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Stakeholder viewpoints on facilitation of cross-border cooperation

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ABSTRACT

The European Union fosters cooperation in cross-border regions through the European Cohesion Policy (ECP). The implementation of ECP instruments requires a participatory approach, in which stakeholders' views are acknowledged. However, the multiple of views among and between stakeholders of cross-border initiatives complicate their involvement in a participatory approach. A prerequisite for a meaningful involvement of all stakeholders is an in-depth understanding of their viewpoints on what facilitates cross-border cooperation. However, to date, these viewpoints are poorly understood. This study aims to identify and analyse stakeholders' viewpoints on the facilitation of cross-border cooperation. The viewpoints of a sample of entrepreneurs, members of education institutes, and members from local institutions (policymakers and industry representatives) in the Dutch-German cross-border region Rhine-Waal were collected via Q methodology and complemented through interviews. Four viewpoints emerged: cooperation through pro-active engagement, cooperation through targeted policies, cooperation through an aligned institutional setup, and cooperation through socio-cultural proximity. Results can inform policy-making aimed to increase stakeholder involvement in participatory approaches in cross-border regions.

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1. Introduction

Despite decades of integration efforts in the European Union (EU), cross-border regions within Europe currently do not exploit their full potential in terms of economic and territorial integration. Administrative and legal barriers between countries lead to potential GDP losses (Camagni, Capello, and Caragliu 2019). One way to foster economic and territorial integration in these regions is through facilitating cross-border cooperation (Fritsch et al. 2015). In this regard, the EU has launched several policy instruments, including the Interreg programmes (European Commission 2020) which are part of

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the European Cohesion Policy (ECP) and support cross-border cooperation via project funding.

ECP instruments require compliance with the principle of partnership, i.e. various entities (henceforth named stakeholders) collaborate in the planning and execution of funded projects (Dąbrowski, Bachtler, and Bafoil 2014). The principle of partnership is associated with multi-level governance, a policy-making system in which governments at the supranational, national, regional and local level, as well as local key-stakeholders from the civil society (e.g. entrepreneurs and NGOs) interact (Dąbrowski, Bachtler, and Bafoil 2014). The aim of this approach is to efficiently deliver tailored interventions. The implementation of policy instruments that are supposed to comply with the principle of partnership and promote a multi-level governance system requires a participatory approach, in which stakeholders' views are acknowledged (Dąbrowski, Bachtler, and Bafoil 2014; Noferini et al. 2020). However, to put into practice a participatory approach it is necessary to systematically assess and delineate the viewpoints of stakeholders toward aspects that influence cross-border cooperation.

Several aspects influence cross-border cooperation. For instance, cooperation between stakeholders is facilitated in cross-border regions that share a similar culture, offer access to university and research institutes, have a good infrastructure, and an aligned institutional setup, economic and policy structures (Boschma 2005; Lundquist and Trippel 2013; Trippel 2010). Although all these aspects are important for cross-border cooperation, it is reasonable to assume that stakeholders hold distinct interests, which are reflected in different views about how these aspects should be put into practice. For instance, local authorities might be interested in improving infrastructure, while entrepreneurs want an aligned institutional setup that reduces bureaucracy of doing business across the border. In fact, multiple views prevail among and between stakeholders of cross-border initiatives (Panten et al. 2018), complicating their involvement in a participatory approach. While we acknowledge that a competitive advantage of cross-border regions lies in their diversity and high levels homogeneity should not be a desirable outcome of participatory approaches (Boschma 2005), we argue that a prerequisite for a meaningful involvement of all stakeholders is an in-depth understanding of their viewpoints on what facilitates cross-border cooperation. However, to date, stakeholders' viewpoints on aspects that influence cross-border cooperation are poorly understood.

To fill this gap in the literature, we propose the use of Q methodology, which has been widely and successfully applied to identify and to analyse stakeholders' viewpoints on policy issues (for example Cuppen et al. 2010; Ellis, Barry, and Robinson 2007; Tuokuu et al. 2019), but not yet in the context of cross-border cooperation. More specifically, the objective of this study was to identify and analyse stakeholders' viewpoints about the aspects that could facilitate cross-border cooperation.

Our study goes beyond previous research by focusing on stakeholders' viewpoints. Previous literature focused on the identification of citizens' perceptions about the European Cohesion Policy (Capello and Perucca 2018), on the identification of obstacles that might hamper cross-border cooperation and how they can be compensated (Capello, Caragliu, and Fratesi 2018a), or on the identification of border-related inefficiencies (Capello, Caragliu, and Fratesi 2018b). We argue that stakeholders can take active parts in forming cross-border cooperation, and therefore an in-depth understanding

of their viewpoints on what facilitates cross-border cooperation is important. This should help to make stakeholders more aware of their own views and the views of others. For instance, by acknowledging that different viewpoints exist, stakeholders may be able to identify challenges to be addressed (Nhem and Lee 2020) and areas of consensus and divergences (Tuokuu et al. 2019). Such a research could provide insights to policy makers that can be used to stimulate stakeholder involvement in participatory approaches in cross-border regions and in a follow-up step to the formulation of better targeted policies.

2. Materials and methods

In this section, we first present the case study region. Second, we introduce the common terminology and the standard procedure of Q methodology. Furthermore, following the guidelines for application of Q methodology (Watts and Stenner 2012), information regarding our study design, statistical analysis and constructing the viewpoints are provided.

2.1. Case study region

This study was conducted in the Dutch-German cross-border region 'Euregio Rhine-Waal', a region with a long history of cross-border cooperation. It covers an area of 9831 km² and has 4.88 million inhabitants (Euregio Rhine-Waal 2019) (Figure 1). Through the INTERREG funding programme, the European Fund of Regional

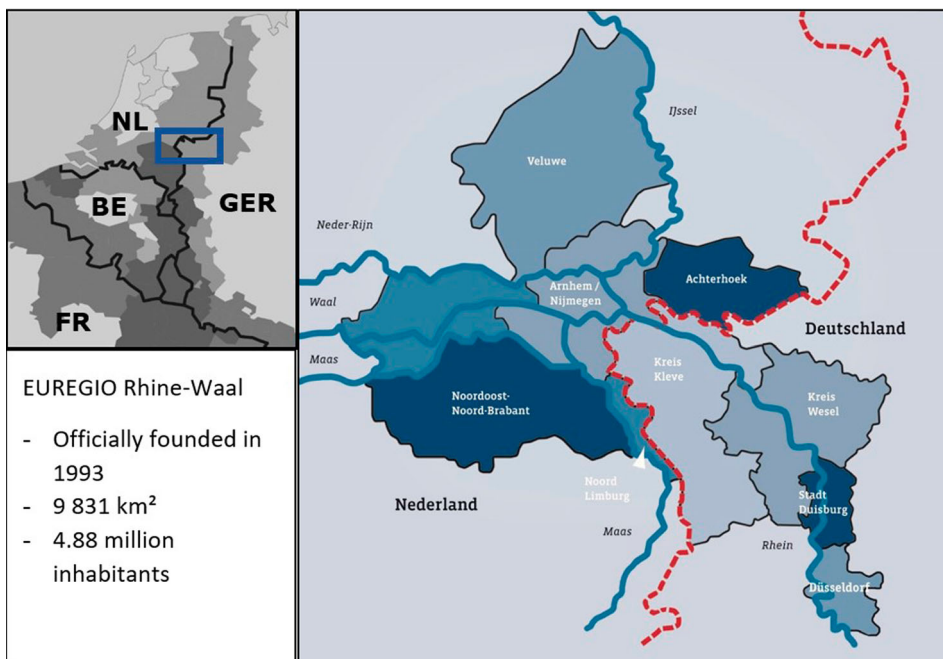


Figure 1. EUREGIO Rhine-Wall Region (Euregio Rhine-Waal 2019).

Development (EFRD) supported different initiatives on health, security, education and industry to foster cooperation in the Dutch-German cross-border region. Between 2014 and 2020, approximately EUR 440 million were made available to increase innovation and decrease practical hurdles in the entire Dutch-German cross-border region, including the Ems Dollart Region, the Euregio (Gronau), the Euregio Rhine-Maas-Nord and the Euregio Rhine-Waal.

Between 2008 and 2020, approximately 177 projects were initiated through INTER-REG funding. The support of small and medium enterprises was and still is a special focus of INTERREG funding programmes. Some recent projects are e.g. KISS ME, Digi Pro, Regional Skills lab, BRESE, EnerPRO and Food Pro-tec-ts. Stakeholders of the latter project were selected to participate in our study.

2.2. Q methodology – terminology/general overview

Q methodology¹ explores the subjective dimension of any issue towards which different viewpoints can be expressed (Stenner and Stainton-Rogers 2004). In this study, the application of Q methodology allows us to identify stakeholders' viewpoints about the aspects that would facilitate cross-border cooperation.²

In Q methodology, participants express their own viewpoint in a structured way, sorting a set of statements of opinion according to a subjective scale (for example, a categorical scale) such as agreement/disagreement (Stenner et al. 2015; Stenner, Watts, and Worrell 2008). First, a set of statements of opinion, called a Q-set, is developed. Second, a sample of participants (P-set) are asked to sort the Q-set in a grid (see Figure A.1 in the Appendix for an example). The result of the sorting procedure is called a Q-sort and provides the researcher with a model of each participant's viewpoint (Stenner et al. 2015). Third, participants are asked to elaborate on their personal reasoning for their specific Q-sort in the form of interview questions. Typically Q-sorts of all participants are then intercorrelated and factor-analysed to identify any shared viewpoints among the participants (Watts and Stenner 2012). The results of this analysis are factors that identify a cluster of Q-sorts, which have been similarly sorted by participants (Stenner et al. 2015). The interpretation of each emergent factor is facilitated by the creation of its own factor array or 'exemplifying Q-sort' (Watts and Stenner 2012) (see Figure 2 for an example). A factor array resembles a Q-sort completed by a participant, but is in fact a 'best estimate' of the factor derived from all the Q-sorts that are significantly associated with the factor in question (Stenner et al. 2015; Watts and Stenner 2012). Finally, the exemplifying Q-sort is supplemented with input from qualitative interviews to describe of each emerging viewpoint emerged.

2.3. Q-methodology – study design application

In this study, we first developed the list of statements of opinion (Q-set) to be given to participants for Q sorting, following the guidelines for application of Q methodology (Watts and Stenner 2012). To define the Q-set, a literature review was conducted about the aspects that could facilitate cross-border cooperation and complemented with ten short interviews among Dutch and German stakeholders. Finally, a list of 25 statements was defined, which represent our Q-set (see Table A.1 in the appendix for

Strongly disagree		Cross-border cooperation would be facilitated if ...										Strongly agree			
---		--		-		0		+		++		+++		++++	
						1. People spoke the same language on both sides of the border.									
				8. The cross-border region had better public transportation infrastructure.		3. Stakeholders adapted to the business customs (i.e. hierarchal structures) of the other country.		11. The regulatory and bureaucratic burdens of doing business across the border were minimized.							
		9. The cross-border region had better highway infrastructure.		12. Intellectual property rights were regulated in a similar manner in both countries.		6. Enterprises had easier access to research institutions on the other side of the border.		14. Enterprises had access to services that address questions on entering the market on the other side of the border.		4. Universities cooperated more with industry on both sides of the border.					
18. Prices and costs of services and goods were similar in both countries.		10. The cross-border region had better internet connection.		15. Business sectors have similar priorities in both countries.		13. Bureaucratic formalities were reduced when applying for common projects on the other side of the border.		16. Education and job qualification certificates were mutually accepted in both countries.		7. More networking events were organized on both sides of the border.		5. More cross-border R&D and innovation transfer projects were established.			
2. Stakeholders in the cross-border region were more reliable.	21. Policy objectives in each country were more clear.	19. The political systems were similar in both countries (centralist in NL vs. federalist in GER).		22. Cooperations were driven more by developing knowledge than reducing costs.		17. Governmental strategies for industry development were similar in both countries.		20. Policy objectives of bordering regions were developed in cooperation with the other country.		24. All stakeholders mutually engaged in cooperation.		25. Networks were better developed through cross-border research projects.		23. All stakeholders in the cross-border region were pro-actively engaged in cooperation.	

Figure 2. Example of the Q sort for factor 1.

the list of statements). Before collecting the data³, we conducted a pre-test with five participants (who were not part of the sample) to validate the semantics of the statements. Next, the Q-set was applied to a sample of 17 participants (P-set).

All participants in our sample were stakeholders involved in the Interreg project ‘Food Pro-tec-ts’. We focused on the stakeholder groups of entrepreneurs, members of education institutes (i.e. universities and universities of applied sciences), and local institutions (policymakers and industry representatives). A convenience sample of 17 participants (P-set) was recruited in the Dutch-German cross-border region (i.e. Euregio Rhine-Waal) through the personal network of the authors ($n = 10$), complemented by snowball sampling ($n = 7$). Ten participants from the Dutch (NL) side and seven from the German (GER) side were interviewed. Among the participants were six entrepreneurs (NL: 4, GER: 2), three members of education institutes (NL: 2, GER: 1) and eight actors from local institutions (NL: 4, GER: 3, NL/GER: 1). All participants had experience in cross-border cooperation.

For the interviews with the 17 participants, we created a grid starting with the following sentence: ‘Cross-border cooperation would be facilitated if ...’ (see Figure A.1 in the Appendix). The 25 statements of our Q-set were printed on individual laminated paper cards. Participants were given the option to be interviewed in German or English (statements were also presented in English or German, depending on their choices).

During data collection, researchers guided the participants to first read all statements and then sort them into two major groups: statements that they agreed to and those that they disagreed with. Second, each participant rated each of the 25 statements in relation to each other in the grid. The grid's scale ranged from -4 (strong disagreement) to $+4$

(strong agreement). Participants were encouraged to adjust their Q-sort until they felt it represented their viewpoint. This procedure resulted in 17 Q-sorts, with different sorting patterns (i.e. the 17 Q-sorts of 17 participants). Upon completion of this task, participants were interviewed to deepen the understanding of their Q-sorts. Finally, during the interviews, we collected information about educational background, current job position, and experience in job position. All tasks (i.e. statement sorting and interview) lasted on average 30 min.

2.4. Statistical analysis

The 17 Q-sorts were intercorrelated and factor-analysed using the software PQ Method v. 2.35. (Schmolck 2002). This procedure generates factors, which represent clusters of Q-sorts similarly sorted by participants. For factor extraction, we used principal component analysis (PCA). To define the number of factors to retain for final analysis, we followed the guidelines suggested by Brown (1980), where each factor must have at least two significant loadings (± 0.51 at $P < 0.01$), and eigenvalue should exceed 1. Of the initial eight factors, four were discarded because they had less than two significant loadings. Therefore, the other four factors were selected for factor rotation, which was performed using Varimax rotation. The four-factor solution represents four different viewpoints about the aspects that would facilitate cross-border cooperation and explains 66% of the total variance.

All 17 Q-sorts significantly loaded one of the four factors. Loadings of ± 0.51 or above were significant at $P < 0.01$. Q-sorts that significantly load on a particular factor are called the defining Q-sorts; they exhibit a very similar sorting pattern (Watts and Stenner 2014). When a similar sorting pattern is found, this suggests that the participants' viewpoints (i.e. their Q-sorts) are similar and as a result we can assume that they share a distinct viewpoint of which aspects would facilitate cross-border cooperation. Q-sorts were either automatically flagged by PQ Method or manually added to one factor. Table A.2 in the Appendix shows the loadings of each Q-sorts.

The defining Q-sorts were subsequently merged to form a factor array. A factor array is a single ideal-typical Q-sort for each factor (Watts and Stenner 2014). It is calculated according to a procedure of weighted averaging, where higher loading defining Q-sorts are given more weight in the averaging process (Watts and Stenner 2014). The factors were interpreted via the holistic approach suggested by Watts and Stenner (2012), which considers the entire statement configuration captured in a factor array. Answers to the open-ended questions from interviews of participants whose Q-sorts were significantly (i.e. loadings of ± 0.51 or above at $P < 0.01$) associated with the relevant factor were also used to complement the interpretation of the factors.

3. Results

Table 1 provides the list of statements and their respective scores on all factor arrays for the specific factors (i.e. viewpoints). Reading this table by column reveals the factor array for each of the factors. Factor F1, for example, has ranked statement 1 at 0, statement 2 at -4 , and so on. Reading the table row-by-row reveals the cross-factor rankings of an individual statement. Statement 3, for example, has been ranked at 0 by Factor F1, at -2 by

Table 1. Factor arrays for factors F1, F2, F3 and F4.

Nb.	Statements	F1	F2	F3	F4
	‘Cross-border cooperation would be facilitated if ...’				
1	People spoke the same language on both sides of the border.	0	0	4	4
2	Stakeholders in the cross-border region were more reliable.	-4	-4	-3	-1
3	Stakeholders adapted to the business customs (i.e. hierarchal structures) of the other country.	0	-2	1	3
4	Universities cooperated more with industry on both sides of the border.	2	-1	-1	0
5	More cross-border R&D and innovation transfer projects were established.	3	1	-1	0
6	Enterprises had easier access to research institutions on the other side of the border.	0	-1	0	-1
7	More networking events were organized on both sides of the border.	2	-1	-2	1
8	The cross-border region had better public transportation infrastructure.	-1	-2	2	-3
9	The cross-border region had better highway infrastructure.	-2	-3	-4	-3
10	The cross-border region had better internet connection.	-2	-2	-2	-2
11	The regulatory and bureaucratic burdens of doing business across the border were minimized.	1	2	3	2
12	Intellectual property rights were regulated in a similar manner in both countries.	-1	0	-3	3
13	Bureaucratic formalities were reduced when applying for common projects on the other side of the border.	0	3	3	2
14	Enterprises had access to services that address questions on entering the market on the other side of the border.	1	2	1	1
15	Business sectors had similar priorities in both countries.	-1	0	0	1
16	Education and job qualification certificates were mutually accepted in both countries.	1	1	2	1
17	Governmental strategies for industry development were similar in both countries.	0	2	0	2
18	Prices and costs of services and goods were similar in both countries.	-3	0	-1	-4
19	The political systems were similar in both countries (centralist in NL vs. federalist in GER).	-2	0	-2	-1
20	Policy objectives of bordering regions were developed in cooperation with the other country.	1	4	2	-2
21	Policy objectives in each country were more clear.	-3	3	-1	0
22	Cooperation was driven more by developing knowledge than reducing costs.	-1	1	0	-2
23	All stakeholders in the cross-border region were pro-actively engaged in cooperation.	4	1	1	-1
24	All stakeholders mutually engaged in cooperation.	2	-3	1	0
25	Networks were better developed through cross-border research projects.	3	-1	0	0

Factor F2, and so on. The four factors (i.e. viewpoints) were labelled as follows: cooperation through pro-active engagement (F1), cooperation through targeted policies (F2), cooperation through an aligned institutional setup (F3), and cooperation through socio-cultural proximity (F4).

In the interpretations presented below, the qualitative answers are indicated in *italics*. Where the ranking position of a statement is important to a section of interpretation, the relevant statement is noted in brackets; hence (1: +4) would indicate that statement 1 was ranked in the +4 position in the relevant factor array.

3.1. Factor 1 – cooperation through pro-active engagement

The Q-sorts of eight participants significantly loaded (i.e. loadings of ± 0.51 or above at $P < 0.01$) the first factor, which has an eigenvalue of 5.9 and accounts for 24% of the total variance (see column F1 in Table A.2 in the Appendix). Six of these eight participants were Dutch: two entrepreneurs ‘(R3, R12)’, two education institute members ‘(R7, R14)’ and two actors from local institutions ‘(R2, R16)’. Two participants were actors from local institutions in Germany ‘(R5, R6)’.

The main idea of this viewpoint is that cooperation would be mostly facilitated by pro-active engagement of stakeholders. It is grounded on participants’ views that stakeholders need to be pro-actively and mutually engaged in cooperation (23: +4; 24: +2), because ‘if

they would cooperate more intensively on their own initiative, then there would also be more intensive cooperation and the bigger the circle, the more effective it would be (R6)'. It is not important that stakeholders are more reliable (2: -4), because 'they already are (R6)' and it is 'not necessarily an aspect that will lead to more cooperation because if there is only one partner to work with, reliability becomes superfluous (R5)'. In cross-border regions, networks, events, and research and development projects should be strengthened (25: +3; 5: +3; 7: +2) and universities should work in close collaboration with industry (4: +2) 'to improve knowledge exchange (R3, R5)'. The 'focus on specific innovation projects is not important, but focus should lie on the economic structures that are created, i.e. networks and clusters (R16)'. However, 'network events should really focus on the core business, activities and interests of the target group and not too widely (R3)'. The reduction of bureaucracy is not a high priority (11: +1; 13: 0).⁴ Besides the general question 'whether it actually can be reduced (R14)', bureaucratic hurdles are only considered to potentially 'slow procedures down, but they are not a clear limitation for business (R3)'. An alignment of political systems, and clearer and jointly developed policy objectives by countries located in cross-border regions are not important for cooperation (21: -3; 19: -2; 20: +1). Similar prices and costs for services and goods in cross-border regions were not considered important to facilitate cross-border cooperation (18: -3). On the contrary, 'differences were even seen as potentially profitable (R14)', because 'they facilitate the need to go beyond the border (R12)'.

3.2. Factor 2 – cooperation through targeted policies

The Q-sorts of three participants significantly loaded (i.e. loadings of ± 0.51 or above at $P < 0.01$) the second factor, which has an eigenvalue of 2.3 and accounts for 16% of the total variance (see column F2 in Table A.2 in the Appendix). The three participants were from Germany: two entrepreneurs '(R8, R10)' and one actor of a local institution '(R17)'.

The main idea of this viewpoint is that cooperation would be mostly facilitated by targeted policies. Hence it is important for cooperation to formulate clearer policy objectives and that governmental strategies of bordering regions are developed in cooperation with the neighbouring country (20: +4; 21: +3; 17: +2). 'If similar policy goals are present, the implementation of projects would certainly be easier (R8)'. Bureaucracy should be reduced to do business on both sides of the border (13: +3; 12: +2), because 'currently it seems difficult to enter the foreign country without additional assistance, i.e. a coordinator (R10)'. In addition, an alignment of political systems in both countries seem worthwhile for cooperation (19: 0),⁵ but 'if not present, it is not an obstacle (R10)'. To facilitate cross-border cooperation social proximity is not important (3: -2; 24: -3). 'Cross-border cooperation thrives on the fact that different structures come together and different impulses, different people with completely different approaches want to do things together (R17)'. Similar to Factor 1, it is not important that stakeholders are more reliable (2: -4), probably because 'they already are (R10, R17)'.

3.3. Factor 3 – cooperation through an aligned institutional setup

The Q-sorts of four participants significantly loaded (i.e. loadings of ± 0.51 or above at $P < 0.01$) the third factor, which has an eigenvalue of 1.6 and accounts for 15% of the total

variance (see column F3 in Table A.2 in the Appendix). One participant was a Dutch entrepreneur ‘(R13)’, one a German education institute member ‘(R11)’, and two were actors from local institutions – one from Germany ‘(R9)’ and one from the Netherlands ‘(R15)’.

The main idea of this viewpoint is that cooperation would be mostly facilitated by an aligned institutional setup. Hence bureaucratic barriers in doing business in cross-border regions should be reduced (11: +3; 13: +3). ‘Regulatory and bureaucratic hurdles hinder especially smaller businesses in participating in funded projects (R9)’. In addition, people should speak the same language (1: +4), but like in Factor 1 and 2, it seems hardly important that stakeholders trust each other more (2: –3), possibly because ‘they already do (R9, R15)’. To facilitate cooperation, it is not important that more networking events and research and development projects are established in cross-border regions (5: –1; 7: –2). However, it was considered important that ‘established networking events become sustainable and do not end as soon as funding ends (R11)’. Better public transportation in cross-border regions would also facilitate cooperation (8: +2), because trips across the border still take too much time which is a considerable problem for younger people (R9 and R13). Increasing mobility also means increasing access to educational institutions and simultaneously facilitates exchange of people between e.g., educational institutions (R9). Common regulation for intellectual property rights between neighbouring countries are not perceived to be important to facilitate cross-border cooperation (12: –3), because such ‘issues arise among partners which are already in close cooperation (R13)’.

3.4. Factor 4 – cooperation through socio-cultural proximity

The Q-sorts of two participants significantly (i.e. loadings of ± 0.51 or above at $P < 0.01$) loaded the fourth factor, which has an eigenvalue of 1.3 and accounts for 11% of the total variance (see column F4 in Table A.2 in the Appendix). Both participants were Dutch, one entrepreneur ‘(R1)’ and one actor from a local institution ‘(R4)’.

The main idea of this viewpoint is that cooperation would be mostly facilitated by socio-cultural proximity. Hence it is important for people in cross-border regions to speak a common language (1: +4), because ‘communication is essential for any form of collaboration or cooperation (R1)’. However, ‘to a large extent it is not only the language but also a bit of a culture as well. If you have similarities in culture, it is easier to work together than if you don’t (R1)’. Stakeholders involved in business should be able to adapt to the customs of the neighbouring country (3: +3) and trust each other (2: –1).⁶ Although one might expect a united European system, ‘there are still big differences (i.e. institutions) (R4)’ and the similarities in culture mentioned above ‘also include mutual respect for traditions and customs (R1)’. In addition, cooperation would be facilitated by neighbour countries having a common regulation for intellectual property rights (12: +3) and a reduced bureaucracy to do business (11: +2; 13: +2), because ‘a lack of similarities creates a gap between countries (R4)’. To facilitate cooperation on both side of the borders, similar prices and costs for services and goods (18: –4) are ‘irrelevant, because one can easily do business in another country, and work closely together with a company in the other country that has a very different price structure (R1)’. It is also not important that the focus of cooperation is

on knowledge creation (22: –2): ‘while knowledge creation should be the aim in a scientific setting, in a business setting cooperation can be about and driven by costs (R1)’.

3.5. Consensus statements

Results suggested consensus of the four viewpoints regarding six statements (see Table 1). There were two statements for which the views were held strongly by stakeholders as indicated by high negative ratings. Specifically, there was a consensus against the notion that better highways (9), and better internet connection (10) would facilitate cooperation in cross-border regions. There were four statements for which the four viewpoints were neutral, ‘Cross-border cooperation would be facilitated if enterprises had easier access to research institutions on the other side of the border’ (6); ‘if enterprises had access to services that address questions on entering the market on the other side of the border’ (14); ‘if business sectors have similar priorities in both countries’ (15); and ‘if education and job qualification certificates were mutually accepted in both countries’ (16).

4. Discussion and conclusions

In our study, stakeholder viewpoints on the facilitation of cross-border cooperation in the Dutch-German border region Rhine-Waal were identified using Q methodology. Compared to previous research which focused on ‘ordinary’ citizens (Capello and Perucca 2018; Capello, Caragliu, and Fratesi 2018a; Capello, Caragliu, and Fratesi 2018b), we focused on stakeholders because they can become actively involved in the process of forming cross-border cooperation. Our results centred around four viewpoints: ‘cooperation through pro-active engagement’, ‘cooperation through targeted policies’, ‘cooperation through an aligned institutional setup’, and ‘cooperation through socio-cultural proximity’. These viewpoints vary not only across but also within stakeholder groups.

The viewpoint ‘cooperation through pro-active engagement’ prioritized aspects related to cooperative behaviour and mutual engagement of all stakeholders. Hence, while this viewpoint considers cooperation as an individual ‘responsibility’, it also reflects the need of reciprocity in cooperation. Previous literature has emphasized the importance of reciprocity (and trust), particularly for long-term cooperation (Pesämaa et al. 2013). Given the explicit focus on pro-active behaviour, the development of policies through a bottom-up approach would be favoured over a top-down approach. In fact, this was the only viewpoint for which a reduction of bureaucratic formalities and a joint development of policy objectives were not considered a priority in cross-border cooperation. Instead, other aspects of this viewpoint are related to the importance of jointly establishing projects (e.g. innovation transfer projects), which suggest another route for enhancing cross-border cooperation. Indeed, previous studies have evaluated cross-border projects as positive for cross-border cooperation (González-Gómez and Gualda 2016). In addition, cooperation through pro-active engagement also entails the organization of targeted network events, which suggest a third route to enhance cooperation in cross-border regions. Indeed, previous studies have found that

networking events are important for cultivating cooperation, particularly for business (Mitchell, Schlegelmilch, and Mone 2016; Kitchen 2017).

The viewpoint ‘cooperation through targeted policies’ emphasizes on policy structures. For this viewpoint, the formulation and development of clear policy objectives in cooperation with the neighbouring country is particularly important. The emphasis on policy structure suggests that this viewpoint relies on policy-makers’ initiatives to enhance cross-border cooperation, which might be explained by the argument that preconditions to allow full exploitation of assets should be set by appropriate policies (Cappellano and Rizzo 2019). Most cross-border regions have a core of four categories of policy areas, namely ‘local economic development, transport and accessibility, environment, culture and education’ (Noferini et al. 2020, 50) and a prioritization among those areas or a more detailed categorization should include the stakeholders’ needs. This observation is in line with González-Gómez and Gualda (2016), who found a disconnection between EU-driven cross-border policies and the objectives of cross-border institutions and inhabitants in a specific location. Hence, this viewpoint might express the position that a pro-active engagement in cooperation only seems necessary if targeted to formulate specific policy objectives, because similar objectives make the implementation of cross-border projects easier (Jacobs 2016). This result is in line with Szmigiel-Rawska (2016), who found that the ability of managing organizations to make key decisions and develop common policies concerning the whole cross-border region is essential for cross-border cooperation. Indeed, we also found that special services can assist enterprises to enter the foreign market. Not in alignment with latest findings (see e.g. Leick 2012), socio-cultural similarities were not considered to facilitate cooperation but were only seen as a bonus. Similar to a study conducted in the German-Polish-Czech cross-border region, cultural variations might be appreciated as an enrichment (Knippschild 2011). A possible explanation is that, in this specific case, socio-cultural differences are limited, and most people are aware of the specificities of the neighbouring region.

The viewpoint ‘cooperation through an aligned institutional setup’ is mainly characterized by aspects related to the reduction of regulatory and bureaucratic barriers. In line with previous findings (Noferini et al. 2020), cross-border cooperation of this viewpoint is restricted by the asymmetries between administrative and legal systems causing increased coordination costs. As an example, this viewpoint emphasized the need for reducing bureaucratic formalities, particularly for small enterprises, when applying for common projects on the other side of the border. As institutional coherency serves as a prerequisite for long-lasting and self-employed cooperation (Podadera Rivera and Calderón Vázquez 2018), bureaucratic barriers hamper cooperation. Furthermore, for this viewpoint, many networking events are not sustainable because when the funding ends, the initiatives stop so there is not long-term facilitation of cross-border cooperation. In fact, while external funding plays a role in cross-border cooperation (Szmigiel-Rawska 2016), previous findings also suggest that the preconditions to establish long-term cooperation have to remain stable over time and must not rely solely on financial incentives (Podadera Rivera and Calderón Vázquez 2018).

The viewpoint ‘cooperation through socio-cultural proximity’ is mainly characterized by aspects related to the importance of communication (verbal and non-verbal) and culture for cooperation. In particular, a common language, adaptation and respect to

the customs and traditions of the neighbour country, are important for cooperation in this viewpoint. Previous research showed that socio-cultural proximity influences information and communication costs (Boschma 2005), and knowledge can only be effectively built and applied when this process is not impeded by cultural differences (Bardy 2010). For this viewpoint, there is no specific concern about the relationship between cooperation and knowledge creation, suggesting no major obstacles in the case study region. A case study in the Upper Adria cross-border region between Slovenia and Italy found that previous cross-border cooperation programmes fostering cultural integration led to an increase of linkages and the formation of a new network among different nationalities, including minority groups of the neighbouring region (Nadalutti 2014). Results also showed the formation of a 'new' cultural identity which goes beyond nationality, i.e. cross-border community. The formation of a cross-border identity could be a long-term goal in other cross-border regions as well.

From our results, the following policy implications emerge. First, we argue that the identification of these four viewpoints reinforces the need of a participatory approach in developing future policy, in which stakeholders' views are acknowledged. This is particularly important for cross-border initiatives that are supposed to comply with the principle of partnership and promote a multi-level governance system. Given the four different viewpoints, it is possible that stakeholders will never be fully satisfied, but the acknowledgement of different viewpoints provides a starting point for cooperation. A cross-border open learning environment, such as a living lab, might facilitate the discussion of different views (Panten et al. 2018). Second, to implement a participatory approach, the stakeholder engagement is necessary. Previous research found that the attractiveness of the neighbouring location, e.g. connection of different organizations through a common destiny, is essential for engagement in cooperation (Szmigiel-Rawska 2016) and that enthusiasm decreases if actors fail to see direct benefits (Pesämaa et al. 2013). Hence, we suggest that it is important to raise awareness among stakeholders of potential benefits of cooperation across the border. A joint managing organization could disseminate the benefits on both sides of the border and assist in establishing and enhancing cooperation (Perkmann 2003; Berzi 2017). Third, to put into practice a participatory approach it is necessary to identify the different stakeholders' viewpoints. In this regard, we argue that Q methodology is a useful tool, although its application might be seen as time and money consuming (Cuppen et al. 2010).

Our study has some limitations that should be considered in future research. First, we used a convenience sample complemented by snowballing to recruit participants. These sampling techniques are non-probabilistic and hence results have to be interpreted with care, but we argue that it is adequate for our study purposes. The application of Q methodology does not allow for generalizations; however, we argue that this approach offers a holistic view of aspects influencing cross-border cooperation. Second, the study was conducted only in a Dutch-German cross-border region, the Euregio Rhine-Waal, which might bias some of the results. For example, good communication and transport infrastructure was not seen as an important aspect in any viewpoint, but this is likely because the infrastructure is already well developed in the region. In the literature, the relationship between enterprises and education and research institutions, i.e. universities, is usually considered as beneficial for innovation development and economic growth (Barajas, Huergo, and Moreno 2012; Peer and Stoeglehner 2013). However, the role of

education and research institutions for further facilitation of cross-border cooperation did not emerge in any viewpoint. For our study region, it might be the case that connections to universities and research institutes are already in place at national level. Thus, we suggest that future research should be conducted in other cross-border regions to verify whether the viewpoints align to those identified in our research. Furthermore, Q methodology could be applied in cross-border regions to investigate stakeholders' perceptions on specific policy instruments which are planned but before they are implemented.

Notes

1. Q methodology has a specific terminology (e.g., factors, P-set, Q-set, Q-sort). For the sake of consistency, we used the terminology based on Watts and Stenner (2012).
2. An alternative approach for eliciting stakeholder views would have been the Analytical Hierarchy Process, but this approach results in a preference ranking for different factors that contribute to cross border collaboration and not a deeper understanding of aspects that could facilitate cross-border collaboration.
3. This project received ethics board approval from Wageningen University (N^o 09215846).
4. Although +1 and 0 are by no means low scores, these are the lowest scores given to these statements by any of the factors. Hence, the relative importance makes it worth mentioning.
5. Although 0 is by no means a high score, this is the highest score given to this statement by any of the factors. Hence, the relative importance makes it worth mentioning.
6. Although -1 is by no means a high score, this is the highest score given to this statement by any of the factors. Hence, the relative importance makes it worth mentioning.

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