of expressing disagreement with superiors and satisfaction with cooperation between the academic community and non-governmental organisations is presented in Table 1.

Table 1. Fear of expressing disagreement with superiors and satisfaction with cooperation between the academic community and non-governmental organisations

Satisfaction with cooperation	N	Mean	Standard deviation	Standard error	p-value
Satisfactory	43	2.95	1.174	0.179	
Unsatisfactory	16	2.13	1.147	0.287	0.019

Source: Author's calculation based on survey data.

The results showed a statistically significant difference between respondents who assessed cooperation as satisfactory and those who assessed it as unsatisfactory with regard to the perceived frequency of fear of expressing disagreement with superiors. Respondents who assessed cooperation as satisfactory less frequently reported the presence of such a problem in their organisational environment than those who assessed cooperation as unsatisfactory. The difference was statistically significant ($p = 0.019$).

Table 2 presents the relationship between respondents' current manager type and satisfaction with cooperation between the academic community and non-governmental organisations.

The results indicated a statistically significant association between satisfaction with cooperation and the type of current manager ($p = 0.005$; Cramer's $V = 0.468$). Respondents who described cooperation as unsatisfactory were most frequently associated with the exploitative-authoritative type of manager, whereas respondents who reported cooperation as satisfactory were most frequently associated with the consultative type of managers. This finding suggests that more hierarchical managerial systems are less favourable to cooperation, while consultative managerial systems provide more favourable conditions for cooperation.

Table 2. Current manager type and satisfaction with cooperation between the academic community and non-governmental organisations

Current manager type	Satisfactory cooperation n (%)	Unsatisfactory cooperation n (%)	Total
Exploitative-authoritative	5 (11.6%)	9 (56.3%)	14
Benevolent-authoritative	13 (30.2%)	2 (12.5%)	15
Consultative	19 (44.2%)	4 (25.0%)	23
Participative-group	6 (14.0%)	1 (6.3%)	7
Total	43 (100.0%)	16 (100.0%)	59

Source: Author's calculation based on survey data.

Table 3 presents the relationship between self-assessed material status and satisfaction with cooperation.

Table 3. Self-assessed material status and satisfaction with cooperation between the academic community and non-governmental organisations

Self-assessed material status	Satisfactory cooperation n (%)	Unsatisfactory cooperation n (%)	Total
Very poor – cannot afford even basic needs	0 (0.0%)	1 (6.3%)	1
Poor – cannot afford everything needed	3 (7.0%)	6 (37.5%)	9
Average	12 (27.9%)	5 (31.3%)	17
Good – can usually afford what is needed, although financial difficulties may occasionally occur	24 (55.8%)	4 (25.0%)	28
Very good – can afford more than is needed	4 (9.3%)	0 (0.0%)	4
Total	43 (100.0%)	16 (100.0%)	59

Source: Author's calculation based on survey data.

Self-assessed material status was analysed separately from cultural indicators. The results indicate a statistically significant association between respondents' material position and satisfaction with cooperation ($p = 0.008$; Cramer's $V = 0.481$). Respondents who assessed cooperation as unsatisfactory were more likely to report financial difficulties, whereas those who assessed cooperation as satisfactory more frequently described their material position as medium, good, or very good.

6. Discussion

The findings of this study provide support for the view that selected manifestations of power distance are relevant to the evaluation of cooperation between the academic community and NGOs. Since this cultural dimension was not measured through a composite index, but through three separate items, the discussion focuses on the extent to which the corresponding hypotheses were supported. Overall, the findings indicate that the relationship between power distance and satisfaction with cooperation is not uniform across all items, but is more clearly visible in those that reflect hierarchical communication and actual managerial arrangements within the organisational environment.

The hypothesis relating to fear of expressing disagreement with superiors was supported. A statistically significant difference was found between respondents who assessed cooperation as satisfactory and those who assessed it as unsatisfactory ($p = 0.019$). Respondents who assessed cooperation as satisfactory less frequently reported the presence of a problem in which employees are afraid to express disagreement with the views of their superiors, whereas this problem was reported more frequently by respondents who assessed cooperation as unsatisfactory. This finding suggests that lower satisfaction with cooperation is associated with an organisational environment in which hierarchical communication is more restrictive and disagreement with authority is more difficult to express. In this respect, the findings are consistent with the literature suggesting that higher power distance constrains dialogue, weakens participation, and limits the openness necessary for cooperation among actors.

The hypothesis relating to the type of current manager was also supported. A statistically significant association was found between satisfaction with cooperation and the type of current manager ($p = 0.005$; Cramer's $V = 0.468$). The distribution of responses shows a clear pattern. Among respondents who assessed cooperation as unsatisfactory, 56.3% classified their current manager as exploitative-authoritative, while only 25.0% associated their current manager with a consultative type. By contrast, among respondents who assessed cooperation as satisfactory, the largest share of respondents (44.2%) classified their current manager as consultative, while only 11.6% associated their manager with the exploitative-authoritative type. This distribution suggests that unsatisfactory cooperation is more likely to occur in organisational settings characterised by stronger hierarchy and more authoritarian management patterns, whereas satisfactory cooperation is more often associated with consultative managerial arrangements. Such a finding is in line with the literature indicating that lower power distance is more compatible with communication, trust, and cooperation, while higher power distance tends to reinforce hierarchy and constrain interaction.

By contrast, the hypothesis relating to the preferred type of manager was not confirmed. This indicates that respondents' normative preferences regarding managerial arrangements were not statistically significantly associated with satisfaction with cooperation. In other words, what respondents consider to be a desirable type of manager did not prove to be relevant to the evaluation of cooperation. This may suggest that the quality of cooperation is shaped less by abstract preferences and more by actual organisational experience. In the present research, the relationship between power distance and satisfaction with cooperation was therefore more clearly visible in indicators referring to lived organisational reality, namely fear of expressing disagreement with superiors and the type of current manager

Taken together, these findings suggest that satisfaction with cooperation between the academic community and non-governmental organisations is not culturally or organisationally neutral. Rather, it appears to be shaped by concrete hierarchical patterns within the organisational environment. This is particularly relevant in the broader context of the regional innovation system, Smart Specialisation, and the Entrepreneurial Discovery Process, since these processes depend not only on the formal inclusion of actors, but also on the existence of communication patterns that allow participation, dialogue, and the exchange of views. Where organisational relations are more hierarchical and authoritarian, cooperation is more likely to be evaluated negatively; where they are more consultative, cooperation tends to be evaluated more positively. On this basis, the findings support the view that selected manifestations of power distance may represent an important constraint on intersectoral cooperation relevant for regional innovativeness.

In addition to the indicators related to power distance, the findings also pointed to the relevance of respondents' self-assessed material status. Although this variable was analysed separately and was not treated as part of the cultural dimension, it showed a statistically significant association with satisfaction with cooperation ($p = 0.008$; Cramer's $V = 0.481$). The distribution of responses shows that among respondents who reported unsatisfactory cooperation, 37.5% reported poor material status and 6.3% very poor material status, whereas among respondents who assessed cooperation as satisfactory the largest share described their material position as good (55.8%) or average (27.9%). This finding suggests that the evaluation of cooperation is shaped not only by hierarchical organisational patterns, but also by the broader socio-economic position of respondents. In this sense, financial insecurity may represent an additional constraint on openness to cooperation.

The findings provide a useful basis for understanding how organisational hierarchy and socio-economic context shape the perceived quality of cooperation between the academic community and non-governmental organisations in the region of Šumadija and Western Serbia.

7. Conclusion

The study has shown that satisfaction with cooperation between the academic community and non-governmental organisations is related to selected organisational indicators used to operationalise power distance. More specifically, the hypothesis relating to fear of expressing disagreement with superiors was confirmed. A statistically significant difference was found between respondents who assessed cooperation as satisfactory and those who assessed it as unsatisfactory ($p = 0.019$), with the former less frequently reporting the presence of such a problem in their organisational environment ($M = 2.95$) than the latter ($M = 2.13$). The hypothesis relating to the type of current manager was also confirmed. A statistically significant association was found between satisfaction with cooperation and the type of current manager ($p = 0.005$; Cramer's $V = 0.468$). Among respondents who assessed cooperation as unsatisfactory, 56.3% classified their current manager as exploitative-authoritative, whereas among those who assessed cooperation as satisfactory the largest share (44.2%) classified their current manager as consultative. By contrast, the hypothesis relating to the preferred type of manager was not confirmed, which suggests that satisfaction with cooperation is shaped more by actual organisational experience than by normative preferences regarding managerial arrangements.

In addition, the findings indicate that respondents' self-assessed material status is also relevant for the evaluation of cooperation. A statistically significant association was found between material status and satisfaction with cooperation ($p = 0.008$; Cramer's $V = 0.481$). Among respondents who assessed cooperation as unsatisfactory, 37.5% reported poor material status and 6.3% very poor material status, whereas among those who assessed cooperation as satisfactory the largest share reported good (55.8%) or average (27.9%) material status. Taken together, these findings suggest that the evaluation of cooperation is shaped not only by hierarchical organisational patterns, but also by the broader socio-economic position of respondents.

The findings of this research have several practical implications. They suggest that improving cooperation between the academic community and NGOs requires more than formal partnership arrangements, since the quality of such cooperation also depends on organisational conditions shaped by hierarchy, communication, and managerial relations. The results further indicate that more consultative organisational environments may provide more favourable conditions for dialogue, trust, and cooperation, which is particularly relevant for EDP and S3. More broadly, the findings suggest that efforts to strengthen regional innovativeness should pay greater attention to organisational culture, especially to aspects that influence openness to disagreement and participation.

Further research should be conducted on a larger sample and should include other quadruple helix actors, particularly representatives of the business sector as well as the public sector.

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