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## THE EVOLUTION OF SME DEVELOPMENT IN THE EU'S CROSS-BORDER COOPERATION: THE EXAMPLE OF DIRECT FUNDING IN THE HUNGARY-CROATIA INTERREG PROGRAMME

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#### **Abstract**

Cross-border cooperation has become an integrated element of the European Union's Cohesion Policy. In line with the strategic objectives, entrepreneurship and innovation have gained importance from period to period. Although cross-border programmes are generally understood as non-profit schemes, direct SME funding appeared already in the 2007-2013 period. On the basis of some Western European examples, a pilot programme was implemented in the Croatia-Hungary border area in the 2014-2020 period that directly supported businesses.

The paper, after providing an overlook on SME development in EU cross-border cooperation, summarises the particularities of the analysed instrument. The paper defines two research questions: sectoral characteristics, specialisation patterns in some types of settlements; and the presence of innovation in the submitted and funded projects. The first question is answered through an analysis of the sectoral and settlement category breakdown of projects, while for the second a simple methodology is presented to measure to what extent innovation was in focus. For the analysis programme level data was used.

The paper's main finding is that, due to the logic of the scheme, innovation was easier to present in the case of more "materialised" sectors, such as wood processing, manufacturing and machine production, leading to higher success rates than in case of the service sector where cooperation between partners was less obvious. Even if the majority of the projects only promoted market entrance instead of innovation, rural areas have shown a higher success rate, demonstrating a relatively balanced spatial structure.

Keywords: cohesion policy, cross-border cooperation, SME development, innovation, Hungary, Croatia

# INTRODUCTION: THE EVOLUTION OF INTERREG AND SME DEVELOPMENT IN CROSS-BORDER COOPERATION

Border areas tend to suffer from their peripheral position, isolation from their natural hinterland, which leads to a lack of services, limited demand and supply and a distorted labour market. As Europe is composed of states of various size, a large share of Europe's regions are border regions. Although a significant part of the achievements of EU integration (free movement of goods, services, capital and labour) significantly contributed to the improvement

of the situation of border areas, the networks defined by national economies still play a pivotal role, putting border regions to a less favourable position compared to core areas. Some border areas, in contrast, could gain significant advantages from their border position, being located near some major economic centres of neighbouring countries. In Central and Eastern Europe, the best known such example is the Vienna-Bratislava-Győr triangle, which has transformed the northwest of Hungary into a dynamic zone for cooperation and innovation (Korec, 1998; Rechnitzer, 2014).

The first innovation of European cohesion policy with a focus on border regions was the INTERREG Community Initiative introduced in 1989 (Harguindéguy & Bray, 2009). In the 1994-1999 period the regulation on the European Regional Development Fund (ERDF) foresaw the launching of initiatives and pilot schemes for developing border regions, for the pooling of experience and carrying out innovative measures (EC, 1993). For this period, the INTERREG II initiative set up the pillar system, which made cross-border cooperation a separate pillar, with the highest share of funding. The cross-border pillar ("A") had been strengthened in the 2000-2006 programming period, with the subnational level receiving higher importance in programming, decision-making and monitoring (Harguindéguy & Bray, 2009). The thematic focus was widened: cross-border cooperation was expected to focus on sustainable regional and local development (EC, 1999) in general. In that programming period, although with limited timeframe and funding, the new member states (accessing in 2004) were also able to participate. In the 2007-2013 period "European Territorial Cooperation" (ETC) was declared as 'Objective 3' of Cohesion Policy, meaning cross-border cooperation - replacing the Community Initiative - became a part of mainstream EU structural policy (Pámer, 2011). The "mainstreaming" of Interreg led to the more specific regulation of its thematic focus: entrepreneurship, including SME development and crossborder trade, inter alia, were distinctly mentioned (EC, 2006). The main determinant of the cohesion policy of the 2014-2020 period was the European Strategy for smart, sustainable and inclusive growth ("EU 2020 Strategy"), which considered borders as hindrances to economic growth, innovation and the flow of goods. Therefore, cross-border cooperation received a key importance, as stressed by the strategy in four particular domains: one of them being research and development, improvement of value added and diffusion of technology across the EU (EU, 2010). This approach required the breakdown of EU objectives to the level of member states, and the setting up of single programmes financed by cohesion policy, with measurable indicators. For the 2014-2020 period a separate regulation was established for the European Territorial Cooperation programmes, which further stipulated a thematic focus, whereby cross-border exchange and cooperation between SMEs were received particular emphasis (EC, 2013).

Cross-border cooperation, besides the promotion of the catching up of cross-border areas, is considered as an important tool of Europeanisation, the practice of multi-level governance, and the exchange of practices (Popescu, 2008). In general, cross-border cooperation is a special tool for transmitting European values, despite being often interest-driven and putting too much focus on funding schemes (Scott, 2013). The funding of Interreg, including crossborder cooperation, has shown a permanent rise since its inception, however a small decrease was envisaged for the 2021-2027 period (Pámer, 2021). Despite the growing amount of funding, there has been a debate about the role of Interreg: whether cross-border cooperation should primarily aim at resolving specific cohesion difficulties of generally undeveloped border regions through the provision of more funding (as in the periods of 2007-2013 and 2014-2020) or rather stimulate the elimination of various obstacles (1994-1999 and 2000-2006), thus enhancing the efficiency of cooperation (Pámer, 2021). This resulted in a swinging approach from period to period. According to a communication by the European Commission "Interreg is a policy tool to improve the situation and not a mere funding tool for the benefit of local authorities" (Interact, 2019, 10), which, for the 2021-2027 period, shows a return to the approach of earlier periods.

#### Cross-border regional innovation strategies and SME development in border areas

Although global business networks may dominate border areas as well, cross-border business linkages may grow over time and significantly affect the local economy of border areas (Leick, 2012). As a tool for promoting innovation and cooperation, the development of regional innovation strategies (RIS) was a commonly observed phenomenon in the early 2000s, promoting regional integration, the strengthening of regional institutions and multilevel governance. Likewise, the concept of cross-border RISs emerged for the sake of taking advantage of physical proximity – which tends to become less important – in border areas, where the border represents an obstacle and undermines business collaboration (Van den Broek, Benneworth, Rutten, 2019). A cross-border RIS could create synergies and stimulate growth, particularly in knowledge-intensive sectors, thus cross-border RIS might be considered as the most advanced form of cross-border integration. According to Lundquist and Trippl (2013), such regions are characterised by the intensive flow of knowledge and labour, partnerships between academia and businesses, making them a favourable location for attracting investments.

The institutionalisation of cross-border cooperation was a heavily discussed topic in the early 2000s. To improve efficiency and provide a governance framework for cooperation, the establishment of Euroregions had become a common trend since the 1950s. The first such cooperation framework was established in 1958 on the Dutch-German border in the area of Enschelde and Gronau (Scott, 1993), as an example of further cross-border institutions (Perkmann, 2003). The target area of EUREGIO concentrates a large number of institutions that may serve as a basis for SMEs and innovation in cross-border cooperation: businesses, universities, universities of applied sciences, science parks, regional development agencies (Van den Broek, Benneworth & Rutten, 2019). Despite a great deal of scepticism about the sustainability of cooperation in this target area, the EUREGIO proved to be very successful in the institutionalisation and generation of projects under various generations of the Interreg initiative, whereas the Dutch government promoted a more focused cooperation: specialising on technology, in line with the Lisbon Agenda. This led to the establishment of a cross-border centre of excellence (Perkmann, 2005). Besides, it prompted a new approach in Interreg: the direct funding of the stimulation of innovation. The project "Mechatronics for SMEs", funded by the Interreg Programme Germany-Netherlands 2007-2013, as its largest project of 18.4 million EUR, provided direct support to SMEs. The leader of the project consortium was the working body of EUREGIO, Euregio e.V. from Germany. As partners, besides a county (Landkreis) from Germany, a high number of regional education institutions, technology transfer and business support institutions of various forms (public agencies, chambers, foundations, private companies) were involved. This major project funded the cooperation of a total of 257 SMEs in the form of 106 joint innovation projects (Zenker & von Bunnen, 2016). Although funding was directly provided to the SMEs for joint innovation activities, they were supported by a set of various external service providers (technology transfer institutions) being involved as project partners, whereby the supported SMEs could obtain technical assistance. Although the programme proved to be a success in terms of indicators, based on the amount funding allocated, the project has been very challenging from an institutional and administrative point of view. Despite these challenges, the evaluations showed that 50% of the cooperating SMEs were planning to carry on the cooperation (Van den Broek, Benneworth & Rutten, 2019).

Another example of the direct involvement of SMEs in cross-border cooperation was the programme Flanders-Netherlands, which prioritised innovation in the 2007-2013 period. The "Crossroads" project from the Interreg IV programme, seeking to finance cross-border

innovation initiatives, provided 3 million EUR funding, including 50% co-financing, resulting in 21 collaboration projects (Van den Broek, Benneworth & Rutten, 2018). Although the border area consists of the EU's most developed regions, with a strong tradition of business cooperation and innovation, and a complete lack of language barriers, awareness of innovation was insufficient, and the weakness of institutions (OECD, 2013) hindered cooperation. Also, despite physical proximity, businesses considered cross-border partners only in case there was no option for cooperation within their own regions and countries (Van den Broek, Benneworth & Rutten, 2018). As a follow-up step, from the Interreg V-A Belgium-Netherlands programme (2014-2020) over 40% of the budget was allocated to cross-border innovation projects, including research and experimental development, as well as research infrastructure for public and private institutions (Van den Broek, Rutten & Benneworth, 2018). This programme supported collaboration projects of SMEs and research institutions in innovation, SME competitiveness and green energy projects (Knotter, 2018).

Concerning the relationship of cooperation activities and socio-economic development, Basboga (2020) examined several factors in case of various cooperation topics, including SME cooperation. According to his findings, cross-border economic development disparities are encouraging SME cooperation, especially if one of the involved regions is economically strong and new EU member states are involved in the cooperation.

Concerning the border of Hungary, SME cooperation activities were analysed on the Slovakia-Hungary border by Kézai et al. (2022), and from the Interreg point of view by Hakszer (2017). Regarding the narrow target area of the present article, the border area has been investigated by various scholars to date, including Čelan (2016) and Rácz (2017), who described the socio-economic relations, border permeability and cross-border cooperation in a general context, without however touching the issue of cross-border innovation and SME cooperation. Pámer (2019a, 2019b, 2020) provided an in-depth analysis of the implemented EU cross-border instruments, in the context of territorial governance structures, on the basis of the 2007-2013 programme data, which lacked direct SME cooperation instruments.

# THE EMPIRICAL RESEARCH: PRESENTATION OF THE ANALYSED SCHEME AND METHODOLOGY

The subject of the empirical analysis is the Interreg V-A Hungary-Croatia 2014-2020 Cross-border cooperation programme, which, from its total ERDF funding of 57.17 million EUR,

has devoted 9.96 million EUR to SME development. This intervention was implemented under the thematic objective "Enhancing competitiveness of small and medium-sized enterprises", with the investment priority of product and service development. From the total allocated funding, 6.5 million EUR was planned to be spent on direct SME support, the rest was dedicated to the operation of the management structure and the provision of support and technical assistance to SMEs.

The SME support scheme has been implemented technically as one operation under the name "Beneficiary Light" (B Light), under the coordination of the Croatian Zagreb-based national SME development agency HAMAG BICRO, which was assisted by a total of seven NUTS 3 regional development agencies from Hungary and Croatia. These bodies were responsible for the promotion of the scheme, and the preparation of the SMEs for application. The selection of the funded SME cooperation projects was carried out through a two-step application system. In the first step, a general description of the project concept was required, afterwards, the pre-selected concepts were requested to submit their detailed project proposal. In sum, four calls were implemented, three using this two-step approach and the final call using a single-step approach. The beneficiaries could be SMEs operating in the programme area: the three NUTS 3 level counties from Hungary and the eight NUTS 3 counties from Croatia (see map on Figure 1).

According to the call, collaboration projects had to focus on joint product, service or technology development, i.e. each project had to provide some joint innovation output. The cooperating partners were expected to play a complementary role in the project: responsible for partitioning the innovation process, being responsible for its different elements, or one partner being responsible for the whole innovation process, while the other one's responsibility was limited to sales and promotion. According to the call, the projects supporting market entrance alone were not supported, however, according to our hypothesis, some of the projects served accessing new markets and not real innovation.

The target set for the number of SMEs involved was 80. Typical bilateral cooperation projects involved at least two SMEs, one from Croatia and one from Hungary. The maximum number of beneficiaries in one cooperation project was four, with at least one company from each side of the border. Altogether 89 projects were submitted by 197 companies. The number of selected projects amounted to 33, implemented by 71 applicant companies, including 36 from Hungary and 35 from Croatia, which shows a very balanced contribution from the two partner countries.

This paper sets the following aims and research questions:

- What kind of sectoral characteristics are detected for the cooperating companies in the border area? Are these sectors concentrated in some selected types of settlements and are there any specialisation patterns within the border area in some specific sectors or industries?
- Although joint innovation was a precondition of application, according to our hypothesis, only a part of the submitted projects targeted real innovation, a significant share of the submitted and funded projects focused on market entrance. Is there a difference between innovation and market entrance-oriented projects and are these distinctions apparent only for the submitted or also for the funded projects?

For the measurement of activities in specific sectors and areas of the border region, the variable of number of applicant and funded companies were used. As the maximum amount of targeted funding per company was set at 180,000 EUR (including 135,000 EUR, 75% EU co-financing) – which was also the modus of the submitted project size – funding, as a variable, does not provide an added value. The data was made available by the programme management body, the Joint Secretariat of the Interreg V-A Hungary-Croatia Cooperation Programme.

#### Sectoral patterns of SME cooperation in the analysed border area

The border area is characterised as the meeting point of peripheries, particularly from the Hungarian side (Berkes & Dusek, 2023). According to the situation analysis of the Cooperation Programme for the 2014-2020 period, the Hungary-Croatia border area is characterised by a low number of business entities, compared to the national averages, low innovation activity, an above-average representation of the agricultural sector and food industry, and a weak manufacturing industry, which is concentrated in the western part of the border area (Međimurje, Varaždin, Zala). The services sector is dominant in the larger cities, including Pécs and Osijek, however, tourism services are also dominant in some selected tourism areas which are more present on the Hungarian side (Balaton area). Innovation is mostly driven by public R&D institutions (universities) in the larger cities, the participation of the private sector is weak (Interreg V-A, 2015). It is important to point out that neither Hungary for Croatia, nor Croatia for Hungary belongs to the most important trading partners at the national level (Rácz & Egyed, 2023). The border area, particularly from the Hungarian

side, is characterised by lagging counties (Berkes & Dusek, 2023) and an unfavourable education attainment in the immediate border area (Pénzes et al., 2023).

In order to provide a transparent overview of the prevailing sectors in the border area, companies have been grouped according to their core business activity (NACE) and the sector they are targeting in their submitted/selected project, as seen in Table 1. The results of this analysis show that IT development, business consultancy and promotion, as well as manufacturing and machine production altogether amounted to more than 50% of the total applications and the funded SMEs. Out of these, more than half of the manufacturing companies have received funding, while IT development companies have been funded at a considerably lower rate. Although interest was somewhat lower from wood and metal processing companies, a very high share of these businesses have been selected for funding. On the one hand, food industry, as one of the traditional sectors, showed a high interest, but without any single funded project; on the other hand, the similarly traditional clothing manufacturers applied in a very low number, albeit with a 100% success rate. These figures show that manufacturing-type industries were the most compatible with cross-border cooperation and the requirements of the scheme, where the value chain can be clearly defined, which was the key assessment condition. On the contrary, a high level of interest has been observed in the non-materialised sectors such as IT, consultancy and promotion, albeit with a significantly lower success rate.

In order to reveal the location of the applicant and funded cooperating companies, the settlements of the dominantly rural border area have been grouped by the number of inhabitants, based on 2021 data, as follows:

- Category 5: cities with over 90,000 inhabitants (Osijek and Pécs);
- Category 4: cities with over 40,000 inhabitants (Kaposvár, Nagykanizsa, Varaždin and Zalaegerszeg;
- Category 3: towns with above 20,000 inhabitants (altogether eight towns, thereof Požega from Croatia and Siófok from Hungary did not have any project);
- Category 2: towns and municipalities with over 5,000;
- Category 1: towns and municipalities with less than 5,000 inhabitants.

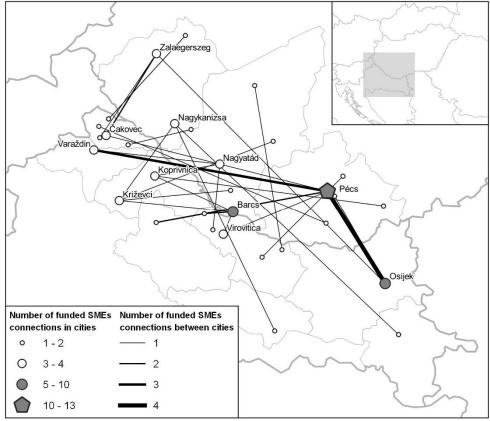
As shown by Figure 1, the largest – Category 1 and 2 – cities were the most active in cooperation. Cooperation was clearly dominated by the city of Pécs in Hungary, while the Croatian side shows a more decentralised approach: besides the city of Osijek in the East, more activity is detected in the more developed Western counties.

Table 1 Distribution and success rate of industries of applicants in the B Light scheme

Industries of applicants	Number of applying SMEs	Number of funded SMEs	Success rate (%)
IT development	43	18	41.86
business consultancy, promotion and communication	32	7	21.88
manufacturing and machine production	27	15	55.56
food industry	13	0	0.00
wood industry	11	7	63.64
retail, wholesale	11	3	27.27
catering and tourism	11	2	18.18
R&D	10	3	30.00
metal processing	9	7	77.78
storage and transport	8	1	12.50
medical	6	2	33.33
agriculture-related	5	1	20.00
waste management	4	2	50.00
construction	4	0	0.00
clothing manufacturer	3	3	100.00
Total	197	71	36.04

Source: programme data, own edition.

Figure 1 Cooperation linkages and intensity of funded SMEs between cities



Source: own compilation.

As revealed by Table 2, although over one-third of the applicant SMEs were from the two major cities, eventually, only a quarter of the funded SMEs were from Osijek and Pécs. Secondary cities (Category 4) have been less represented but slightly better funded. The second most active and the most successful applicants were from the small towns (Category 2), hosting one-third of the funded SMEs. Small municipalities (Category 1) were similarly active and successful to secondary cities. As also demonstrated by Table 2, IT development, business consultancy and, in particular, R&D companies applied mostly from cities, while manufacturing and machine production companies were present from all types of settlements. Food, wood and tourism, however, were more typical for rural settlements. Concerning the most successful applicants in the big cities, medical companies stood out, while metal processing, manufacturing and machine production firms were among the most successful ones in all types of settlements (Table 2).

Table 2 Distribution of applications and funded SMEs between settlement categories and their most prevalent industries

Settlement category	SMEs applied (%)	SMEs funded (%)	Most applying	Most successful
Category 5	34.01	25.35	<ul> <li>IT development;</li> <li>business consultancy, promotion and communication;</li> <li>manufacturing and machine production;</li> <li>R&amp;D</li> </ul>	- medical
Category 4	12.69	15.49	- IT development; - business consultancy, promotion and communication	- metal processing; - IT development
Category 3	14.72	11.27	- IT development; - food industry	- manufacturing and machine production
Category 2	25.89	33.80	<ul> <li>manufacturing and machine production;</li> <li>wood industry;</li> <li>business consultancy, promotion and communication</li> </ul>	<ul><li>metal processing;</li><li>wood industry;</li><li>manufacturing and machine production;</li><li>IT development</li></ul>
Category 1	12.69	14.08	- catering and tourism; - manufacturing and machine production	- manufacturing and machine production
Total	100.00	100.00		

Source: programme data, own edition.

Concerning the territorial distribution of certain industries, the border area has been divided into three zones, which includes one county in Hungary in each zone, plus the eight Croatian counties divided as shown on Figure 2.

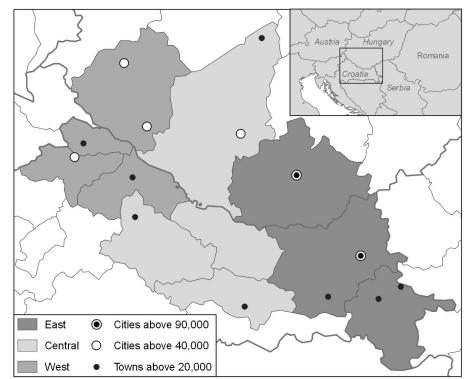


Figure 2 The division of the Croatia-Hungary border area into three zones

Source: own edition.

The three zones differ significantly in terms of their spatial structure. The Western Zone is dominated by a polycentric network of small towns, a high number of SMEs and good transport infrastructure. The Central Zone is the most rural, without significant urban centres and poor cross-border and intra-regional infrastructure. The Eastern Zone, despite including peripheries in both countries, is characterised by the dominance of the two big cities, relatively good cross-border and internal connectivity and a high number of SMEs and public institutions. As Figure3 shows, although SMEs from the Western and Eastern Zone were more active in applying, the distribution of the beneficiary companies shows a surprisingly balanced picture. The most rural Central Zone, which stands out in manufacturing, machine and wood industry, was a more successful applicant than the Eastern Zone where the majority of the IT, business consultancy and promotion companies reside. Some selected sectors, i.e. medical, R&D and education, were only contracted in the Eastern Zone.

applied 72 31 94

contracted 24 22 25

0% 20% 40% 60% 80% 100%

■ West ■ Central ■ East

Figure 3 The distribution of applicant and contracting companies by border area zones

Source: programme data, own edition.

### Innovation vs. market entrance in cross-border SME projects

In order to find out whether the scheme supported real innovation or only cross-border market entrance attempts, the applied and funded projects have been thoroughly analysed, based on their content provided in the project forms and budget, with special attention to the cooperation approach in the different activities of the project partners.

As the scheme primarily focused on innovation, as laid down in the guidelines of the call, innovative projects were more favoured during selection. Besides the innovation element and the approach to cooperation, places of sales were also detailed in the project applications. Although both innovation and sales were subject to evaluation prior to project selection, in order to avoid bias, during the current research all applying projects have been re-evaluated by the authors on the basis of the complete project application forms. According to our hypothesis, although innovation was a must have element of funded projects, a part of the projects served only market entrance without containing a real innovation element. However, being included among the selection criteria, we also assume that projects with a higher innovation ranking were more likely to be selected than those only targeting market entrance.

The classification of projects was carried out by separating them into groups of joint innovation activity-based cooperation and cross-border market entrance-based cooperation. The criteria used for classification were the following:

- In the case of innovation activity-based cooperation projects innovation is the core activity, which is carried out jointly by the project partners. This means that throughout the project description and project activities a clear evidence can be found that the project partners are working together on the innovative character, or the element of the development, complementing each other's activities, providing feedback on each other's work and the decisions are made jointly. The innovation approach is clearly formulated, visions and goals are shared, responsibilities are divided.

- In the case of cross-border market entrance-based cooperation projects partner companies infuse their already existing technologies in creating a new product or service, targeting one of the countries' markets. The level of cooperation on effective innovation is low, linked services are developed in order to gain market competence, or partners provide complementary services to each other. It is also common for such projects to include business cooperation with a clear division of tasks, however, no joint efforts on innovation activity are undertaken, and in many cases, either only one project partner is working on innovation, or an external expert company is contracted to execute the innovation itself.

According to the criteria above, each project has received a ranking in both categories (Table 3).

Table 3 The scores of 'innovative ranking' and 'places and quality of sales'

Score	Innovative ranking	Places and quality of sales	
1	No innovation	Clear project plan for entering each other's markets and sales plan explained	
2	Innovation on territorial level relevant for project partners	Project creates opportunity for new market entry	
3	Innovation on industry level	Product/service sold on international level in a non-neighbouring country	
4	Innovation on sectoral level	Demand analysis conducted and explained	
5	Disruptive innovation affecting the sector and beyond	High sales potential indicated by a "pre- reservation" from a future customer	

Source: own edition.

Depending on which of their two rankings were higher, projects have been grouped into 'innovation projects' and 'business cooperation projects'. As revealed by Table 4, according to the applied methodology, more than 60% of the applied projects belonged to the category of 'business cooperation projects', proving that, even in cases where innovation was the main objective, the majority of projects did not qualify as an 'innovation project'. The average innovation ranking of funded projects was somewhat higher than that of applied ones. The situation is the opposite concerning the places and quality of sales scores, where submitted projects have received higher scores than funded ones.

This and the significantly higher success rate of innovation projects prove that the applied selection criteria was respected, i.e. innovation was prioritised.

**Table 4** Average scores of submitted and funded projects from the two evaluation aspects

	Applied	Funded	Success rate (%)
Number of projects	89	33	37.08
Innovative ranking (average score)	2.47	2.52	
Places and quality of sales (average score)	2.62	2.09	
Number of innovation projects	34	21	61.76
Number of business cooperation projects	55	12	26.09

Source: own edition.

#### LESSONS AND DISCUSSION

Although innovation and SME development had been included among the objectives of Interreg from the very beginning, the first examples of direct SME support in Interreg programmes appeared in the 2007-2013 period, along the borders of the Benelux countries, which opened up new areas for research on cross-border policies. Such cooperation in the 2014-2020 programmes was particularly promoted. As a result of this approach, the analysed B Light Hungary-Croatia 2014-2020 scheme provided direct support to SMEs, which makes it a suitable subject for analysis. Based on the available cooperation activity data, our analysis has shown that certain service sectors (IT, business consultancy, promotion and communication) are rather concentrated in the two big cities, while some specific industrial activities (wood, manufacturing, machine production) are more abundant in smaller towns. The success rate of SMEs in these industries differs significantly: IT development, consultancy and promotion are characterised by lower success rates than industry-oriented projects. This was due to the nature of the scheme: it required a clear presentation of the role of the individual partners in the value chain, which proved to be easier in the case of the material sectors. While in the service sector cooperation appeared to be less obvious, it was at least reflected in the project selection. This, overall, led to a higher success rate in smaller towns, where industrial SMEs are more dominant. This dichotomy of industries and the success rate of companies is reflected in spatial terms as well. While the active and big citydominated Eastern Zone showed a lower project success rate, the dominantly rural, industry and manufacturing-focused Central Zone contained a higher share of funded SMEs, due to the activity of its companies better fitting the scheme's concept, i.e. cross-border cooperation was easier to demonstrate in the case of physical product-oriented industries than in the service sector. Concerning the presence of innovation in the projects, on the basis of the applied methodology it has been shown that instead of real innovation, the majority of projects

promoted only market entrance to one of the partner countries. However, in general, the selected projects could be considered more innovative than non-selected ones.

Comparing these results with related scholarship on the targeted border area, the analysis of the cross-border SME scheme has yielded several findings. As the study of Pámer (2019a) has demonstrated on the basis of analysis of nonprofit schemes in the 2007-2013 programming period, from a cross-border cooperation point of view Hungary is a rather centralised country, as, on the one hand, the majority of activities and funding is concentrated in the big cities, particularly in Pécs; on the other hand, the majority of investments were implemented in the small towns and municipalities, for which cross-border cooperation presents a real added value. Croatia, due to its strong county-level institutions, has shown a relatively decentralised structure: alongside the relatively strong Osijek, the county seats and secondary towns showed the highest activity. In this context, the currently investigated SME scheme revealed a strikingly different picture, as the nature of the innovation-oriented SME scheme rather supported the manufacturing companies, which were able to better demonstrate the added value of cooperation and are often located in the more peripheral areas. Overall, this has resulted in a much more balanced spatial structure of cooperation activities, somewhat counterbalancing the spatially more concentrated nonprofit projects. Thus, a well-tailored SME scheme may be a suitable tool for enhancing cooperation in the peripheries as well.

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#### **REFERENCES**

- Basboga, K. (2020). A Theme-based Analysis of the Intensity of Cross-Border Cooperation Across Europe, Journal of Borderlands Studies, DOI: 10.1080/08865655.2020.1833230
- Berkes, J., & Dusek, T. (2023). The socio-economic performance of the Hungarian NUTS3 regions between 2010-2020. *Deturope*, 15(2), 85-108.
- Čelan, J. T. (2016). An analysis of the latest trends of the complex development of the Croatian-Hungarian border area. *Hungarian Geographical Bulletin*, 65(1), 43-56.
- EC (1993). Council Regulation (EEC) No 2083/93 of 20 July 1993 amending Regulation (EEC) No 4254/88 laying down provisions for implementing Regulation (EEC) No 2052/898 as regards the, European Regional Development Fund. https://eurlex.europa.eu/legal
  - content/EN/TXT/PDF/?uri=CELEX:31993R2083&gid=1682326993211 (24.04.2023).
- EC (1999). Regulation (EC) No 1783/1999 of the European Parliament and of the Council of 12 July 1999 on the European Regional Development Fund. https://eurlex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31999R1783 (24.04.2023).
- EC (2006). Regulation (EC) No 1080/2006 of the European Parliament and of the Council of 5 July 2006 on the European Regional Development Fund and repealing Regulation

- (EC) No 1783/1999. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02006R1080-20100618 (24.04.2023).
- EC (2010). Communication from the Commission "Europe 2020 A European Strategy for smart, sustainable and inclusive growth". https://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007% 20-%20Europe%202020%20-%20EN%20version.pdf (24.04.2023).
- EC (2013). Regulation (EU) No 1299/2013 of the European Parliament and of the Council of 17 December 2013 on specific provisions for the support from the European Regional Development Fund to the European territorial cooperation goal. https://eurlex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1299 (24.04.2023).
- Hakszer, R. (2017). A 2007-2013-as Magyarország-Szlovákia Határon Átnyúló Együttműködési Program regionális aspektusai, megvalósításának tapasztalatai. *Tér és Társadalom*, 31(1). 107-123. doi:10.17649/TET.31.1.2791.
- Harguindéguy, J.-B., & Bray, Z. (2009). Does cross-border cooperation empower European regions? The case of INTERREG III-A France Spain. *Environment and Planning C: Government and Policy*, 27, 747-760.
- Interact (2019). Territorial approach post 2020. Input to Transitioning. 09-10 December 2019, Frankfurt/Main, DE, Bernard Schausberger. Retrieved January 21, 2021, from http://www.interact-eu.net/download/file/fid/18497.
- Interreg V-A (2015). Interreg V-A Hungary-Croatia Co-operation Programme 2014-2020, approved EN Hungary-Croatia. Retrieved June 16, 2022, from http://www.huhr-cbc.com/uploads/editors/Cooperation%20Programme%20Interreg%20V-A%20Hungary-Croatia%20EN%20approved.pdf
- Kézai, P. K., Dömötör, M., & Fekete, D. (2022). Economic Development Opportunities in the Hungarian-Slovakian Cross-Border Area Szigetköz and Csallóköz (Žitný ostrov) According to Development Documents and Local Stakeholders Perceptions. *Deturope*, 14(1), 87-110.
- Knotter, S. (2018). Impactevaluatie Interreg V Vlaanderen-Nederland, Eindrapport. IDEA Consult, Antwerpen.
- Korec, P. (1998). Transformation of the Border transport system in the Vienna-Bratislava-Györ region. *European Planning Studies*, 6(5), 599-609. DOI: 10.1080/09654319808720483
- Leick, B. (2012). Business Networks in the Cross-border Regions of the Enlarged EU: What do we know in the Post-enlargement Era? *Journal of Borderlands Studies*, 27(3), 299-314. DOI: 10.1080/08865655.2012.750952
- Lundquist, K.-J., & Trippl, M. (2013). Distance, proximity and types of cross-border innovation systems: A conceptual analysis. *Regional Studies*, 47(3), 450-460.
- Molema, M. (2018). Bright Ideas, Thick Institutions. Post-industrial Development Theories as Drivers of Cross-border Cooperation. *Journal of Borderlands Studies*, 36(1), 59-75, DOI: 10.1080/08865655.2018.1496467
- OECD (2013). Regions and Innovation: Collaborating Across Borders (OECD Revie). OECD. doi:10.1787/9789264205307-en
- Pámer, Z. (2011). The possibilities of implementing the European Grouping of the Territorial Cooperation in South Transdanubia. In Ágh A., Kaiser T., & Koller B. (Eds.), *The New Horizons of the Cohesion Policy in the European Union: the Challenge of the Danube Strategy* (pp. 176-194). Budapest: Blue Ribbon Research Centre King Sigismund College.
- Pámer, Z. (2019a). How governance counts? Comparative analysis of activity and funding patterns of Central European cross-border cooperation programmes. *EUROPA XXI*, 35, 2018. 111-126.

- Pámer, Z. (2019b). Magyarország és Horvátország határon átnyúló együttműködésének vizsgálata a két ország területi kormányzási rendszerének tükrében. *Tér és Társadalom*, 33(2), 149-166.
- Pámer, Z. (2020). Uloga teritorijalnog upravljanja u prekograničnoj suradnji, na primjeru IPA programa Mađarska-Hrvatska 2007-2013. *Podravina*, 19(37), 153-161.
- Pámer, Z. (2021). Tackling the measurement of cross-border cooperation intensity: an empirical example on the Hungary-Croatia border. *Deturope.* 13(2), 125-138.
- Perkmann, M. (2003). Cross-border Regions in Europe. Significance and Drivers of Regional Cross-border Cooperation. *European Urban and Regional Studies*, 10(2), 153-171. SAGE Publications.
- Perkmann, M. (2005). The emergence and governance of Euroregions: the case of EUREGIO on the Dutch-German border. Working paper on line. Institut Universitari d'Estudis Europeus, Barcelona.
- Pénzes, J., Papp, I., Apáti, N., & Kiss, J. P. (2023). Border areas and educational attainment Long-term analysis of Hungary for the period between 1960 and 2022. *Deturope*, 15(2), 109-128.
- Popescu, G. (2008). The conflicting logics of cross-border reterritorialization: Geopolitics of Euroregions in Eastern Europe. *Political Geography*, 27, 418-438.
- Rácz, S. (2017). Main characteristics of Hungarian-Croatian political relations and Cross-Border Co-operations. *Geographica Pannonica*, 21(1), 54-67.
- Rácz, S., & Egyed, I. (2023). From the "West of the East" to the "East of the West": The postsocialist economic and structural transition of Central and South-Eastern Europe. *Deturope*, 15(2), 9-27.
- Rechnitzer, J. (2014). A győri járműipari körzetről szóló kutatási program. *Tér és Társadalom*, 28(2), 3-10.
- Scott, J. W. (1993). The institutionalization of transboundary cooperation in Europe: Recent development on the Dutch-German Border. *Journal of Borderlands Studies*, 8(1), 39-66. DOI: 10.1080/08865655.1993.9695433
- Scott, J. W. (2013). Territorial Cohesion, Cross-border Co-operation and the EU's Political Identity: A Brief Observation. In Pálné Kovács, I., Scott, J., & Gál Z. (Eds.), *Territorial Cohesion in Europe For the 70th anniversary of the Transdanubian Research Institute* (pp. 73-84). Pécs: Institute for Regional Studies, CERS HAS.
- Van den Broek J., Benneworth, P., & Rutten, R. (2018). Border blocking effects in collaborative firm innovation. *European Planning Studies*, 26(7), 1330-1346. DOI: 10.1080/09654313.2018.1476470
- Van den Broek, J., Benneworth P., & Rutten R. (2019). Institutionalization of cross-border regional innovation systems: the role of university institutional entrepreneurs. *Regional Studies, Regional Science*, 6(1), 55-69. DOI:10.1080/21681376.2018.1562367
- Van den Broek, J., Rutten, R., & Benneworth, P. (2018). Innovation and SMEs in Interreg policy: too early to move beyond bike lanes? *Policy Studies*. DOI: 10.1080/01442872.2018.1539225
- Zenker A., & von Bunnen, P. (2016). European Territorial Cooperation Work Package 11 Ex post evaluation of Cohesion Policy programmes 2007-2013, focusing on European Regional Development Fund (ERDF) and the Cohesion Fund (CF). European Commission, Directorate-General for Regional and Urban Policy.