



Masaryk University  
INTERNATIONAL INSTITUTE OF POLITICAL SCIENCE  
Prof. PhDr. Vít Hloušek  
&  
Universiteit Utrecht  
SCHOOL OF GOVERNANCE  
Dr. Jasper Sluijs

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*Does Twinning address limitations to institutional  
cooperation?*

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*A case study on institutional cooperation between Dutch institutions  
and post-communist institutions in the field of research*

By

**Joep Bresser**

Rue Henri Stacquet 24  
1030 Brussels  
Belgium

Student ID: 6596940

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## **Abstract**

*The low participation of some new member states in the European Union's Framework Programmes for Research & Innovation display an internal R&I divide within Europe, which impacts EU's competitiveness on the world stage. To address this challenge the European Commission introduced some measures in the newest Framework Programme. This study aims to analyse to what extent one of the introduced measures called Twinning addresses the limitations to institutional cooperation between new member states and the old member states. It does so by a case study on institutional cooperation via the Twinning instrument between Dutch universities and post-communist institutions. The findings suggest Twinning addresses some of the barriers such as network access, but also finds multiple barriers persist due to institutional contexts.*

# Table of Contents

|   |    |
|---|----|
| Abbreviations .....   | 5  |
| 1. Introduction .....   | 6  |
| 1.1 Contribution to research on widening participation.....               | 11 |
| 1.2 Reader's guide .....  | 12 |
| 2. Literature Review .....  | 13 |
| 2.1 Development of research systems during communism.....                 | 13 |
| 2.2 Transformation of the research systems during transition period ..... | 15 |
| 2.3 The influence of EU integration on research systems.....              | 17 |
| 2.4 Causes of the R&I divide in the European Union .....                  | 19 |
| 2.5 Instruments to address the R&I divide in Europe .....                 | 22 |
| 3. Theoretical Framework.....   | 27 |
| 3.1 Historical institutionalism.....                                      | 27 |
| 3.2 Sociological institutionalism .....                                   | 27 |
| 3.3 Europeanization.....  | 28 |
| 3.4 Combining theories .....  | 29 |
| 4. Methods.....   | 30 |
| 4.1 Case selection .....  | 30 |
| 4.2 Mixed research methods.....   | 34 |
| 4.2.1 Document analysis .....   | 34 |
| 4.2.2 Interviews.....   | 35 |
| 4.3 Analysis.....   | 36 |
| 4.4 Validity and reliability .....  | 37 |
| 5. Perception of policy makers on widening measures .....                 | 39 |
| 5.1 Horizon 2020 (FP8) .....  | 39 |
| 5.2 Horizon Europe (FP9).....   | 43 |
| 5.3 Interim conclusion .....  | 47 |
| 6. Establishing research partnerships .....                               | 48 |
| 6.1 How are research partnerships established? .....                      | 48 |
| 6.2 Motivation for research cooperation .....                             | 51 |
| 6.2.1 Motivation of researchers from widening institution.....            | 51 |
| 6.2.2 Motivation of researchers from Dutch universities.....              | 53 |

|     |   |    |
|-----|---|----|
| 6.3 | Interim conclusion .....  | 54 |
| 7.  | Perceptions on cooperation in Twinning projects.....                | 55 |
| 7.1 | Successes in cooperation.....                                       | 55 |
| 7.2 | Problems in cooperation .....                                       | 57 |
| 7.3 | Interim conclusion .....  | 59 |
| 8.  | Perceptions of the Twinning instrument .....                        | 61 |
| 8.1 | Perception on Twinning from the widening institution .....          | 61 |
| 8.2 | Perception on Twinning from Dutch institutions .....                | 65 |
| 8.3 | Interim conclusion .....  | 67 |
| 9.  | Conclusions and recommendations.....                                | 68 |
| 9.1 | Conclusion .....  | 69 |
| 9.2 | Policy recommendations .....  | 72 |
| 9.3 | Limitations and outlook.....  | 74 |
|     | References.....   | 76 |
|     | Annex I Questions for semi-structured interviews .....              | 88 |
|     | Annex II Positions on widening participation in Horizon Europe..... | 89 |

## Abbreviations

**CEEC** Central and Eastern European Countries

**COST** European Cooperation in Science and Technology

**EHEA** European Higher Education System

**EIT** Institute for Innovation and Technology

**ERA** European Research Area

**ESIF** European Structural and Investment Funds

**Parliament** European Parliament

**EU** European Union

**EU-13** List of countries including: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia

**EU-15** List of countries including: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden & the U.K.

**FP** EU Framework Programmes for Research and Technological Development

**FP8** 8<sup>th</sup> Framework Programme Horizon 2020 2014-2020

**FP9** 9<sup>th</sup> Framework Programme Horizon Europe 2021-2027

**GDP** Gross Domestic Product

**Horizon 2020** H2020

**MSCP** Marie Skłodowska Curie Programme

**NCP** National Contact Point

**R&D** Research & Development

**R&I** Research & Innovation

**SEWP** Spreading Excellence & Widening Participation

**USSR** Union of Soviet Socialist Republics

# 1. Introduction

The fall of the Soviet Union (USSR) created the opportunity for the European Community to expand their borders, promote their democratic values and push for pro-market economic reforms in the post-communist countries of the European Union (EU) in the Central and Eastern European (CEE) region<sup>1</sup> (Baldwin, Francois, & Portes, 1997, pp. 125-126). The EU expanding into a new highly different geographical area in terms of political experience and past economic structures waved criticism on what the impact would be, and many politicians doubted the readiness of the candidate states to join the single market of the EU. Rehn coined these concerns as the 'enlargement fatigue' in a speech on the future of Eastern Enlargement (Rehn, 2007). Despite criticism and concerns, on 1 May 2004, the Czech Republic, Estonia, Hungary, Lithuania, Latvia, Poland and Slovakia were the first post-communist countries to join the EU. Three years later, it was Bulgaria's and Romania's turn to join the EU, meaning the largest group of post-communist countries are now member of the EU (Krajewski, 2014, p. 101).

Multiple studies have shown 'new' Europe, which will be called the EU-13<sup>2</sup> countries and 'old' Europe, which from now on I will call the EU-15<sup>3</sup> countries and, converged considerably after the Eastern Enlargement. Economically, every EU-13 country converged relatively to the EU-15 compared to ten or 25 years ago (Grela, et al., 2017). Although EU membership proved wealth enhanced for the EU-13 states, membership did not equalize wealth between the EU-15 and EU-13 (Epstein, 2014, p. 2). The openness of the national market to the European Single Market, resulted in a high degree of dependence on the Western European countries (Jacoby, 2014). Institution building imposed by the EU and compliance with the transnational rules lead to capacity building in every post-communist country (Bruszt & Vukov, 2017). Quantitatively post-communist countries have been performing well, with high GDP growth, exports and labour productivity. But despite economic growth and institution building, qualitatively EU-13 countries did not manage to build up a knowledge economy based on research & innovation

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<sup>1</sup> Post-communist countries will be the focus of this research and not the EU-13. I focus on post-communist countries that were part of the USSR. In the EU these are Poland, Hungary, Czech Republic, Slovakia, Estonia, Lithuania, Latvia, Bulgaria and Romania

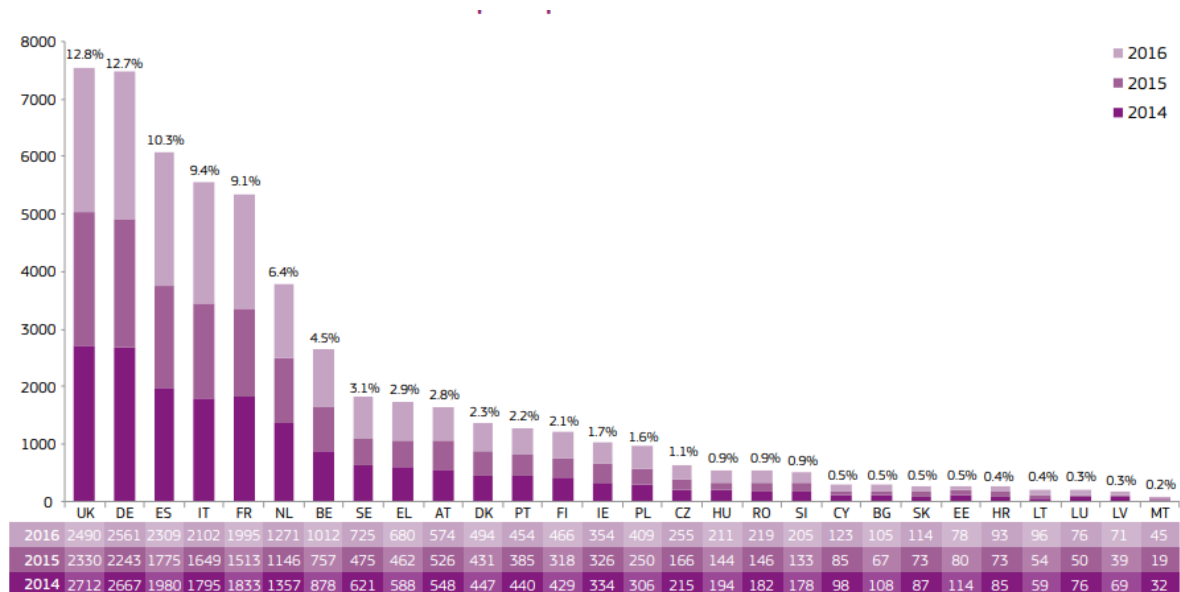
<sup>2</sup> Estonia, Lithuania, Latvia, the Czech Republic, Poland, Slovakia, Hungary, Bulgaria, Romania, Cyprus, Croatia, Slovenia and Malta

<sup>3</sup> Other 15 Member States of the European Union

capacity (European Innovation Scoreboard, 2018). Therefore we currently speak of a research & innovation divide existing within Europe (European Commission, 2011, p. 1).

This research & innovation divide can be observed in the big differences in participation in the EU Framework Programmes for Research and Technological Development (FP), which is the EU instrument to fund excellent research & innovation projects in Europe. These FPs have always had a focus on fostering excellence in research since the EU sees this as a prerequisite for an innovation-led economy (European Commission, 2006, p. 1). Compared to the EU-15 countries who used the FPs to establish national niches of excellent research, evaluations of the FP programmes showed the new member states of the EU still have low participation rates in the programmes (Fotakis, 2010) (Fresco, et al., 2015) The evaluation on the FP7 programme (2007-2013) concluded this low participation shows a divide in Research Excellence within Europe (Fresco, et al., 2015, p. 35). In the 7<sup>th</sup> Framework Programme (FP7) running from 2007 until 2013 85% of total funding for projects was allocated to EU-15 countries, while only 4% went to EU-13 countries (Fresco, et al., 2015, p. 32). These low participation rates persisted in the newest programme Horizon 2020 (H2020). Figure 1, which sets out performance in H2020, displays a big difference in participations in projects between countries categorized as EU-13 countries and EU-15 countries. To illustrate, the Netherlands, a country with a population of 17.08 million people (3.33% of total EU population), managed to participate in 6.4% of all H2020 projects in 2014-2016. Poland has a population more than doubling the Dutch population (38 million, 7.4%), but only managed to participate in 1.6% of H2020 projects. It seems EU-13 countries like Poland have trouble with participating successfully in projects within H2020.





**Figure 1 Number of participations to Horizon 2020 per Member state, 2014-2016 and share of total Horizon 2020 participations**

Source: Horizon 2020 in full swing, 2018

Whereas European funds like the European Structural Investment Funds (ESIF) are meant specifically for regions to catch up and use the funds for Research & Innovation (R&I) investments, the structure of FPs is based on excellence of research. Only the most excellent research proposals with the biggest potential impact get awarded funding out of the FP (European Commission, 2006). EU-13 countries generally lack sufficient national R&D investments, synergies between national research systems and the EU research landscape and have reduced access to international networks (Corpakis, 2016). Other limitations to institutional cooperation between EU-15 and post-communist institutions are differential wage levels and lack of R&D capacity, for example in terms of R&D personnel (European Commission, 2011). Furthermore many of the post-communist institutions still have to learn the system through experience and often are not ready to take up projects of a big size such as the ones in FPs (Puukka, 2018, pp. 21-26). This system learning is hampered because information, training, communication and availability of advice are less present than in EU-15 countries. Other barriers identified are a fragmentation of the R&I systems due to historical legacy, language barriers and weak public institutions (Puukka, 2018, pp. 31-33). As a consequence the capability of post-communist institutions to participate in the competitive environment of European FPs is limited (Schuch, 2014).

As the goals of the FPs are to enhance research excellence and Europe's competitiveness in the world, the innovation gap in the European Union between E-15 and E-13 member states represents not only a problem for the EU-13 countries itself, but for the EU as a whole. In a world where the United States, South Korea and Japan remain fierce competitors at international level and other countries like China and India are swiftly catching up, it is evident an R&I divide within Europe forms a major constraint for effectively competing with these countries (Soete, 2013). Although the EU is catching up with Canada, United States and Japan, it is still well behind these countries in terms of innovation performance and compared to China and South Korea, Europe's position is in decline (Hollanders & Es-Sadki, 2018, p. 25). The European Innovation Scoreboard 2018 identified tackling the uneven spending on R&D in EU countries as one of the main challenges for an excellent European Research Area (ERA) (Hollanders & Es-Sadki, 2018). In many of the post-communist countries sustainable economic integration to the EU in the long term is threatened by a lack of investment in R&I. Therefore it is a pressing challenge to shift their economies onto an innovation path (Krajewski, 2014, p. 1).

Another goal of the FPs is to produce EU added value, for example through boosting the competitiveness of the EU, but also because it produces solutions to societal challenges, contributes to sustainable economic growth and has a positive influence on employment (European Commission, 2018, pp. 2-4). These goals can only be achieved with excellent research, which consequently means it has to be based on competition, producing winners and losers. The low participation of EU-13 member seems to be persistent and structural however, which represents a problem as the FPs' goal is to produce EU added value for all the regions and countries. If only the internationally-leading institutions are benefiting from the program and knowledge is not freely circulated throughout the European Research Area (ERA) excellent solutions are only limitedly applied in national and regional contexts (European Parliamentary Research Service, 2018, p. 120). In short, it hampers the achievement of the higher objectives and consequently European integration.

To address these challenges several measures were taken to improve participation of countries with low participation in the FP. In H2020 the pillar 'Spreading Excellence and Widening Participation (SEWP)' was introduced and 816,5 million euros (out of 70 billion euros total budget of H2020) were set aside for it (European Parliament & Council, 2013a, p.

111). Measures in this part of H2020 are specifically targeted at low performing countries<sup>4</sup> to improve their research and innovation systems and policies as to tackle the internal disparities in Europe (European Commission, 2018a, pp. 1-2). Some of the measures introduced are specifically aimed at universities and research institutions to increase their potential.

In this thesis I will assess whether these SEWP measures introduced in H2020 contribute to bridging the R&I divide in Europe and are effective to tackle barriers to participation in FPs of post-communist countries. In this thesis I will specifically focus on Twinning. Twinning allows an institution in a widening country to institutionally network by linking the institution with at least two internationally leading institutions in Europe. The aim of the project is to strengthen a specific field of research in the institution, which should be achieved by organizing activities like short-term staff exchanges, expert visits, on-site or virtual trainings, workshops and conference attendance (European Commission, 2019a; European Commission, 2019b). Twinning can be seen as a first step to intensified research cooperation between widening and partner institutions. It facilitates and funds instruments to cooperate in research, but does not fund the research itself (European Commission, 2018a). By analysing Twinning projects it allows me to discover what are the barriers faced in the first steps to institutional cooperation and if the instrument creates sustainable cooperation during the course of the project. By analysing four different case studies between widening institutions and EU-15 institutions the strengths and limitations of the Twinning instrument can be identified. This demarcation leads me to the following research question:

***What are current limitations for institutional cooperation between institutions in post-communist countries and EU-15 institutions and to what extent does Twinning in Horizon 2020 address these limitations?***

*Sub-questions:*

- 1. What is the perception on the SEWP measures of policy makers in the European Union?*
- 2. How are research partnerships between post-communist and EU-15 countries established and what motivates researchers to start cooperation?*

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<sup>4</sup> Low performing countries marked as ‘widening countries’ are:

Member States: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia and Slovenia.

Associated Countries: Albania, Armenia, Bosnia and Herzegovina, Faroer Islands, Former Yugoslav Republic of Macedonia, Georgia, Moldova, Montenegro, Serbia, Tunisia, Turkey and Ukraine.

3. *How do researchers involved in research partnerships between post-communist and EU-15 universities perceive their cooperation?*
4. *How do researchers involved in institutional cooperation between post-communist and EU-15 institutions perceive Twinning instrument?*

In order to answer this research question I formulated four sub-questions. First of all, I will analyse documentation on the problem of low participation rates of EU-13-countries. The aim of answering sub-question 1 is to identify the views of policy makers on the R&I divide in Europe and the SEWP measures which aim to address it. The other three sub-questions will be answered by using a case study of four Twinning projects between Dutch institutions and post-communist institutions. The second sub-question looks at how research partnerships are established and what motivations researchers have to start cooperation. The third sub-question asks how the researchers involved in Twinning projects perceive cooperation and the last question asks how actors perceive the Twinning instrument. This last question on the perception of the Twinning instrument by researchers in projects, allows for a comparison with the perception of stakeholders involved in the decision making process (Sub-question 1). The combination of these sub-questions will lead to answering what the current limitations are for institutional cooperation and to what extent the Twinning instrument addresses the limitations. Furthermore, the sub-questions will be supported by an extensive literature review identifying how history and institutional environment can limit institutional cooperation. Furthermore the use of both a policy makers' perspective as a researchers' perspective will give a good picture to what extent the Twinning instrument addresses limitations to institutional cooperation.

### 1.1 Contribution to research on R&I divide

The R&I divide in Europe has been extensively analysed by scholars, who focused on causes for low innovation capacity and low participation in FPs of post-communist countries. The SEWP measures introduced in H2020 are however relatively new and outcomes of these measures have not frequently been researched academically. On the specific instrument of Twinning a study exists from the European Commission itself. It is an evaluation on the Twinning measure and uses a questionnaire survey and qualitative interviews with coordinators from widening institutions to assess the effectiveness of the instrument. The non-academic research of the Commission did however not take into account perspectives of

researchers in internationally-leading institutions. My research is unique because qualitative interviews will be undertaken not only with the coordinators of widening institutions, but also with participants from internationally-leading institutions, offering a balanced view on how institutional cooperation is perceived by both sides. My research aims to contribute to the research on the pressing challenge of the R&I divide in Europe. Many academic papers have been written on causes of the R&I divide, I want in turn to contribute to the less attributed academic question on how to solve the R&I divide.

## 1.2 Reader's guide

First of all a literature review will be conducted on the development of research systems during the communist and post-communist era (Chapter 2). This will be followed by a chapter on the theoretical foundations of this thesis (Chapter 3) and a chapter on the methodology used (Chapter 4). Chapters 5 until 8 will address the sub-questions formulated earlier in this chapter (Chapter 5-8). In the last chapter a summary of the analysis will be presented, which will form the basis of answering the central research question, policy recommendations and suggestions for future research (Chapter 9)

## 2. Literature Review

In this chapter I will write an analysis on academic literature about the R&I divide. First I will analyse the development of research systems of post-communist countries during communist time. Consequently I will analyse the transformation of their research systems during the post-communist phase, while maintaining a specific focus on the impact of European integration on the transformation of the research system. The historical analysis will contribute to the ability to analyse the main causes for low participation of post-communist countries in the FPs of the EU. The chapter ends with an analysis on participation patterns in the FPs and measures introduced to address low participation in H2020.

### 2.1 Development of research systems during communism

The development of universities in post-communist countries greatly differs from the development of Western-European universities. Until WWII, the development of universities has been quite similar in the sense that the state was the main and mostly only funder of university budgets and thereby exerting quite some influence on the policies of universities. After WWII Western European and universities part of the communist sphere took different paths. Western European universities embarked on a path of massification<sup>5</sup> of higher education, ever more accessible to a broad segment of society. This meant an increase in revenues for universities and more independence due to a higher source of third party funding and less from the state itself. Due to communist legacy this massification of higher education in post-communist countries was delayed for almost 50 years (Keszei, Hausz, Fonyó, & Kardon, 2015, p. 171).

Besides missing out on the massification trend, Soviet occupation had a great influence on the structure of universities in CEECs<sup>6</sup>. It led to political and administrative control of universities by the government, a confiscation of their properties to the communist state and complete dependence on direct and indirect state funding (Keszei, Hausz, Fonyó, & Kardon, 2015, p. 171). Furthermore, research and education were in most cases completely separated in different institutions. In CEE countries Academies of Sciences were founded alongside

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<sup>5</sup> Massification of higher education refer to the transformation from elite to a mass form of education (Mok & Jiang, 2016)

<sup>6</sup> As my focus is on post-communist countries in the Central and Eastern European (CEE) region the terms are used interchangeably in this chapter

universities, so little to no research and research funding was left for the universities (Marga, 1997) (Keszei, Hausz, Fonyó, & Kardon, 2015, p. 172). Still nowadays, you can observe the communist legacy in the sense that many universities in CEE are more teaching-based than based on knowledge production (Kwiek, 2012). Besides this, the separation of teaching and research meant research at the Academies was primarily production oriented, thereby attracting attention from industrial enterprises. Other non-industrial sectors remained rather undeveloped (Radosevic, 1999, p. 282).

The Communist higher education system was heavily centralised, in which the government aimed to balance the number of graduates with the number of jobs. Funding of universities was completely in hands of the government and the government set quotas, guidelines, goals and requirements for the system (Mateju, Rehakova, & Simonova, 2007). On the other hand, research was mainly centred in separate research institutions which were closely positioned to the needs of output, meaning they had close ties to their sector. Apart from R&D state funding, research institutions received their funding, although indirectly still from the state, from enterprises in the industry sector. In the 1970s and 1980s communist reforms such as decentralization and promotion of manufacturing demand, lead to more growth, autonomy and research competence (Müller, 1995, p. 49). Also lack of academic freedom and institutional autonomy were characteristics of the system (Elster, Offe, & Preuss, 1998).

The Western system had similarities to the Soviet system as there were large public investments in science. But whereas Western European states stimulated innovation, the Soviet system is a linear model of technological development rather than a system of innovation (Balázs, 1988). In Western European states marketing and business interests played a big role in research-intensive institutions, while these were missing in the Soviet system. In the Soviet Union a linear model chain was adopted with a strict institutional separation of phases in research. This fragmentation meant no synergies were present between for example basic and applied research (Darvas, 1988). The formality and centralized structure of the system hampered circulation of knowledge flows, only by working around these barriers innovation was possible. This inefficiency is a major weakness of the research system in post-communist countries (Balazs, Faulkner, & Schimank, 1995, p. 616). Furthermore, since research & innovation only occurred when people found informal ways of conducting it, formal research evaluation did not happen. This made it difficult to set priorities

for research system reforms during the transition period, as no evaluations were available to fall back on (Balazs, Faulkner, & Schimank, 1995, p. 617).

## 2.2 Transformation of the research systems during transition period

This centralised state-dependent production-based structure of education & research was bound to undergo significant change during the transition period after the fall of communism. All the CEE countries faced many challenges, not only in the field of R&I, to transform from the autocratic and centralistic regulatory system towards a competitive and pluralistic market system (Müller, 1995, p. 2). Liberalization of the economy had a severe influence on the transition of universities and research institutions in the CEE region, as the transition to the market economy impeded the innovative capacities of the region (Krammer, 2009, p. 1). A big part of the society associated universities and research institutions with the bureaucratic elements of the communist period. For the first time they were not state-dependent, which enhanced academic freedom, but universities had to deal with acute lack of funds (Kwiek, *Universities and knowledge production in Central Europe*, 2012, p. 113). Whereas other sectors in the society underwent significant reforms and received more funding, knowledge institutions were largely ignored, also partly because of the recession most CEECs faced during their transition period (Keszei, Hausz, Fonyó, & Kardon, 2015, p. 172). Another reason was policy makers followed neoliberal policies and focused on stabilisation, liberalisation and privatisation, while focus on higher education and research was hardly existent (Orenstein & Haas, 2005, p. 145).

Research was arguably one of the sectors suffering most from the transition to a market economy, for several reasons. First of all, research funding and higher education funding operated in two separate streams. These separate streams were relatively unequal, as a bigger share went to higher education funding. Thus, universities were more or less forced to focus on teaching rather than on knowledge production (Kwiek, *Universities and knowledge production in Central Europe*, 2012). Higher education was free of charge, but funding was not proportionate to the rising number of students in the 1990s. This meant academics and academic institutions had to apply survival strategies, like teaching on private institutions or offering fee-based programmes. This led to a significant research underperformance, as it was the very last priority (Tomusk, 2004) (Slantcheva & Levy, 2007). The only fields in which an expansion could be observed were in social sciences, economics and law, as they were



cheaper to teach and did not require expensive infrastructures (Dobbins & Kwiek, 2017). Moreover, these new fields such as social sciences became popular as they didn't exist during communist times and thus were not associated with this time (Dobbins & Kwiek, 2017, p. 520). Second, as research was focused on industry, the demise of the industry due to decentralization and privatization had a big impact on industrial research, as the R&I funds were heavily reduced. The same effect could be seen in other areas of research (Müller, 1995, p. 49).

As shown in these two sections structural problems of research systems within CEE countries seem to evolve around two factors. The first factor is the inherited institutional communist system (Schuch, 2014, p. 7) characterized as a state-centralist system in which innovation was hampered. It was further characterised by the aforementioned Academies of Science, which functioned more as ministries than universities; lack of competitive funding mechanisms; bureaucracy, centralization and compartmentalization; political domination of universities; industrially production oriented research (Biegelbauer, 2000; OECD, 1994; Josephson, 1994).

The second factor is the painful transformation of the research systems in the 1990s. During the transformation process research was not treated as a preferential policy by politicians in the CEECs (Bucar & Stare, 2002) (Havas, 1999) (Mickiewicz & Radosevic, 2001). Besides this, the demand for applied R&D which was closely connected to the industry, almost collapsed in most CEECs during the 1990s. Despite a general high inflow of Foreign Direct Investment (FDI), this did not lead to knowledge spillovers to national researchers and institutions. Multinationals that invested in R&D in the region were not connected to the local knowledge base (Biegelbauer, Griessler, & Leuthold, 2001). Besides the collapse of industrial R&D, many CEECs faced problems with research infrastructures, which were in strong need of renovation as these were not modernized since the communist era (Schuch, 2005b). Furthermore the 1990s many countries faced ageing of researchers. The low salary of researchers and a brain drain had negative effects on countries' research population (van der Lande, 1998). From a governance perspective, policy making on research and higher education had been problematic too in the transition in the post-communist period. Research policies were distributed over different ministries, negatively influencing the efficiency of designing policies. Also, the attempt of *agency-fication imposed by the EU* was a problematic process as the weak administration and centrality of the system impeded the process (Suurna & Kattel,

2010). These agencies were set up to administer EU and national funds, but had difficulty to manage due to a lack of inter-institutional coordination or cooperation experience (ESPON, 2005).

The abovementioned development of CEE research systems helps to clarify the R&I gap between EU-15 and post-communist countries, as it shows an initial competitive disadvantage for CEE countries compared to the 'old' member states. But ever since the transformation to a Western market economy, European integration has and continues to have significant impact on the development of research systems in CEECs, which will be highlighted in the next section.

### 2.3 The influence of EU integration on research systems

EU integration had notable influence on the research systems of those countries and their economies and governance as a whole. In the previous section it was identified R&I were no priority issues for national governments. But it was not only national politicians who marginalized R&I policies in the 1990s. Economic policies from international organisations were more focused on FDI and privatisation, instead of building a strong innovation-led economy (Loewen & Schulz, 2019, p. 134). Despite this reform started taking place in the R&I systems of the CEE countries with the financial and technical support by the EU. This resulted in a period of institution and capacity building and structural reform starting in the second half of the 1990s (Suurna & Kattel, 2010) (Schuch, 2005b). The prospect of accession exerted more pressure on CEE countries' governments to give priority to innovation policies from the EU. In this period before accession CEE countries started reforming their public R&I systems; creating national research programs; stimulating industry R&I with funds from the sector; institution building; creating infrastructure like technology parks, incubators to support innovation (Schuch, 2014, pp. 8-9). By 2000, CEE countries made considerable progress in restructuring their research systems towards the Western model as the former separated universities and academies were in many countries merged (Muscio, Reid, & Rivera Leon, 2015, p. 3). During the early 2000s, pre-accession and after EU accession, Structural Funds from the EU helped building research infrastructure in the area and more focus on innovation policies. Despite these efforts, innovation capacity did not increase and participation in FP6 and FP7 remained very low (Reid, 2011).

Another important factor in the process of convergence to the Western model was the Bologna process, which is an intergovernmental cooperation between European countries in the field of higher education. The Bologna Process was started in 1998 when the European ministers of education signed the *Sorbonne declaration* which set the course for transforming the European higher education system (Kwiek, 2004, p. 760; Manuel, 2014). Whereas the Bologna process in Western Europe evolved gradually, CEECs only joined after 1999, which meant they were in a 'catching up' position and sometimes drastically had to reform their institutions (Kozma, 2014, p. 21). Since its start in 1999 the Bologna Process has had a big impact on systemic transformation in the field of higher education and research in CEECs. Before the Bologna Process started the TEMPUS and PHARE programmes aimed at assisting CEECs, already causing Europeanization of higher education and research in the region. The encouragement of cooperation with European universities and research institutes was thus a continuation of these earlier programmes, but European integration during the Bologna Process necessitated institutional change in order to adopt European standards, rules, reforms, goals, guidelines, strategies and objectives (Matei, Craciun, & Torotcoi, 2018). According to Martens, Rusconi and Leuze the internationalization process, including the Bologna process, of CEE universities showed a dichotomy between institutional endurance and repeated institutional makeovers. On the one hand it provided the impetus for the reappearance of past pre-communist models but on the other hand new policy models were conveyed upon them through transnational processes like the Bologna process (Martens, Rusconi, & Leuze, 2007). Although the Bologna process was specifically aimed at the higher education sector, it created synergies between the converging European Higher Education Area (EHEA) and European Research Area (Keeling, 2006).

Qualitatively, results of European integration did not lead to an abundance of highly-skilled workers and an innovation-led economy (Krajewski, 2014, p. 105). Due to communist legacy, policies in the early stages of economic transformation were designed based on innovation replacement rather than creating entirely new innovations. (Krajewski, 2014, pp. 102, 105). Innovation replacement in this context means the transfer of solutions already known and used somewhere else, like for example in Western Europe. The failure of the post-communist<sup>7</sup>

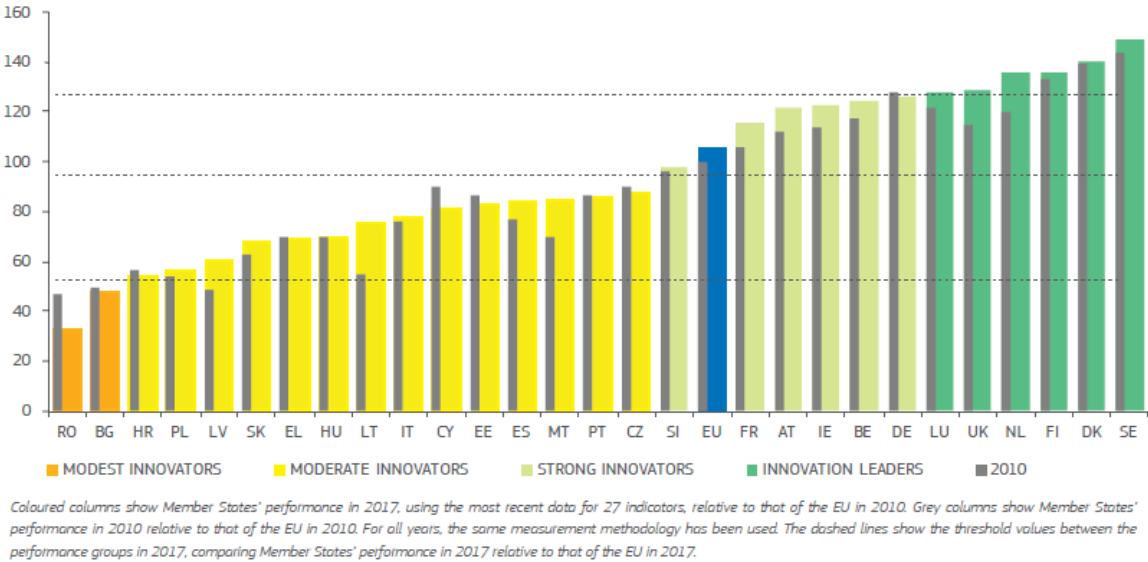
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<sup>7</sup> Post-communist countries will be the focus of this research and not the EU-13. The post-communist countries were part of the USSR. In the EU these are Poland, Hungary, Czech Republic, Slovakia, Estonia, Lithuania, Latvia, Bulgaria and Romania

countries to transform their economies into similar knowledge-based innovation enhancing systems like in big parts of the EU-15 stipulates an innovation gap between the post-communist and EU-15.

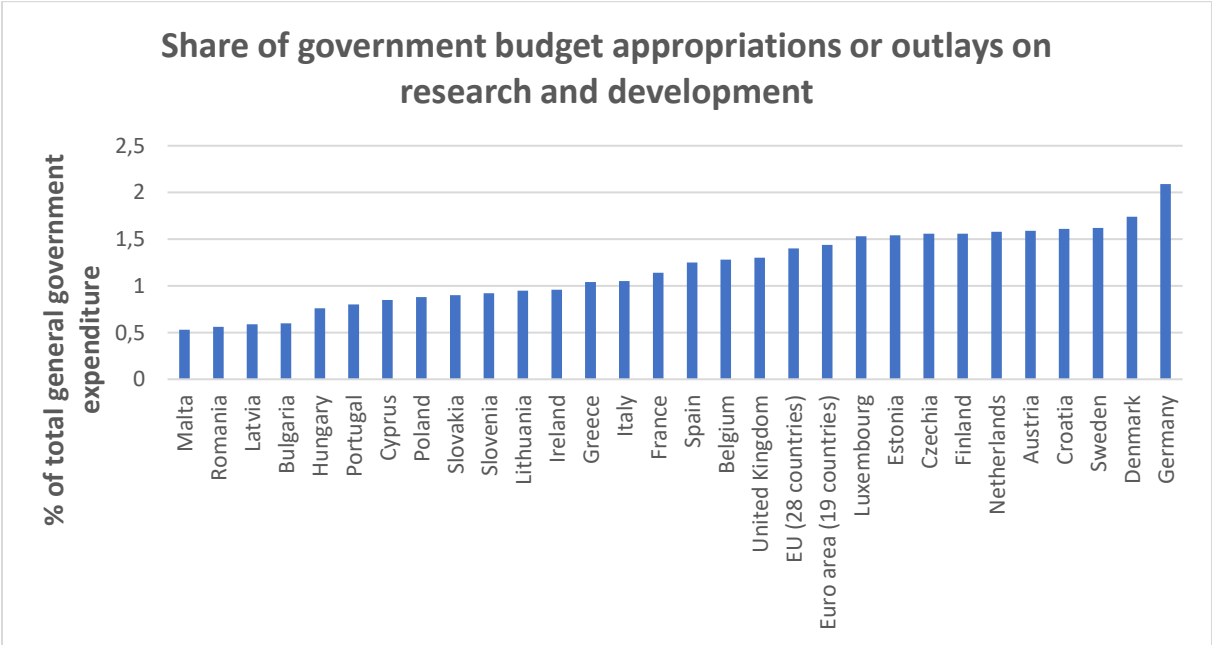
### 2.4 Causes of the R&I divide in the European Union

During the post-communist phase all post-communist countries in the CEE region underwent substantial political, institutional and economic changes. Also, compared with decades ago, all post-communist countries have undergone significant economic growth (Aghion, Harmgart, & Weisshaar, 2011). Although on average there still exists a real gap between the post-communist and EU-15 countries in terms of GDP per capita, labour productivity, employment in agriculture, employment in service sector, infrastructure, financial sector and export, countries are catching up on these quantitative sectors. Convergence has taken place, albeit in some cases slowly (Krajewski, 2014, pp. 102-104). The real problem lays in the qualitative factor of their economies. There is a clear difference between the fast growing economies in the CEE region in terms of productivity and GDP growth and the performance in innovation capacity. Scholars suggested a clear innovation deficit exists in these countries (Gorzalak & Ferry, 2014; Havas & Keenan, 2008), which is supported by statistics on R&I in the European Union.



**Figure 2 Performance of EU member states' innovation systems**  
 Source: European Innovation Board, 2018

Figure 2, taken from the European Innovation Scoreboard shows a difference between EU-13 and EU-15 in terms of the performance of innovation systems. The outcome of this research by the European Commission (EC) shows no single CEEC performs above the EU average. The same report points out that in the years between 2010 and 2017 innovation performance of the moderate innovators, which includes most of the CEECs, did improve but the performance gap with the strong innovators and innovation leaders did not change (Hollanders & Es-Sadki, 2018). Many scholars have agreed one of the main drivers for innovation is the share of government budget spent on research & development (R&D) activities and high spending on R&D is in turn mainly found in advanced economies (Furman, Porter, & Stern, 2002; Szirmai, 2011; Bhattacharya & Bloch, 2004). Furthermore, the more innovative a country is, the greater is the share of funding from the private sector additional to public R&D funding. More public spending on R&D thus creates a positive feedback loop through attracting more private funding (Marciniak, 2013) (Sarul, 2013). Countries in which the opposite is true, scarcity of financial resources generally means low levels of innovation. In many cases, a correlation exists between R&D spending measured as percentage of the total budget and innovation performance.



**Figure 3 Share of government budget appropriations or outlays on R&D**  
 Source: Eurostat, 2018

The correlation between R&D investment and innovation performance needs to be nuanced however, as there are exceptions in the EU. Moreover EU-13 and EU-15 are not homogeneous

zones, with big differences existing between countries in the two groups. While it is true every EU-13 country performs below average in terms of innovation (Figure 2), some countries perform quite well when you take a look at the level of R&D investment. Malta invests least of the whole EU but still belongs to the strongest innovators among EU-13 countries. Czech Republic and Estonia invest above EU-average in R&D, but perform on the same level as Malta. Also in the EU-15 notable differences can be observed, Portugal performs worse in comparison to other EU-15 countries and also invests less in R&D. Germany is the biggest investor in R&D within the EU, but this does not make it one of the lead innovators within the EU, while the United Kingdom invests below EU average and is among the lead innovators.

As already identified this lack of R&I capacity has a consequence for the ability of EU-13 states to participate in the FPs for Research & Innovation. For EU-13 states this means the FPs are costly since they contribute more than they receive in revenues. As contributions to different parts of the total EU budget are secret, direct comparison of contributions to the FP with returns of the FP is not possible. It is however possible to statistically compare the contribution to the total EU budget and compare this with the returns from the FP programme. In case of the period of 2007-2013 the EU-13 countries covered 8 percent of the total EU budget, but only received 3.7 percent in revenues from the FP. All individual EU-13 countries receive less from FP7 than they contribute, but also countries like France, Italy and Germany contribute less than they receive (European Parliamentary Research Service, 2018, pp. 51-52). Although this method of comparing indeed stipulates a gap, applying it to the FP is flawed. As the goal of the FP is to enhance Europe's research excellence and competitiveness, only the most excellent research proposals receive funding and in a research programme based on competitiveness there are always winners and losers.

In the previous paragraphs a correlation has been found between low innovation rates and participations in the FP on the one hand and low investment in R&D on the other hand. It has been shown communist legacy and the transition period played and continues to play a big role in the current R&I environment of CEECs. Besides these factors Kardri Ukrainski et al and Cristina Serbanica & Luminița Constantin identify reasons like static 'old' network patterns; geographical, cultural, institutional and technological barriers; lack of experience in

transnational cooperation; insufficient triple helix<sup>8</sup> linkages as additional reasons for the innovation gap (Ukrainski, Kanep, Kirs, & Karo, 2018; Serbanica, 2017). Also the Commission has addressed causes for low participation in a 2011 analysis following an invitation from the Council to analyse the reasons for low participation of some member states and possible remedies. The Commission noted national research investments and availability of national R&D personnel have an impact on participation in FPs (European Commission, 2011, p. 4). Furthermore lack of complementarity between national and EU levels is mentioned as a problem (European Commission, 2011, p. 3). Better structural compatibility makes it easier for national researchers to apply for FP funding. It also takes time for new actors (in context of the Enlargement) to adapt to structures of the FP (European Commission, 2011, p. 4). In countries where competition for research funding exists, FP participation is higher. Besides this, variation in wages of researchers and support staff between countries has an impact on participation in FPs and barriers to enter existing research networks are also seen as a problem, especially regarding EU projects as they often constitute multiple partners (European Commission, 2011, p. 5).

## 2.5 Instruments to address the R&I divide in Europe

When the candidate countries joined the EU support they received as candidate states largely disappeared (Schuch, 2005b). Instead they were now able to participate as full members of the EU funding programmes, such as the FPs. The Sixth Framework Programme (FP6) for Research & Innovation was launched in 2002, just before the Eastern Enlargement. During the course of this FP the new member states joined the EU and specific measures were included to start the process of integrating the Associated Candidate States in FP6. It offered the Associated Candidate States a unique position compared to other countries associated to the program (European Commission, 2002, p. 16). They gained full membership rights halfway the programme. In contrast to the later research programmes, when FP6 was implemented, the Commission explicitly stressed the importance of a good integration of the new member states within the FP. The Commission made actions to accomplish this specific objective of the new programme. These objectives disappeared in the next FPs (European Parliament & Council of the European Union, 2002) (European Parliamentary Research Service, 2018). In

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<sup>8</sup> Triple Helix refers to relationships between university, industry and government (Triple Helix Research Group, 2019)

the proposal for FP6 the main objective was stated as: *Improving integration and co-ordination of research in Europe which is so far largely fragmented* (European Commission, The Sixth Framework Programme in brief, 2002, p. 3). More specifically, the Commission stated in their proposal that *“this process of improving integration must fully involve the candidate countries which need to be encouraged to join forces in the European research effort to get research to play its proper role in the dynamics of EU enlargement”* (Commission of the European Communities, 2001, pp. 2-3). For the Marie Curie Development Scheme<sup>9</sup> it was for example included that Entities in Less-Favoured Regions of the EU and in the Associated Candidate States would be given priority (European Commission, 2002, p. 6). The Council supported the objective in the Commission as the additional goals formulated in the preambles of the decision stated cooperation should be promoted with ‘Third Countries’, especially Candidate Countries (Expert Group, 2009).

Although the EU institutions addressed the need for integration of the Candidate countries in the European Research Area (ERA) in the proposal of FP6, evaluation of FP6 did not include further integration actions needed for new member states in the next FP7. The Expert Group did however note new Member states will assimilate further into the FPs over time and therefore need to build links to Structural Funds in order to fund it. It also says it takes time for new entrants to join established networks and therefore need to invest in R&I capacity to increase their participation by using structural funds (Expert Group, 2009).

Although integration of new member states was not one of the specific objectives, the Commission did take a regional approach within FP7. In the proposal for FP7 it was highlighted Europe does not fully exploit its research potential and therefore needs to strengthen especially less advanced regions. The program, called REGPOT, was targeted on researchers in the convergence and outermost regions, to help them to participate in research activities at EU level (Commission of the European Communities, 2005, p. 42). It has to be noted that when negotiations took place in 2005-2006 following this proposal, the Enlargement countries just joined the EU and Romania and Bulgaria did not join yet at the time. According to the new member states, FP7 reflected a program designed for more mature research and innovation environments because of a lack of their involvement within the negotiations (EU-12, 2011).

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<sup>9</sup> This is a scheme that offers fellowships for research to go on exchange to university in a different country



The first time low participation rates among the new EU member states in the FPs was mentioned in an official document of EU institutions was during the mid-term evaluation of FP7 (2007-2013) in 2010. The subhead on 'New concerns and dilemmas' reads out: *"success rates for applicants in several of the Member States that acceded to the EU in 2004 and 2007 are distinctly lower than for the EU-15"* (Expert Group, 2010, p. 10). Furthermore the Expert Group diagnosed *"a too narrow focus on research excellence can overshadow the benefits of full-scale involvement of EU12 in the FP and this should not be neglected"* (Expert Group, 2010, p. 48). The Expert Group stressed both the importance of the PEOPLE<sup>10</sup> programme for developing the potential for scientists from EU-12 and the scope for using research infrastructures in addressing low participation rates (Expert Group, 2010, p. 72). Acting upon the advice of the Expert Group the Commission recognized the need to address the insufficient participation of some member states currently underrepresented. The Commission acted quickly and called into life the Synergies Expert Group to find out about possible synergies between FPs, Structural Funds and the Framework Programme for competitiveness and innovation (CIP) (Kroes, 2011).

The interim evaluation of FP7 appeared to be the start of a debate on the 'R&I divide' within Europe and turned out to be one of the main discussions in the design of the new FP H2020. These discussions in which EU-13 countries were fully involved lead to the introduction of new measures to address the R&I divide. H2020 introduced a new distinct pillar in the programme called Spreading Excellence and Widening Participation (SEWP). These measures are specifically aimed to develop the potential of countries with low participation rates in FPs. These measures include the following

**The core widening actions:**

- *Twinning* of research institutions, this measure aims at strengthening a defined field of research in an emerging institution through links with at least two internationally-leading institutions in a defined field. This is a small-scale measure, which can be used for employee exchange, workshops, conferences or joint summer schools (European Commission, 2018a, pp. 15-17).

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<sup>10</sup> The PEOPLE programme was one of the five specific programmes in FP7 providing support for research mobility and career development for research in inside the EU and internationally

- The *Teaming* of excellent research institutions and institutions in low performing R&D regions. By teaming excellent institutions with widening institutions the aim of the measure is to update or create centres of excellence in low performing R&D Member States and regions. Teaming is a bigger measure creating a Centre of Excellence needs more co-financing from the partner institutions, for which additional funding from third partners is needed (European Commission, 2018a, pp. 6-11).
- Establishing *ERA Chairs* which allows institutions in widening countries with a clear potential for research excellence to attract excellent academics to institutions with the aim to establish a new chair group for excellent research in a specific field (European Commission, 2018a, pp. 19-22).

**Other widening actions:**

- A Policy Support Facility to improve the design, implementation and evaluation of national/regional research and innovation policies.
- Supporting access to international networks for excellent researchers and innovators who lack sufficient involvement in European and international networks, including European Cooperation in Science and Technology (COST).
- Strengthening the administrative and operational capacity of transnational networks of National Contact Points (NCP), including through training, so they can provide better support to potential participants (European Parliament & Council, 2013a, pp. 166-167) (Wolters, 2013).

All of these measures aim to close the R&I divide between EU-13 and EU-15. Also other funds in H2020 from the Marie Skłodowska Curie Programme<sup>11</sup> (MSCP), the Institute for Innovation and Technology (EIT) could be employed to enhance cooperation (Wolters, 2013, p. 5). Besides specific measures in H2020, by means of Article 21 of the Regulation the aim is to close the R&I divide by promoting synergies with the ESIF. This means national and regional authorities working together with research institutions to use the ESIF, in which a dedicated part has to be spend on research & innovation projects, for developing research and innovation capacity in the region (European Parliament & Council, 2013, p. 114). The funds available for new Smart

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<sup>11</sup> EU Exchange programme in the style of Erasmus+, but then for researchers

Specialization strategies (RIS3)<sup>12</sup> adopted in the Common Provisions Regulation<sup>13</sup> for 2014-2020 are a good example of this, as universities and research institutions in the region can profit from the funds available for R&I (European Parliament & Council, 2013). Furthermore the Seal of Excellence is a new feature which could especially help the widening countries. In H2020 many projects labelled as excellent do not receive funding due to lack of availability. The Seal of Excellence recognises the potential of a project as it has been evaluated by the Commission as an excellent proposal. This makes it attractive for other funding bodies to fund these projects (European Commission, 2019). Limitations to this exist as state aid rules complicate funding projects (European Commission, 2017c).

These widening actions are not only advantageous for the widening countries, but also create opportunities for the EU-15 states, as most of the measures taken in H2020 promote cooperation between EU-13 and EU-15. First of all, a specific part of the H2020 budget, 816 million euros, is reserved for widening participation, which means also EU-15 institutions can profit from these funds if they cooperate with EU-13 institutions. Besides this, it gives EU-15 institutions the opportunity to open up their networks to new potentially interesting partners.

In this thesis one of the above explained measures taken in H2020, namely Twinning, will be analysed. By conducting a case study involving Dutch and post-communist institutions, I will assess to what extent the instrument addresses the limitations identified in this literature review. Following from the literature review, in the next chapter concepts and theories relevant to the problem of the R&I divide in Europe will be elaborated upon.

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<sup>12</sup> Smart specialization is a place-based approach, in which strengths and potential are identified. Based on this strategic interventions will be made (European Commission, 2019)

<sup>13</sup> This is the regulation of the Cohesion Policy of the EU

### 3. Theoretical Framework

In this chapter theoretical concepts and theories will be considered which are relevant to answering my research question. The literature review explained development of research systems, limitations to institutional cooperation and influence of the EU on the domestic level. This has led me to apply the following theories and concepts elaborated upon in this chapter.

#### 3.1 Historical institutionalism

Firstly, as the central subject of this thesis surrounds universities, I consider it appropriate to use institutional theory in order to explain the university as an institution and the way they interact with other institutions. Institution is most commonly defined as rules. This can be formal rules and organization but also informal rules and norms (Streeck & Thelen, 2005) (Hall P. A., 1989) (Marcussen, 2000). Institutions shape and structure behaviour of other institutions and individuals. As shown in the literature review history and institutions matter, as they shape current developments, processes and institutions. Therefore the first theory which will be used in this thesis is historical institutionalism. Historical institutionalism is rooted in the new institutionalism paradigm and its approach seeks to explain the evolvement of society and its institutions from a historical perspective (Steinmo, Thelen, & Longstreth, 1992). Historical institutionalism explains continuity over time through the concept of path dependence. Once a decision is taken at a certain time it will impact and often constrain future decisions. It thus involves both elements of continuity and structured change (Thelen, 1999, p. 384). Path dependence is relevant to this thesis as it seems to be hard to change the existing status quo of the innovation gap problem. The collapse of the USSR provided a momentum, called a 'critical juncture' by historical institutionalists, to reform the institutions present in the USSR (Katznelson, 1997) (Robinson & Acemoglu, 2012). The decisions taken during the transition constrain future paths taken by the CEECs. Historical institutionalism can therefore help explain current problems in cooperation between EU-13 and EU-15 countries by looking at the historical legacies of both sides.

#### 3.2 Sociological institutionalism

Adding to this, it is also essential to use sociological institutionalism. Sociological institutionalism also falls within the scope of the wider group of new institutionalism (Saurugger, 2017). New institutionalism presented a new orientation on how to view

institutions and their organization structures. It suggest organizations are embedded in their social and political environment, structures and practices are seen as reflections to this social and political environment (Powell, 2007). Sociological institutionalism is part of this broader wave and analyses policy practices in geographically specific governance contexts and relates practices on micro level to wider environment (González & Healey, 2005, p. 4). The design of the institutional infrastructure thus has an impact on how projects and policies emerge within this infrastructure. Sociological institutionalists look into how concepts and discourses become embedded in practices in this wider institutional environment (Healey, McNamara, Elson, & Doak, 1988) (Richardson, 1997) (Zonneveld, 2000). Sociological institutionalists argue rules adopted by organizations are not always driven by efficiency, but should be seen in the context of (organization) culture. Cultures of societies are in that way translated into organizational structures and practices, not necessarily because they lead to efficiency, but as a product of the transmission of cultural practices (Hall & Taylor, 1996, p. 14). In sociological institutionalism explanations are sought for why a specific institution adopts certain rules and practices. Whereas historical institutionalism seeks explanations in how history shapes the formation of institutions and how path dependence within institutions constraints development of new practices, sociological institutionalism looks more into individual action. As shown in the literature review research systems vary greatly between Western Europe and Central and Eastern Europe. But on the other hand, some research systems across nations also have great similarities. It is therefore worthwhile looking into how practices in for example research systems are diffused through organizational fields or across nations (Hall & Taylor, 1996). Sociological institutionalism takes a wider approach by including both the formality of institutions, but also the informal culture. Where most institutionalists treat them as two distinctive features, sociological institutionalists abolish this divide (Campbell, 1995).

### 3.3 Europeanization

With analysing organizations through a lens of both sociological and historical institutionalism the concept of Europeanization cannot be overlooked. Europeanization theory is chosen as it focuses on the influence of the EU on the domestic level (Rometsch and Wessels 1996; Meny, Muller, and Quermonne 1996; Hanf and Soetendorp 1998; Börzel 1999; Kassim et al. 2000; Hérietier et al. 2001; Zeff and Pirro 2001). During the transition period and after their EU accession, European policies started to gain more and more influence on national politics and

decision making of CEECs. Interestingly, despite pressure of the European Commission on adopting more R&I policies and investments, so far pressure and influence have been limited. However, participating in the research programme of the EU of course has an influence on domestic research systems. The programme allows for transnational cooperation with institutions from different states and research systems are exposed to the European rules when starting a project funded from the framework programme budget. European rules can lead to adopting or adapting to EU rules, but can also lead to collision with national rules on research.

### 3.4 Combining theories

Combining the theories of historical institutionalism, sociological institutionalism and Europeanization explain how researchers within the broader European environment are constrained by institutional infrastructure, but also can explain opportunities offered to research due to dynamic changing environments. The critical juncture of the collapse of the Soviet Union offered a window of opportunity to be opened up to a new and broader 'European' environment. On the other hand researcher are constrained by the legacy of the past: institutions in post-communist countries were designed, as explained in the literature review, in a different way than the Western European institutions. Organizational culture is influenced by past practices, but also transforms and changes due to individual action. The researchers of today are not the same persons anymore as the researchers active during the communist times. Thirty years ago researchers were not as embedded in the European Research Area as they are now. Individuals change and cultural practices can change institutional infrastructure. In the Netherlands nowadays every university has a department for European affairs which shows how impactful European policy can be. The theories presented in this theoretical framework will be used in the analysis of the selected cases which will be presented in the next section.

## 4. Methods

### 4.1 Case selection

The case study chosen is institutional cooperation via the Twinning instrument in H2020 between Dutch universities and post-communist countries. The Twinning instrument connects a widening institution to two or more internationally-leading institutions. As organization culture, institutional design and national structures differ across the EU-15 countries, I decided to focus on one single country, as it allows for more sound comparison between the different selected cases. The EU-15 country of focus is the Netherlands. As this thesis was written during an internship at a Dutch organization for research & innovation, I had multiple access points to find the cases I wanted to analyse. The Netherlands is a country with an advanced research system and with high success rates in H2020 so far. 5.6% of all the H2020 applications between 2014-2016 came from the Netherlands and with a success rate of 20% it relatively scores among the highest of all countries in H2020 (European Commission, Horizon 2020 in Full Swing, 2017b). The Dutch universities thus know well how to perform in H2020 compared to the post-communist universities. Choosing a very well advanced country in R&I allows for an in-depth analysis on how cooperation with the less advanced post-communist countries in R&I is established and which problems for institutional cooperation occur between universities in post-communist countries and the Netherlands.

The Dutch Ministry of Economic Affairs recognized in 2013 the opportunities for Dutch universities in CEE countries in a paper setting out the possibilities and limitations for Dutch knowledge institutes for institutional cooperation. The Dutch government explicitly encouraged universities to investigate opportunities following the widening measures in H2020 (Wolters, 2013). However, so far the participation of Dutch institutions in widening participation projects has been quite low when you compare it to participation rates in other pillars of the Horizon Europe program (eCorda H2020 database, 2018) (Annex 1). As shown in the table below, the Netherlands ranks low compared to other EU-15 countries with advanced research systems.

| Country     | Share SEWP budget of total budget (in %) |
|-------------|--|
| Sweden      | 0,51                                     |
| UK          | 0,44                                     |
| Germany     | 0,36                                     |
| Denmark     | 0,25                                     |
| Finland     | 0,24                                     |
| Netherlands | 0,021                                    |

**Table 1 Share of budget received for SEWP projects compared to total budget (in %)**

*Source: eCorda H2020 database*

Dutch institutions took part in 25 projects in the SEWP pillar , of which 16 were Twinning and 8 were Teaming projects. The intention was to select projects part of the ‘Spreading Excellence and widening participation’ pillar in H2020, but Dutch universities were so far mainly involved in Twinning projects. ERA Chairs are not present and albeit multiple Teaming projects exist involving Dutch institutions, the suitable projects including universities cannot be used as a unit of analysis. Two projects involving Dutch universities got funding for Phase 1 of the project, in which an elaborate business plan for the project is written. The projects both failed in the application for Phase 2, which would mark the actual execution of the project. This makes the Teaming projects not suitable as a unit of analysis. In this research four specific cases of Twinning of Dutch universities with post-communist countries will be selected. Conducting four interviews with research coordinators in the widening institution and four interviews with participants from Dutch institutions should give a good representation of experiences in Twinning projects. To ensure a high degree of validity, the selection was made keeping diversity in mind. The four cases were selected on the basis of certain criteria keeping diversity of cases in mind:

- Different universities in the Netherlands (division generalist/technical universities)
- Institutions in different post-communist countries (countries with higher participation rates will be selected alongside countries with lower participation)
- Different fields of research

The diversity in cases should give a good representation of the functioning of Twinning involving different Dutch universities and allows for a comparison of CEE countries in terms of the institutional, economic, governing and legal problems of cooperation. I came to the



following selection of research projects, which were all selected via the eCorda H2020 database (Vinnova, 2019).

|                                      |  |
|--------------------------------------|--|
| <b>Name of the Project</b>           | ENGHUM (Engaged Humanities)  |
| <b>Dutch university</b>              | Leiden University  |
| <b>Post-communist institution</b>    | University of Warsaw, Poland   |
| <b>Other partners in the project</b> | School of Oriental and African Studies Royal Charter (SOAS) , United Kingdom   |
| <b>Field of study</b>                | Humanities   |
| <b>Interviewees</b>                  | Genner Llanez-Ortiz (Leiden University)  |
|                                      | Justyna Olko (Warsaw university)   |
| <b>Project description</b>           | Reaching scientific excellence in the area of participatory action research in linguistic-cultural heritage and revitalization of endangered languages; bridging gap of humanistic research; developing strong innovation potential of Warsaw University |

**Table 2 Case study 1: Enghum**

|                                      |   |
|--------------------------------------|---|
| <b>Name of the Project</b>           | EdEN (Education Economics Network)  |
| <b>Dutch university</b>              | Maastricht University   |
| <b>Post-communist institution</b>    | Magyar Tudományos Akademia, Hungary   |
| <b>Other partners in the project</b> | Katholieke Universiteit Leuven, Belgium<br>Politecnico di Milano, Italy   |
| <b>Field of study</b>                | Economics   |
| <b>Interviewees</b>                  | Joris Ghysels (Maastricht University)   |
|                                      | Daniel Horn (Magyar Tudományos Akademia)  |
| <b>Project goal</b>                  | Enhancing cooperation in the field of education economics by boosting publication and research capacities of participating institutions; increase awareness among PhD student in the field; building a stronger network |

**Table 3 Case study 2: EdEN**

|                                      |  |
|--------------------------------------|--|
| <b>Name of the Project</b>           | Tutorial   |
| <b>Dutch university</b>              | TU Delft   |
| <b>Post-communist institution</b>    | Tallinn University   |
| <b>Other partners in the project</b> | Politecnico di Torino, Italy<br>Deutsches Zentrum fuer Luft – und Raumfahrt, Germany   |
| <b>Field of study</b>                | Nanoelectronics  |
| <b>Interviewees</b>                  | Saïd Hamdioui (TU Delft)<br>Jaan Raik (Tallinn University)   |
| <b>Project goal</b>                  | Strengthen TUT's research excellence in the field of study; enhance R&I capacity of TUT and Twinning partners; Raise research profile of TUT and Twinning partners; contribute to smart specialization strategy Estonia; support R&I at EU level |

**Table 4 Case study 3: Tutorial**

|                                      |   |
|--------------------------------------|---|
| <b>Name of the Project</b>           | ESPESA  |
| <b>Dutch university</b>              | Eindhoven University  |
| <b>Post-communist institution</b>    | Universitatea Tehnica Cluj-Napoca, Romania  |
| <b>Other partners in the project</b> | Ecole Nationale Supérieure d'Arts et Métiers, France<br>Rheinisch-Westfälische Technische Hochschule, Germany<br>Deutsches Zentrum fuer Luft – und Raumfahrt, Germany<br>Siemens Industry Software NV, Belgium<br>Université de Technologie de Belfort-Montbéliard, France  |
| <b>Field of study</b>                | Electrical Engineering  |
| <b>Interviewees</b>                  | Elena Lomonova (Eindhoven university), <b>cancelled</b><br>Claudia Martis (Universitatea Tehnica Cluj-Napoca)   |
| <b>Project description</b>           | Strengthen research activity of the Centre for Applied Research in Electrical Engineering and Sustainable Development (CAREESD); reinforce research potential by enhancing expertise of research and support staff; promote collaboration with leading EU research institutions; development market-oriented strategy; stimulate entrepreneurial culture; promote collaboration with industry |

## 4.2 Mixed research methods

The research design of this master's thesis takes a qualitative approach. The first sub-question is of descriptive nature, while the second and third question form the analytical part of the thesis and finally the fourth sub question constitutes a prescriptive question. The thesis will employ two qualitative methods, document analysis and semi-structured interviews and triangulate the results of abovementioned methods.

### 4.2.1 Document analysis

Document analysis allows the researcher to interpret documents to give meaning around the topic assessed (Bowen G. , 2009). Document analysis is an important research tool, as it allows for triangulation with other qualitative methods (Bowen G. A., 2009). Triangulation of different methods contributes to the credibility and reliability of the research, as qualitative data gathered from interviews can be confirmed through documents written on the topic. In the context of this thesis, this document analysis is of great importance, as a small sample of selected research projects could potentially lead to a bias. Furthermore in the analysis a comparison will be made between policy makers' perceptions and researchers' perception. In order to assess if expected outcomes by policy makers of their designed measures match the perceptions on the ground, a detailed document analysis is necessary. The results of the document analysis are supported by the findings of the elaborate literature review and theoretical framework of Chapters 2 and 3.

For the document analysis of Chapter 5 I considered two aspects. First, I gathered documents of EU institutions showing the design, objectives and expected impact of the SEWP measures by the EU institutions. These documents allow for triangulation with the interviews, as it makes it possible to assess if objectives and expected impacts of the widening measures translate well to the target group. Second, I gathered documents showing the perceptions of stakeholders involved in policy makers. Both opinions of 'insiders' who are part of decision making processes such as the EU institutions and the member states, but also 'outsiders', such as interest organizations are considered as they also form part of the informal policy making process by exerting influence through position papers for example.

The document analysis is carried out to answer the first sub-question: *What is the general perception on the widening measures of stakeholders in Europe?* Answering this question will give useful insights on how widening is seen from a governance perspective in Brussels and

allows for comparison between the perception of stakeholders involved in the decision making process and the researchers working with the designed instruments. It will contribute to answering the main research question, as barriers to institutional cooperation can occur due to incoherent policy making. Actors involved in policy making shape the design of instruments, but the theories of sociological and historical institutionalism stipulates people are constrained by institutional design and decisions are thus not always made because they are the most efficient.

#### **4.2.2 Interviews**

Besides the document analysis, semi-structured interviews were carried out with relevant stakeholders in research partnerships. Semi-structured interviews constitute a pre-determined set of open questions with the opportunity for the interviewer to explore particular themes further (Barriball & While, 1994). For the interviews I used a set questionnaire with open-ended questions allowing for detailed answer of the interviewees. The questions were structured keeping the chronological order of the project in mind. Thus, I first asked questions about the start of the project and concluded with question about end results. The questions were made with consideration of sub-questions 2, 3 and 4. Based on these broad questions, I formulated more detailed questions. I used the same set of questions for both the Dutch and widening institutions to prevent unjustified biases based on the findings in the literature review. The use of semi-structured interviews still allows to explore themes coming up in either the interviews with Dutch and post-communist institutions.

The chosen sampling method is purposive sampling. This method allows the researchers to select interviewees based on pre-defined criteria (Arber, 2006). In the case of this research it means interviewees were selected based on their participation in Twinning projects between Dutch universities and post-communist institutions. It was a targeted selection approach based on pre-established criteria for selection. As I was conducting interviews with researchers all over Europe and the Netherlands all interviews except one were conducted either by phone or skype. As analyzing facial expressions or body language are not relevant for answering the research questions this method was suitable. Interviews were except for one undertaken in English. The results of the interview in Dutch were translated in English.

The results of the semi-structured interviews will be used to identify how research partnerships are established, how actors perceive their cooperation and how they perceive

working with the Twinning instrument. Semi-structured interviews and document analysis combined allows for methodological triangulation, where official documents issued by relevant European stakeholders can be compared with reality found on the ground through semi-structured interviews.

4.3 Analysis

In order to analyse the interviews with the researchers in the project a reliable method of coding is essential to a correct documentation of the results. Coding is a way of indexing or categorizing the text in order to establish a framework of thematic ideas about it (Gibbs, 2007). Before I conducted the interviews I already had a clear understanding of the codes I was searching for due to the nature and clarity of my sub-questions. There I used the method called deductive coding as you develop codes before you start your data collection. (Clifford & Carey, 1989). I developed the codes based on my sub-questions and interview questions and combined this with issues identified in the literature review. I combine this with an inductive method as semi-structured interviews can lead to surprising new insights which you did not think of beforehand. In order not to miss out on valuable information, I have incorporated this method as well in the analysis.

For my second sub-question, which is *“How are research partnerships between post-communist and EU-15 countries established and motivates researchers to start cooperation?”* I want to find out what intrinsic and extrinsic motivation actors involved in the research project have to cooperate with each other. Furthermore I assess how research partnerships are established and to what extent actors already had contact or cooperation before the project started.

|  |
|--|
| Final code: <i>Establishment of research partnerships</i>  |
| Preliminary codes: contact, previous cooperation, university rankings, pick, funding, partnership, partner, cooperation, established, roots, network |

|  |
|--|
| Final code: <i>Motivation for establishing research partnerships</i>   |
| Preliminary codes: contact, past cooperation, enhancing research excellence, new direction, work with like-minded partners, funding, instrumental, |

My third question asks *how actors involved in research partnerships between post-communist and EU-15 universities perceive their cooperation?* Once a partnership has been established, the question is how successful it is perceived by actors involved in the research projects. Problems can be institutional, cultural or personal.

|  |
|--|
| Final code: <i>Cooperation problems in research projects</i> |
|--|

|  |
|--|
| Preliminary codes: difficulties, differences, communication, cultural, institutional, personal |
|--|

The fourth sub-question questions *How the widening measure of Horizon 2020 is perceived by actors involved in institutional cooperation between post-communist and EU-15 institutions?* This question builds on the observations in the previous questions. Asking interviewees how they think about the effectiveness of the widening participation measures of H2020, allows for a comparison between the perception of stakeholders involved in the decision making process (Sub-question 1) and of stakeholders involved in the projects .

|   |
|---|
| Final code: Perception of widening measures |
|---|

|  |
|--|
| Preliminary codes: improved, network building, capacity building, Twinning instrument, publication of common papers, suitable, added value, closer, integration, |
|--|

#### 4.4 Validity and reliability

Qualitative research allows for gaining more in-depth understanding about certain phenomena. It is used to understand social interactions, attitudes and experiences of people (Pathak, Jena, & Kalra,, 2013). As explained in section 1.3 on academic relevance qualitative research is chosen as method since it gives deeper understanding about researchers' experiences in institutional cooperation and with the widening instruments used to establish this cooperation. Regarding validity, a disadvantage of qualitative research is the risk of subjectivity and bias of the researcher. In order to prevent subjectivity I formulated open-ended questions non-suggestive questions which gives the participant freedom to answer their questions independently from biases of the interviewer. Furthermore the analysis of the case study is supported by a lengthy literature research and well-founded theories, so the results of the case study can be backed and compared to literature and theories. Another

important aspect of validity is the extent to which the results are generalisable across other situations outside of the context the case study took place. (Lincoln & Guba, 1986). The nature of a case study makes it unique in its context. This also applies to this case study, as every Twinning research project is different. However, every project used the framework of Twinning to carry out the research. This allows for comparison of case studies, but also for extrapolating it to different contexts as long as cooperation is established with the Twinning instrument. The validity is further guaranteed by the evaluation of Twinning by the Commission, which can be used to assess whether findings of the interviews match with the findings of the evaluation. Furthermore the institutional context was carefully chosen; post-communist countries were chosen because of the similar historical development due to communist legacy. Even though the countries analysed do not form a homogeneous zone, many problems reoccurring in literature allow for comparison between the countries. Dutch institutions were chosen as they operate in the same national institutional context. This allows for transferability of the results to cases with other Dutch universities. Reliability refers the ability for a new researcher to come to the same results by repeating the steps I took in this researchers. I documented all the steps and I have detailed transcripts of the interviews undertaken. Other researchers should thus be able to repeat the steps. Furthermore use of triangulation by combining document analysis and interviews contributes to the validity and reliability of the research.

## 5. Perception of policy makers on widening measures

This chapter will analyse documentation on the problem of low participation rates of EU-13 countries within the EU research funding programmes. The aim of answering the sub-question *What is the general perception on the widening measures of stakeholders in EU policy making?* is to identify the perception of the problem and the widening measures addressing them by stakeholders involved in the policy making process. Answering this question will give useful insights on how widening is seen from a governance perspective in Brussels. This will later be used in the analysis to compare perceptions with the perceptions of researchers actually involved in the projects. The main focus of the chapter will be on H2020 and the upcoming framework programme Horizon Europe. Widening actions have been specifically addressed in H2020 under the Spreading Excellence and Widening Participation pillar and will be continued in Horizon Europe. The focus of the chapter will be on how the R&I divide is perceived from a governance perspective by analysing communications from the EU institutions and how this Furthermore it will look into how the widening measures are perceived by relevant stakeholders within Brussels and how they are perceived by the different members states of the EU.

### 5.1 Horizon 2020 (FP8)

The first time low participation rates among the new EU member states in the FPs was mentioned in an official document of EU institutions was during the mid-term evaluation of FP7 (2007-2013) in 2010. The subhead on 'New concerns and dilemmas' reads out *"success rates for applicants in several of the Member States that acceded to the EU in 2004 and 2007 are distinctly lower than for the EU-15"* (Expert Group, 2010, p. 10). Furthermore the Expert Group diagnosed that *"a too narrow focus on research excellence can overshadow the benefits of full-scale involvement of EU12 in the FP and this should not be neglected"* (Expert Group, 2010, p. 48). This interim evaluation appeared to be the start of a debate on the 'research divide' within Europe and turned out to be one of the main discussions in the design of the new FP H2020.

The discussions took place in light of the global financial crisis, which further increased disparities between regions in the EU (Schuch, 2014, p. 12). The Green Paper of the Commission launched the public debate to define the key issues to be taken into account for the next FP (Geoghegan-Quinn, 2011). On invitation of the Council the Commission conducted



an analysis on low participation in FP7, called *“Widening participation in the European Framework Programme: challenges and opportunities”* (European Commission, 2011). Based on this analysis the Council called the European Commission to put forward appropriate action aimed at spreading excellence (European Commission, 2011, p. 2).

The Commission identified multiple possible solutions to improving participation of EU-13 member states. Examples mentioned in the document include:

- Strengthening national R&D investments towards the 3% target and develop national R&I strategies
- Usage of Structural Funds to build research capacity and implementing ‘smart specialization strategies’
- Provide adequate remuneration for highly skilled human resources to prevent brain-drain from less-developed regions
- Measures to improve information and communication, by optimising existing systems and networks
- Simplification measures, to help countries with smaller administrative capacities
- Mobility schemes and support to returning scientists under Marie Curie
- Room for smaller projects and less prescriptive projects
- Measures to open networks
- Mapping and indicators
- Learning from the experience of other countries which have improved participation rates

(European Commission, 2011)

In November 2011, several months after the abovementioned analysis was discussed in the Council, the European Commission came forward with a proposal for the new FP H2020. The proposal of the Commission aligned with suggestions made in analysis. Key novelties were an inclusive approach to new participants and simplification of the rules. The Commission took the stance that the excellence approach for allocation of funds should not be abandoned and should thus remain the main criterion without consideration of geographical distribution (European Commission, 2011, p. 11). It did however recognize the need to complement this approach with measures to ensure broad participation among institutions and researchers

within the EU. The measures included the actions mentioned in the introduction of this thesis, including the core widening actions Teaming, Twinning and ERA Chairs.

The negotiations following the proposal of the Commission exposed a division of opinions on the research division in Europe. From an analysis of position papers of concerned parties it appeared many Western European stakeholders were in favour of keeping factors as excellence, impact and competition as point of departure, while the EU-12 was in favour of more regional spreading through more flexible evaluation criteria (Drijver, den Bak, & Kramer, 2011). In a common position paper the EU-12 called *“for other principles for evaluation of research projects to be taken into account, such as inclusiveness, cost efficiency, relevance of research and contribution to growth and jobs. They opted for a more flexible approach to support research excellence in the EU-12 with more differentiated measures”* (EU-12, 2011, p. 4). At the end of the negotiations between the Council and the Parliament the excellence criterion was maintained (European Parliament & Council, 2013). The Parliament however did put great emphasis on the need to broaden the participation compared to FP7 (Neth-ER, 2012). In the end, under pressure of the Parliament 815 million euros was reserved for a new specific part on ‘Spreading Excellence and Widening Participation’ within the regulation of H2020 (European Parliament, 2013). Only in this part of the program geographical considerations are taken into account while reviewing research proposals, as inclusion of a ‘widening’ institution is obliged. But also for this part, proposals are reviewed on excellence and impact (European Parliament & Council, 2013).

The overall objective of the core widening actions is to unlock research excellence in less advanced regions, the Twinning, Teaming and ERA Chairs-actions specifically aim to strengthen the networking capabilities of institutions in Widening countries. As a consequence of entering transnational networks by these projects participation in European research programmes of widening countries should increase in the future (COWI, 2017). As these actions in H2020 only started off in 2015 with the first call it is difficult to make observations on increased participation. The interim evaluation on both H2020 and the ERA Chairs & Twinning by the Commission, were both written while no single Twinning-project was finished

(COWI, 2017). Time-lag effects<sup>14</sup> have to be taken into account as effects such as access to transnational networks and increased participation can take time to be realized.

The interim evaluation of the Commission on H2020 in 2017 addressed the progress made on widening participation. Unlike the interim evaluation on FP7 carried out by an external Expert Group, this report was directly carried out by the Commission staff. A subtle difference, as for Expert Groups the Commission cannot be held responsible and can thus also disregard advices it gives. The Commission confirms in their evaluation widening actions have raised awareness and brought EU-13 stakeholders closer to H2020, for example through networking, information sharing and exchange of best practices (European Commission, 2017, p. 91). The Commission took note participation of EU-13 countries in 2017 did only very marginally improve compared to FP7 (from 4.2 to 4.4%). In absolute terms no positive effect can thus be observed according to the Commission (European Commission, 2017, p. 91). In the separate evaluation on Twinning and ERA Chairs it is suggested by the High Level Expert Group both instruments are achieving the results, since partnerships are established, staff exchanges and conferences were facilitated and publications and grant applications were submitted (COWI, 2017, p. 44).

So does this reflect the objectives set out by policy makers in Brussels? According to the Commission the main objectives for Twinning are to enhance the S&T capacity of the institutions with a focus on the institution in the Widening country and to raise the research profile of the institution and its research staff (Albuquerque Silva, 2017, p. 2). Furthermore the impact the Commission expects from a project is manifold: increased research excellence of the coordinating institution in the particular field of research as a result of the twinning exercise; enhanced reputation, attractiveness and networking channels of the coordinating institution; improved capability to compete successfully for national, EU and internationally competitive research funding; impact by expected future publications in peer reviewed journals, collaboration agreements with businesses, intellectual property and new innovative products or services (European Commission, Funding & tender opportunities: Twinning, 2017). For the excellent partners in the Twinning projects benefits to be achieved are more

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<sup>14</sup> Time lag effect refers to delay between the time of an intervention and development of a policy outcome

access to new research avenues, creativity and the development of new approaches, as well as a source for increased mobility of qualified scientists (European Commission, 2017).

## 5.2 Horizon Europe (FP9)

In order to get a good picture of how the widening measures are perceived by policy makers within Brussels it is necessary to take a look at the next FP of the EU: Horizon Europe. Before analysing how 'spreading excellence' is reflected in the proposal of the new framework programme, it is worth going back to 2016, when Commissioner for Research & Innovation Carlos Moedas delivered a keynote speech during a conference held by the Slovak presidency. In this speech he acknowledged the great importance the Commission attaches to closing the research divide within Europe. *"The goal must be not to compromise on excellence, but to multiply it and diffuse it across the EU. The new Spreading Excellence and Widening Participation pillar is a great start, but I want to go further"* (Moedas, 2016). In the speech he announces additional measures to be taken in H2020 and stresses both member states and the European Commission need to work on solving the problem in the future (Moedas, 2016).

The call for continuation by Carlos Moedas in his speech is reflected in the proposal of the European Commission on Horizon Europe, published in June 2018. The Commission intends in its proposal to more than double the budget for widening participation (European Commission, 2018, p. 29). The pillar, renamed to 'Strengthening the European Research Area' will receive 2 billion euros compared to 800 million euros under Horizon 2020, additionally further synergies with the Structural and Cohesion funds were announced (ERA Portal Austria, 2018). The core widening instruments Twinning, Teaming and ERA Chairs will continue under the same name as in H2020 (European Commission, 2018, p. 11).

This stance was already supported by a qualified majority of the member states, in the Council Conclusions of 1 December 2017 it was acknowledged by the Council that measures addressing SEWP have to continue and should be strengthened. The research ministers also noted progress in comparison to FP7 is still insufficient (Council of the European Union, 2017, p. 12). Ahead of and/or after the proposal of the European Commission member states and interest organizations expressed their opinions on the future priorities for the next framework programme, including opinions on how to continue with closing the research divide in Europe. Whereas all actors acknowledged the need for continuation of tackling the research divide, not all actors agree on how to accomplish this.

In Annex 2 an analysis is made on the perception of stakeholders, including member states' governments, joint country positions, positions of the EU institutions and international interest organizations in the field of research. The reason for conducting this analysis is to map how the SEWP measures introduced in H2020 are perceived by these stakeholders. The results of this analysis give insights in if stakeholders do render the widening measures effective and if they think it should be continued or even strengthened in the next FP. Furthermore positions on excellence have been analysed, as this shows how different stakeholders think on tackling the research divide. Some stakeholders advocate for a more inclusive FP which takes into consideration more factors besides excellence, other actors advocate excellence as the main criterium for evaluating research proposals. The results are based on analysed position papers which were released either before the proposal of the European Commission on Horizon Europe or after. A brief overview of the analysis of Annex 3 can be found in the table below:

| <b>Stakeholder</b>                                  | <b>Continuation SEWP measures<sup>15</sup></b> | <b>Strengthen SEWP measures</b> | <b>Excellence as main criterion</b> |
|---|--|---------------------------------|-------------------------------------|
| Government of Austria                               | x  |                                 | x                                   |
| Government of Belgium                               | x  |                                 | X                                   |
| Government of Croatia                               | x  | x                               |                                     |
| Government of Cyprus                                | x  | X                               |                                     |
| Government of Czechia                               | x  | X                               |                                     |
| Government of Denmark                               | X  |                                 | x                                   |
| Government of Estonia                               | x  |                                 |                                     |
| Government of Finland                               | x  |                                 | X                                   |
| Government of France                                | X  | x                               | x                                   |
| Government of Germany                               | X  | x                               | x                                   |
| Government of Hungary                               | x  | X                               |                                     |
| Government of Ireland                               |  |                                 | x                                   |
| Government of Italy                                 | X  | x                               | X                                   |
| Government of Latvia                                | x  | X                               |                                     |
| Government of Lithuania                             | x  | X                               |                                     |
| Luxcor (official position government not available) | x  |                                 | X                                   |

<sup>15</sup> No 'x' does not necessarily mean the stakeholder is opposed to statement, but it is not addressed in their position

|   |   |   |   |
|---|---|---|---|
| Government of the Netherlands                 | x |   | x |
| Government of Poland                          | X | X |   |
| Government of Portugal                        | x | X |   |
| Government of Slovakia                        | X | x | x |
| Government of Slovenia                        | x | x |   |
| Government of Spain                           | X |   | x |
| Government of Sweden                          | X |   | x |
| Government of United Kingdom                  | x |   | x |
| European Economic and Social Committee        | x |   |   |
| Committee of the Regions                      | x |   |   |
| European Parliament                           | x | x | x |
| Council of the European Union                 | x | x |   |
| European Commission                           | x | x | x |
| European University Association <sup>16</sup> | x | x | x |
| Russell Group <sup>17</sup>                   | x |   | x |
| LERU <sup>18</sup>                            | x | x |   |
| The Guild <sup>19</sup>                       | x | x |   |
| Science Europe <sup>20</sup>                  | x |   | x |
| Danube-INCO.net                               | x |   |   |
| Joint position EU-13 knowledge institutions   | x | x |   |
| Western Balkan 6 <sup>21</sup>                | x | x |   |
| Visegrad group <sup>22</sup>                  | x | x |   |

**Table 6 Positions on excellence and continuation/strengthening widening measures**

Source: Annex 2

<sup>16</sup> Association representing more than 800 universities from 48 European countries

<sup>17</sup> Represents 24 leading UK universities

<sup>18</sup> Network of 23 leading innovative European universities, all from EU-15 countries

<sup>19</sup> Network of 19 research-intensive universities, including universities from EU-13 countries

<sup>20</sup> Association of European Research Funding Organisations and Research Performing Organisations

<sup>21</sup> Group of countries consisting of Albania, North Macedonia, Albania, Kosovo, Montenegro and Serbia. As associated countries they can also make use of widening actions

<sup>22</sup> Group of countries consisting of Slovakia, Poland, Hungary and Czechia

Table 6 and Annex 2 shows a broad consensus SEWP measures should be continued in the next FP Horizon Europe. Many of the involved stakeholders recognize the positive contribution of the SEWP measures in tackling the R&I divide. Furthermore a big share of the stakeholders welcome or advocate for strengthening the SEWP measures in Horizon Europe. All of the EU-13 countries share this stance, but multiple EU-15 countries' governments are also in favour of strengthening the measures, which include Italy, France and Germany. Other EU-15 countries do not address the issue of strengthening the measures, but instead advocate for more synergies with ESIF and stronger national investments. EU-15 countries also express it is vital to maintain excellence as the guiding principle which should not be compromised by geographical considerations. According to these governments, SEWP measures should be distinct from other parts of the programme which are based on excellence. In general however, the SEWP measures are welcomed by every stakeholder and recognized as contributing to tackling the research divide.

The proposal of the Commission suggested a continuation of the SEWP measures, but did not add new SEWP actions (European Commission, 2018). In their adopted position on Horizon Europe the Parliament introduced improvements of existing measures and added new measures to the SEWP actions. These new measures included 'Excellence Initiatives' and 'widening fellowships' (European Parliament, 2018). The results of the outcome of the trilogues between the Commission, Council and Parliament show some new SEWP measures. In the reports of rapporteurs Dan Nica and Christian Ehler from the European Parliament some controversial measures were included, such as a remuneration of 1.25 for widening researchers compared to other researchers, equal pay for equal work and more selection criteria besides excellence in case of equally scoring projects (European Parliament, 2018, pp. 12, 13, 36, 38). The abovementioned controversial proposals were taken off the table during the trilogues. However, the compromise document between the European Commission, European Parliament and Council of the European Union showed some introductory measures. First of all, at least 3.3% of the total budget (compared to 1.1% in H2020) is earmarked for the 'Spreading excellence and widening participation across the Union' pillar (European Parliament, 2019, p. 8). Although budget negotiations only start later in 2019, the Parliament achieved a provision in the deal that no matter how budget negotiations play out, the total budget for widening participation should be at least 3.3%. Furthermore new in

Horizon Europe are support activities aimed at improving quality of proposals from entities in widening countries, boosting activities of NCPs and supporting increased participation in already existing collaborative projects (European Parliament, 2019, p. 111). Furthermore, whereas Twinning and Teaming require a coordinating position from the widening institution, a new provision basically introduced a hop-on instrument, where institutions from widening countries can join already existing consortia that received EU funding (European Parliament, 2019, p. 73). In the SEWP pillar new actions are announced, such as the Excellence Initiative proposed by the Parliament and activities to foster brain circulation (European Parliament, 2019, p. 110). The agreement between the EU institutions is an interim agreement and could in theory still change on content, but the next and final negotiations will be on the budget and association of third countries (which could potentially also include countries eligible for widening actions like in H2020).

### 5.3 Interim conclusion

This chapter analysed perception on widening measures in the governance networks of the EU. Specifically the positions of EU institutions, member states and interest organizations representing knowledge institutions were analysed. The chapter showed the call to widen participation within the FPs of the European Union started to gain ground after the interim evaluation of FP7. During the negotiations on H2020 the debate on how to tackle the research divide revived around excellence vs. widening participation. Although the excellence principle was maintained for the lion share of the program, a small pillar introduced widening participation measures. In Horizon Europe, FP9, these widening participation measures will continue as they are broadly supported by a large range of stakeholders, including EU institutions, member states and interest organizations. The widening measures match the intention according to stakeholders and evaluations of the European Commission, participation rates did however only slightly improve which could be explained by a time-lag effect. In the new proposal for Horizon Europe the existing instruments such as Twinning are continued in the same. The EU institutions introduced some new facilitating measures, but no new instruments, which suggests policy makers perceive the current measures as good instruments to address the low participation. This is further supported by the fact the EU institutions intend to dedicate a bigger slice of the budget to the SEWP pillar in the new FP9 Horizon Europe.



## 6. Establishing research partnerships

This chapter will analyse the establishment of research partnerships and aims to answer the sub-question *How are research partnerships between post-communist and EU-15 countries established?* In this question the intrinsic and extrinsic motivation of actors in universities to start cooperation with each other will be assessed. Furthermore the chapter analyses to what extent actors already had previous contact before the project started and in what ways they were already cooperating. By looking at universities taking the step to cooperate, insights are given into what motivates them and why in some cases cooperation is established. Therefore, answering the sub-question allows me to gain deeper understanding on how partnerships within the EU start, what reasons the actors have to cooperate with each other and why they chose the Twinning instrument. Gathering information about the roots of cooperation between universities, gains fruitful knowledge on how cooperation can be enhanced.

### 6.1 How are research partnerships established?

The Work Programme for the SEWP pillar in H2020 for 2014-2015 states the specific challenge is *to address networking gaps and deficiencies between the research institutions in the low performing member states and regions and internationally-leading counterparts at the EU level* (European Commission, 2013, p. 14). It also says institutions with an already established research tradition tend to already work in a closed network and thereby crowd out promising institutions. Twinning should help to get widening institutions into the closed network and research intensive institutions to open their closed networks for new partners (European Commission, 2013, p. 14). Furthermore the aim is to significantly strengthen a defined field of research in a particular knowledge institution. Specifically, therefore the Call for Twinning mentions the widening institutions have to seek at least two internationally-leading research intensive counterparts in at least two different member states (European Commission, 2013, p. 15). What an internationally-leading institution entails is not defined in the work programme, but part of evaluation criteria for a research proposal is the scientific quality of the partners involved in the Twinning project. The applicant of the widening country has to outline their scientific strategy for stimulating scientific excellence. Besides this, it needs to be indicated to what extent synergy is expected because of the cooperation with the research intensive organisations due to gain of more research and innovation capacity (European Commission, 2013, p. 17).

As finding partners of scientific quality is part of the evaluation criteria, it suggests this drives applicants from widening countries in choosing their partners. This is confirmed by some of the interviews. One of the interviewees even noted they chose their partners based on their world university rankings (Martis, 2019). Another of the interviewees confirmed he picked partners that would sound strong in the proposal (Raïk, 2019). So in this case the first step was choosing the partners and only afterwards he motivated why in particular these partners were chosen. In the other cases scientific quality was not explicitly mentioned as a driver for choosing the partner (Horn, 2019) (Olko, 2019).

*“We were looking for partners who are very well positioned in university rankings. We had partners in Eindhoven and Aachen, they were the top 150 I think, the other four a bit lower, but not so far off” (Martis, 2019)*

However, all interviewees stated previous contact with institutions or persons within the institution as one of the reasons for choosing the partners. In all of the cases personal contact was key, establishing the partnership was in all cases a bottom-up process. One of the interviewees explicitly stated he/she was looking for a person he/she already knew. Not in all cases every partner institution was already known by the initiator of the project. In one of the projects there was initial connection between the widening institution and the EU-15 institution. The partner of the EU-15 institution brought together the rest of the consortium through use of his network (Horn, 2019). Other interviewees also stated they knew their partners from previous cooperation in projects, for example through European projects (Raïk, 2019) (Martis, 2019). Others stated they didn't have previous collaboration with the partners but knew a contact and used this as basis for establishing the cooperation (Horn, 2019) (Olko, 2019). Some partners were not known before the project, one of the interviewees noted he/she went to a conference of the known institution and established other contacts for the project there (Olko, 2019). In another case, which involved a broader consortium, the interviewee made visits to institutions not known yet to see what the researchers there are working on (Martis, 2019).

Establishing the actual research partnership and designing the project proposal was done in different ways. In one of the cases the project was suggested by the EU-15 institution, while in the other cases initiative purely came from the widening institution. One of the interviewees mentioned that after initiation of the project the research proposal was written together, in other cases it was written individually by the widening institution and another interviewee mentioned he was the coordinator but got support from the other institution in writing the proposal. Thus not in all cases the widening institution is the single designer of the proposal.

*"I invited them to participate in a specific research and participate in the proposal. Then all the project leaders met in Leiden and discussed the idea of the project, agreed on the idea and wrote basically most of the proposal there" (Olko, 2019)*

Previous experience in European projects can lead to already established networks, an outward international experience and increased skills helpful in project in a European setting, which might make it easier to establish the partnership and design the research proposal. All of the interviewed actors stated to already have experience with cooperation in European projects, either supported by national or EU funding. One of the researchers of the Dutch institution also noted it was previous international orientation of the widening institution was beneficial to the project. He noted researchers from the institution were often present at conferences, had European research projects, good English language skills and an international orientation within the institution (Ghysels, 2019).

From the side of Dutch universities it was stated they were invited to participate in the project, either by the widening institution or by another participating EU-15 institution. In this sense actors in Dutch universities were not involved in the initiation of the project (European Commission, 2013, p. 15). The Call for Twinning assumes a coordination and initiation role from the widening institution, so this is in the line of thought from the instrument. However, one of the interviewees from the widening institution stated a contact from a EU-15 institution came up with the idea of Twinning and suggest this to him (Horn, 2019). Research partnerships in Twinning can thus also be established on initiative of an EU-15 institution. In this certain case the interviewee also noted he was impressed by how KU Leuven, the initiating institution, looks at European projects and how they are active in closely following the calls and opportunities for EU funding (Horn, 2019). He also noted there is unawareness in Hungary about opportunities and application for calls.

This section analysed how research partnerships are established and how partners are chosen. This section infers coordinators from widening institution already had contact with some of the institutions before starting the project. In all cases the coordinators in widening institutions have an international perspective. In choosing their partners scientific quality of the other partners is taken into consideration. In most cases the widening institution is the initiator of the project, which is in the line of thought of the instrument. But this does not always have to be the case, as in one of the projects the EU-15 institution informed the other organisation. The next section will look into why research partnerships are established. What drives actors to cooperate with each other?

## 6.2 Motivation for research cooperation

In this section I will analyse the motivations of the partners to start a research project via the Twinning instrument together. First motivations of the researchers in the widening institutions will be analysed and afterwards the motivations of the Dutch researchers.

### 6.2.1 Motivation of researchers from widening institution

As stated in the Call for Twinning, the challenge is to address network gaps between institutions from low performing member states and leading institution in well performing member states. Besides this, it aims to strengthen a defined field of research, enhance the R&I capacity and to help raise the staff's research profile (European Commission, 2013, p. 14).

According to most of the interviewees extending their network was a motivation to start the Twinning project. Only one of the interviewees said didn't state network building as one of the motivations, this interviewee highlighted strengthening the cooperation with the involved institutions as motivation, since he already knew the partners within the project (Raïk, 2019). One of the interviewees mentioned for both the university and the researchers the Twinning project was interesting as new partners means a chance to get more involved and gain more European and national projects. Besides this he/she pointed out the motivation for the project and gaining possibilities to extend the network was done to make research more attractive within her institution, because going to institutions in other countries showed her young researchers what other younger researchers are working on (Martis, 2019). In some of the cases the network, or at least part of the network, already existed before the project was started. So the objective of overcoming network gaps by giving widening institutions the ability to join 'closed' networks in EU-15 countries is not reached, as all of the widening

institutions already had a connection with the partner institution, so only network extension took place.

Besides building the network, all of the interviewed researchers stated common interest as part of their motivation. Matching their own field of research was also a reason for selecting the involved partners in the first place. One of the interviewees stated it as the main driver, as the researcher in the institution wanted to go into a certain direction of research previously not undertaken and based on this defined direction they selected their partners (Olko, 2019). Another researcher stated common interest in the academic topic was the main reason as well. For others it was mentioned as a motivation, but not the single motivation to undertake the project.

Funding was also stated as motivation for doing the project. Most of the researchers argue funding always has to be taken into account. It was considered very important by one of the actors, as specifically twinning gives funding for activities apart from research, like organizing conferences, this gives more possibilities than a normal project where there is often no room for these activities (Martis, 2019). Funding is however never stated as the sole reason to start cooperation. Another researcher noted it is fundamental to the project as the project would have been this kind of scale without it (Olko, 2019). Motivation to specifically start cooperation using the Twinning instrument was also related to funding. As you only have to compete with widening countries and not with the whole EU the success rate is higher (Olko, 2019) (Horn, 2019).

*“Of course one of the motivations is always funding, but it is not only funding why you do this” (Raik, 2019)*

Two researchers expressed their project was in line with the goal stated in the Call, which is strengthening the research capacity in their field. One of the interviewees stated the objective was to enhance the research capacity, by learning from other universities about the trends and hottest research projects. Furthermore motivation was to enhance not only the research capacity of the researchers involved in the project, but also of the university as an institution (Martis, 2019). The other two researchers were a bit ambivalent towards this stance. They both stated it is about enhancing your own research capacity and

*“Basically the idea of the framework was that underdeveloped centres of the East both have to learn from developed centres in the West. Me and our partners found it a bit of a colonial approach. Our project was based on exchange of experience and transfer of knowledge” (Olko, 2019)*

developing new skills, but they also stressed the knowledge transfer and benefits it gave to the EU-15 partners. They both found the core idea of Twinning a strange way of looking to the cooperation (Olko, 2019) (Horn, 2019). For them cooperation with like-minded partners was an important motivation.

Motivations from coordinators of widening institutions stated in this section are extending their network and strengthening their research capacity, but also access to funding was stated as an instrumental reason for initiating the Twinning project. Besides this, the coordinators deemed common interest important for undertaking the project.

### **6.2.2 Motivation of researchers from Dutch universities**

One of the objectives the Commission mentions is addressing the networking gaps and deficiencies between institutions in the widening countries by giving widening institutions the chance to join closed networks. Evidently, EU-15 institutions therefore need open up their closed network to new partners. This is beyond the scope of the research, because in this thesis running or just finished projects were analysed and nothing can be said about institutions still operating in closed networks. It should be noted all of the researchers from the widening institutions stated they knew at least one or more of the partners before. In this sense EU-15 networks were already opened up, although it is doubtful if this translates from an individual level to institutional level.

But what motivated the researchers from Dutch institutions to start the Twinning project together with the widening institution? For the internationally-leading universities no clear goals were formulated as to why to participate in a Twinning project, whereas for widening institutions objectives were clearly formulated like for example unlocking research excellence. All of the researchers involved stated funding was part of the decision to start the project. For Leiden University the benefit for example was that from the received funds they could hire a temporary post-doc during the two years of the project (Llanez-Ortiz, 2019). The other researchers stated getting funding played an important role in accepting the initiative (Hamdaoui, 2019). One researcher mentioned finance to do research was the instrumental reason. Although Twinning does not have a research component, the funds made it possible to organize conferences, trainings and staff exchange to carry out research (Ghysels, 2019).

Two out of three researchers stated the content of the project was a motivation to participate. One of the researcher pointed out they knew the other two EU-15 institutions from which they knew they had common interest and expertise in the field. The coordinator in the Dutch institution did not know the widening institution, which might suggest past experiences with the other two EU-15 institutions might have played a role in the decision to start the project (Ghysels, 2019). The other researchers stated their reason to collaborate was because they already had the collaboration with the widening institution (Hamdaoui, 2019).

*“When they came up with this idea of Twinning we said yes, because we actually already had collaboration. It was a straightforward thing for us to do” (Hamdaoui, 2019)*

Summarizing, this section identified funding is an important instrumental reason to start cooperation. Furthermore, the researchers pointed out common interest is an important reason to start cooperation.

### 6.3 Interim conclusion

This chapter aimed to answer the sub-question on *how research partnerships between post-communist and EU-15 countries are established and what motivates researchers to start cooperation*. In the case of Twinning initiative has to come from the widening institution, as they are the coordinating institution and is designed to enhance their research capacity. The interviews confirm in most cases it is indeed the widening institution who is the initiator, but it can also be the EU-15 institution who informs about the opportunity for funding. This seems to be related to a lack of knowledge in the widening institution and country. Furthermore previous experience in European projects, past cooperation or contact, scientific quality of EU-15 institutions are factors playing a role in establishing partnerships. Motivation for establishing research partnerships are manifold. From the perspective of the widening institution networking building was often stated, strengthening cooperation with already known partners, enhancing research capacity, but also access to funding and common research interested were mentioned. For the Dutch side mainly access to funding and common academic interest were stated as motivation to start the cooperation.

## 7. Perceptions on cooperation in Twinning projects

*How do actors involved in research partnerships between post-communist and EU-15 universities perceive their cooperation?* Once a partnership has been established, the question is how successful it is perceived by actors of the universities involved. This question will analyse both the perspective of post-communist universities as EU-15 universities on the problems of cooperation. Understanding how actors involved in cooperation within research projects perceive cooperation with the other partners gets useful insight to what extent the widening measures within H2020 reach the goal of widening the participation to countries and institutions that are now less represented in the research programme of the EU. In this chapter I will analyse what researchers perceive as successes and problems in their cooperation via the Twinning instrument.

### 7.1 Successes in cooperation

Objectives of the call state cooperation within Twinning projects should lead to enhanced research excellence and capacity, improvement of research image and increased network building by partnering institutions. All of the interviewees confirmed they regard their cooperation in the project as successful. All of the actors mentioned they would apply again for a Twinning project. From the EU-15 side, two researchers saw the cooperation as fruitful. One of the researchers said cooperation in the project did not help much with integration between the partners. This researcher did not see the point of the cooperation in the way it was organized (Hamdaoui, 2019). Some of the researchers mentioned cooperation went well in the decision making processes of the project. In two of the projects all the coordinators were involved in the decision making process, with the widening institution in a coordinating role (Olko; Ghysels; Horn; Llanez-Ortiz, 2019). In the other two projects the widening institution assumed a coordinating role without much involvement of the other institutions in decision making processes (Martis; Raik, 2019).



Regarding research excellence some of the researchers noticed an improvement in their institution. By doing the staff exchanges these researchers learned new topics to study and new ways to study (Olko; Martis; Horn; Raik, 2019).

They did however not regard this as an improvement in the quality of the papers. They only observed more mutual written papers, so increased cooperation. It also didn't lead to a bigger output within the institution, but it did lead to more co-publications

*"We recognized our our colleagues in Warsaw as equal partners and that lead to very interesting growth academically, organizationally, institutionally and also personally" (Llanez-Ortiz*

(Hamdaoui; Raik; Horn; Olko; Martis, 2019). From the EU-15 side, learning experiences were also observed. For two of the researchers they learned about new ways of doing research and analysis. Also one researcher observed the widening partner had access to valuable data which could not be obtained in the Netherlands (Ghysels; Llanez-Ortiz, 2019). Both confirmed the cooperation was a big success on academic level. Furthermore in two of the projects both researchers from the EU-15 and widening institution noted there existed mutual knowledge transfer (Jansen; Olko; Llanez-Ortiz; Ghysels; Horn, 2019). Also on a non-academic level, there was learning experience. One of the researchers stated there were workshops in applying for European projects by the EU-15 institution (Horn, 2019).

Three of the four coordinators of the widening institution stated the cooperation lead to increased network building on their side. In some cases this already happened due to new partners involved in the project (Martis; Olko; Horn). Other researchers mentioned that due to the project access was granted to new partners who were not involved in

*"We engage with more and more partners. We also have a new project with two new partners, Groningen University and an institute in Vienna" (Olko, 2019)*

the project (Horn; Olko). Two of the researchers observed there was not an increase in network building, but only intensification of cooperation between the partners involved in the project (Raik; Hamdaoui, 2019). However, the interviewee from the widening institution observed their team became less isolated in doing research (Raik, 2019). Furthermore multiple researchers pointed out their individual image improved because of the project and also the image of the institution improved because of the project (Olko; Horn; Martis, 2019). One of the researchers stated the project lead to acquisition of more projects on a national level (Martis, 2019).

From this section it appears cooperation is generally perceived as successful, which is also shown in the fact all of the coordinators of the widening institution would try to apply again due the success of this cooperation. Project did not necessarily always lead to increased research excellence in the short term, but it did in all cases lead to intensified cooperation evidenced by a high number of co-written papers. Looking from a Dutch perspective, some researchers highlighted cooperation was a big success on academic level for them and their institutions. Furthermore multiple research stated cooperation lead to an improved image and increased access to networks. Although cooperation was generally perceived as successful, problems were also observed by the participating researchers.

## 7.2 Problems in cooperation

The literature review suggested that due to the divergent past of institutions in post-communist countries research systems within these countries are less developed. Furthermore the theory of historical institutionalism suggests history has influence on the present and path dependence creates patterns that are sometimes hard to break. Moreover, the theory of sociological institutionalism suggests institutions and individuals within those institutions are embedded within an institutional infrastructure that is not per definition created through efficiency of organization. Europeanization might have influence on change in domestic settings, it is questionable to what extent research systems have been transformed during the past. In the literature review causes for the innovation gap were identified, like static 'old' network patterns; geographical, cultural, institutional and technological barriers and lack of experience in transnational cooperation. The Commission also identified reasons for low participation, such as insufficient national investments and R&D personnel; lack of synergies between national research systems and EU research; lack of system learning; differential wage levels; barriers to existing networks; large projects are too difficult to coordinate and problems with information, communication advice and training (European Commission, 2011, p. 4). In this section identified problems by academics and policy makers will be compared to experiences of the researchers.

A common mentioned problem by the interviewees are external influences on the national level of the widening countries that have an impact on the cooperation. These are for example cuts in research funding on the national level, restriction of academic freedom, excessive rules, differing national rules from the European rules (Ghysels; Horn; Raik; Martis, 2019).

External influences on national level of the EU-15 countries were not mentioned. On the EU level several interviewees mentioned the project officers lacked time to support the project and were changed quite frequently during the project (Raik; Horn; Martis).

On the institutional level of the organization several problems were mentioned. Differences in organizational culture were observed by several interviewees. One interviewee mentioned for example one of the institutions was quite hierarchical which impacted the liberty of the research within that institution. Also the focus on funding in that institution gave the researchers less liberty and possibility in what to teach, how to teach and what to expect. (anonymous interviewee, 2019). Another interviewee pointed out different styles of leadership were observed. This interviewee from the Dutch institution confirmed this and mentioned some institutions have a more centralized organization culture with delegations of tasks and others have more patience for groups in decision making processes (interviewee, 2019). Furthermore one of the interviewees points out the widening institution institutionally was more like a school as many students were taking part in the interaction (Llanez-Ortiz, 2019). Several interviewees stated different ways of doing research lead to problems in the cooperation, in other cases different ways of doing research lead to mutual learning exercises (all interviewees, 2019).

Organizational culture also had an impact on communication between the institutions according to most of the researchers. In the organizations where coordinators are in closer contact to the researcher, less communication problems were observed (all interviews, 2019).

One of the interviewees observed that due organization structure you have professors who make the planning and proposals, but information about this did not triple drip down to the researcher within the group. This leads to lack of awareness about the project that is going on. This was observed in both the

*“At the start I was just pushing everybody that they need to research together and we should exchange people, but no one understood the value. They told me: why do you have this project, it is not interesting” (Raik, 2019)*

EU-15 and widening institutions (Raik; Martis; Hamdaoui). There was also confusion and lack of awareness between the institutions about the content of the project, mainly from the EU-15 side (Raik; Hamdaoui; Martis, 2019). Furthermore it was mentioned by multiple researchers communication is hard due to everyone doing multiple projects at the same time, leading to conflicting agendas. This was not attributed to either the widening institution or

the EU-15 institution and could be observed everywhere (all interviews, 2019). Some interviewees from the widening institutions a lack of interest from EU-15 partners organizations were observed (Raik; Martis, 2019). The other researchers said interest was equal, but coordination from their institution (Horn; Olko, 2019)

On an individual level multiple problems were observed. Some of the interviewees confirmed there were some prejudices from the EU-15 institution side towards the widening institutions (Ghysels; anonymous; Martis; Olko, 2019). They also pointed out these prejudices and stereotypes faded during the course of the project. Others said that due to lack of knowledge about the partner in the widening countries and about research in this country lead to vague expectations (Llanez-Ortiz; Ghysels, 2019). Furthermore language problems were observed in only one of the projects, on the part of the EU-15 institution. Furthermore wrong expectations about art of the project by the other institution due to lack of contact was mentioned as a problem (Raik, 2019).

*“Before the project started I was under the impression the academic would be much lower in Eastern Europe. I didn’t think it would be an equal partner” (Ghysels, 2019)*

All of the interviewed researchers noticed cooperation improved during the project. Once of the researchers stated getting to know each other better over the course of the project improved common understanding and lead to more efficient decision making (Llanez-Ortiz, 2019). Some of the researchers also confirmed cooperation intensified during the project, for example by an increase in staff exchanges between the universities (Raik, 2019).

The outcomes of this section suggest researchers are constrained by their institutional context. External influences hampering cooperation were found on the institutional, national and European level. Also on individual level, prejudices were perceived a problem by some researchers at the start of the project, although these disappeared as cooperation intensified. For all of the interviewed researcher cooperation improved during the course of the project.

### 7.3 Interim conclusion

From this chapter it became evident most of the researchers regard their research cooperation as successful. Benefits of the cooperation included mutual learning experiences, increased networks, erasing stereotypes, intensified cooperation, improvement of individual and institutional image. When you look into internal cooperation, every researcher mentioned

they were content with the cooperation and the outcome of the cooperation. Major problems were not observed. There were however problems due to external influences on the national or European level. Also on institutional level problems occurred because of differences in organizational culture and structure. Also within the institution gaps were observed between project leaders and the research group.

## 8. Perceptions of the Twinning instrument

In this chapter I will analyse *how the widening measures of H2020 are perceived by actors involved in institutional cooperation between post-communist and EU-15 institutions?* This question builds on the observations in the previous questions. Asking interviewees how they think about the effectiveness of the widening participation measures of H2020, allows for a comparison between the perception of stakeholders involved in the decision making process (Sub-question 1) and of stakeholders involved in the projects.

In 2017 an independent Expert Group carried out an evaluation on the Twinning measures by conducting a questionnaire and qualitative interviews with partners from the widening institutions. The evaluation of the Twinning projects sets out achievements such as the establishment of partnerships with international institutions and the facilitation of activities that were set out in the call of Twinning. Furthermore it mentions some of the projects lead to publications and other partnerships. Furthermore researchers perceive Twinning addresses network gaps with internationally leading universities (COWI, 2017, p. 44). Identified challenges in the projects were the managing of the project by the coordinator of the widening institution and negotiations with the research partners (COWI, 2017, p. 45). Other findings of the evaluation found ability to compete for international funding strengthened and that not having to compete with Western institutions for the grant was perceived well by the coordinators of the EU-13 institution (COWI, 2017, p. 45).

### 8.1 Perception on Twinning from the widening institution

In this section I will analyse the perceptions from the researchers of the widening institutions. Furthermore I will assess the results achieved in the project that can be attributed to the Twinning project. First of all, two of the researchers acknowledged that as a result of the project they were able to extend their network. Claudia Martis for example mentions they are involved in a new European project in which they are partners with other institutions than in the project (Martis, 2019). Also Justyna Olko already mentioned that because of one of the partners in the project her research group was able to negotiate directly with the Cambridge journal for the main publication. Without the project this would not have happened. Furthermore he/she stated they now engage with more and more partners after the project and after the project a new project with Leiden University but also other partners was set up (Olko, 2019). Three researchers stated their Twinning project encouraged other researchers

within the institution or outside the institutions to also apply for Twinning projects. Martis stated three applications from her university were submitted and he/she also got into contact with a Czech university who sought for advice due to the experience (Martis, 2019). Another researcher stated it had an impact on the Hungarian institutional framework as he knows three people from different Hungarian institutions who applied for Twinning and sought his help during the application (Horn, 2019). And one researcher stated other researchers active in her field did applications but did not receive funding (Olko, 2019).

All researchers stated the Twinning project made them more active in applying for new projects. Claudia Martis for example mentioned he/she is applying for new Twinning project and another researcher stated other people in his research group are applying for a new Twinning (Raik, 2019). Daniel Horn said his institutions and partner institutions are working on a follow up project and they tried another Twinning project with an Estonian partner which didn't get funded. Olko stated a collaborative of her group is now coordinator of new EU project and they applied for several projects. Besides this, several researcher stated the Twinning project raised the research profile of the research group and the institution (Olko; Martis, 2019). It was also mentioned participating in a European projects counts on trust from Western institutions, but also gives good references on the national level (Martis, 2019).

*"We are now recognized as the main centre for language in Poland. We had the first ERC grant for humanities in Poland so far. And also the first Twinning" (Olko, 2019)*

Several researchers acknowledges the Twinning project facilitated a learning process. One of them mentions it was very good for the researcher in her institution as they were able to see what is happening in other universities (Martis, 2019). Daniel Horn said it gave him a lot of experience in conference organization and applying for more research funding. Olko mentioned the negotiating skills and getting funding from the EU as important results from the project (Olko, 2019). One researcher he found it difficult to manage the project and had to get the internationally leading partner institutions enthusiastic for the project. He did say he learned a lot from it to take into account for next projects (Raik, 2019).

Also intensified cooperation was regarded as positive outcome of the project by all researcher. Raik observed it forced cooperation and co-published papers. Previously his team felt more isolated (Raik, 2019). Another researcher mentioned cooperation only intensified on the

individual level. He is still in contact with the partners. On an institutional level cooperation might break due to external influences (Horn, 2019).

The researchers in the Twinning projects viewed the instrument itself mainly as positive. All of the researchers mentioned the flexibility provided by the instrument as very positive. Daniel Horn stated it gives a nice mix of giving you resources to work together, but also gives incentives to work together on papers.

*“In other European actions you have to follow very close what you have put in your project, here there is more flexibility to discuss with the project officers” (Martis, 2019)*

Also the role of the European Commission was seen as very flexible. Raik observes they were not too strict and if there was problem with some rules that did not match the European rules, they were flexible (Raik, 2019). Besides this, the design of instrument was viewed positively, as Twinning gives possibility for trainings and conferences which are not available in other European research projects (Martis; Horn, 2019). Some researchers also mentioned they liked that Twinning allows for having some specific topic to work on and the fact it also supports fundamental research in non-popular disciplines (Horn; Olko; Martis, 2019).

The researchers were also positive about the respect of the European Commission and its officers. No stereotyping was observed (Olko; Raik, 2019). Most researchers did however observe difficulties in communication with the project officers. One researcher stated his project officers was changed four times which lead to communication problems and lack of involvement (Horn, 2019). Another researchers observed the project officers were too busy to be able to discuss with every partner in the project (Martis, 2019). One researcher stated in the past he/she had trouble with EU project officers, but in this case he/she was very content with the communication of the project officer (Olko, 2019).

*“I think we had 4 project officers. No one knew about EdEN. There was no individual connection” (Horn, 2019)*

Some problems with the design of the instrument were mentioned. Two researchers found a lack of clarity in some elements of the project. The guide was for example not clear on how to spend researchers, which meant some partners did not know how to spend their funds. Another researcher also observed lack of understanding in his institution and the partner institutions (Raik, 2019). Two of the research also observed it was difficult to get other partners motivated to participate in the project. One of the researchers attributed this to the fact no money was available for small materials or partner’s equipment. This made it difficult



to facilitate trainings given by partner institutions (Martis, 2019). Another researcher stated research funding would have improved participation. This in line with findings of the European Commission in their evaluation on Twinning. The expert group states *“for some project coordinators no coverage of research funding is acceptable as the respective ERA Chair or Twinning grant then supplements the research grants. However, other projects find this to be an obstacle, both in terms of time spent applying for research funding and of the risk of not being granted the needed funds in order to implement the projects”* (COWI, 2017, p. 44). This is in line with my findings, as the other researchers did not observe this as a problem (Olko; Horn, 2019). Raik observes there is a lack of understanding on differences in countries’ research funding from the Commission side (Raik, 2019).

Some gaps were observed between the academic community and policy makers. Two researchers mentioned they did not agree with the idea of the Commission behind the Twinning project. Daniel Horn for example said that looking from the perspective of helping the less-performing widening institution by connecting it to EU-15 institutions only partially makes sense. On an institutional level he acknowledges the policy, because he feels Hungarian academies have less experience in European project than their EU-15 counterparts. But on an individual level he states the idea is not correct, as also in EU-15 institution individual researchers learn from the researchers in widening countries. Another researchers observes the same and finds the approach of the Commission colonial and would like the Commission to take a more flexible approach whereby mutual transfer between institutions are assumed (Olko, 2019). Lastly some individual observations were made not mentioned by other researchers. Daniel Horn states the Commission looked for policy advice during the evaluation of the project, but sees Twinning as purely an academic project without policy implications. One researcher mentions the selection for a Twinning project is pretty tough as he knows about projects scoring very high, which did not receive funding. The same researcher was positive that in Twinning also funds are available for Western institutions, in the old REKPOT programme of FP7 this was not the case.

*“I would propose to the Commission that they should look at it from a more decolonizing way, be more flexible in who can participate, and assuming both mutual transfers. It is high time to change this rhetoric”*  
(Olko, 2019)

The perception of Twinning by researchers is generally very positive. The network building goal is reached which is evidenced by participation of researchers in new European projects. Moreover the Twinning projects seems to have an impact on the wider institutional framework, as it encourages other institutions to apply for Twinning or European projects as well. Furthermore the flexibility is perceived as positive, both in the design as in the activities it facilitates. A few of the researchers did not agree with the narrative of the European Commission for the Twinning instrument, as they would like to see a narrative where knowledge transfer from both sides is assumed. Also regarding support of the Commission problems were observed, especially with the project officers.

## 8.2 Perception on Twinning from Dutch institutions

This section analyses the perception of Dutch researchers on the Twinning instrument and the results achieved due to the instrument. Concerning network building, one researcher stated also for their research team it lead to growing up in collaboration and new networks (Llanez-Ortiz, 2019). Another researcher said it lead to network building in the sense they did not know the partner from the widening country before (Ghysels, 2019). The other researcher did not observe network building as they already had collaboration with the partner before (Hamdaoui, 2019). All of the researchers observed publications were done together. Saïd Hamdaoui mentioned he found it a success since they did a lot of publications together. And also personnel and student exchanges. On the other hand he/she also mentions Twinning did not help much with intensifying cooperation (Hamdaoui, 2019). Another researcher mentions he finds it an ideal instrument to cooperate with and to write papers (Ghysels, 2019).

Twining was by two of the three researchers perceived as academically interesting. One researcher mentions there was academic added value because access was given to interesting data not available in the Netherlands which gave new perspectives (Ghysels, 2019). Another researcher said they developed academically and saw their colleagues in Warsaw as equal partners. The project also gave new and different perspectives in research (Llanez-Ortiz, 2019). The other researcher stated it was especially interesting for the partners who initiated and for them it was less attractive (Hamdaoui, 2019). Two researchers stated the cooperation between the institutions intensified. One researcher is not working at his institution anymore, but told cooperation was tried to continue with a new Twinning project which was not successful (Ghysels, 2019). The other researcher said due to the success of the Twinning they

started a new project with Warsaw University (Llanez-Ortiz, 2019). Hamdaoui stated in terms of intensifying cooperation Twinning was not very useful.

Two researchers stated the Twinning project did encourage more participation in the widening measure as this successful project set an example (Ghysels, 2019). Another researcher mentioned it made the team but also the institution more prone to seek collaboration and connect with other universities (Llanez-Ortiz, 2019). Ghysels also observed the Twinning project changed the opinion on the widening country. Before the project started he thought academic level in Hungary was much lower which turned out not to be the case. The instrument brings you out of your own world (Ghysels, 2019). Two researchers also mentioned a shared passion for the project contributed to the success (Ghysels; Llanez-Ortiz, 2019).

Regarding the design of the instruments, one of the researcher observed it was an attractive instrument because of its relatively high success rate compared to other European projects (Ghysels, 2019). One researcher stated the instrument is not interesting since there is no money for research. He thinks in order to get partners interested it would be more interesting if money is available for research. Ghysels observes everyone would like to have money for research, but questions if it would be suitable for this instrument, because the instrument would fundamentally change (Hamdaoui, 2019). He thinks the instrument is efficient because it gives starting finance necessary to get groups into contact, which leads to sustainable cooperation in the long-term as it is side-finance on which you can build later on (Ghysels, 2019). Also the good structure of the instrument was noted by two researchers. The system of deadlines and work packages were perceived well (Ghysels; Llanez-Ortiz, 2019). Another researcher mentioned it was beneficial one partner was clearly leading with possibilities to take part in the decision making process (Llanez-Ortiz, 2019).

Most of the researchers perceive Twinning as an useful instrument to facilitate cooperation, as it gives starting finance and it allows for writing papers together. The combination of flexibility and hard deadlines contributed to the success of the project. Also academic value was recognized as it lead to new unprecedented avenues for research. Also for some institutions Twinning set an example within their institution or research field.

### 8.3 Interim conclusion

This chapter analysed how the Twinning instrument is perceived by the researchers involved. From the analysis of researches in widening institutions it appears they are in general content with the results achieved, as it led to network building, intensified research collaboration, improved their image, learning processes and more publications in cooperation. It also appeared this positive message spread across and to other institutions. Flexibility was perceived as an asset of the instrument, since it gave the ability to join conferences and training. Researchers are positive about the Commission's approach towards flexibility. They were however critical on administration and the way the Commission approaches Twinning.

On the Dutch side two of the researchers were positive about the influence of the instrument. They observed mutual learning processes, a grown network, new insights, abolishment of stereotypes and intensified of cooperation. The other researcher claimed the instrument did not have a sincere impact on the already established cooperation and claimed it would be more interesting if a research component would be added. Two researchers were positive about the design as it facilitated cooperation in a flexible way, but also provided deadlines to put pressure. Knowledge transfer between Dutch and widening institutions happens in cases where there is a mutual academic interest and view on the project. In cases where the initiative purely comes from the widening institution without a clear view on common research goals makes cooperation and involvement between institutions harder.

## 9. Conclusions and recommendations

The R&I divide in Europe remains a pressing challenge and a hotly debated topic among policy makers and academics. In the first sub-question I asked how the widening measures which address this challenge are perceived from a governance perspective. Although they are widely regarded as successful and needed measures by many stakeholders, the chapter showed an evolving debate on what would be the right way to tackle the problem. Many of the Western European governments do not want to see the excellence principle in the European FPs for Research & Innovation to be compromised. Their rationale is FPs should contribute to the goals of Europe as an innovation leader in the world by finding solutions to great societal challenges. These governments call on the EU-13 region to dedicate more resources to R&I and make use of Structural Funds to build up research capacity in their countries.

This vision collides with the visions of many EU-13 governments who argue the benefits of the programme should be widely spread throughout Europe. It represents a political dilemma for EU-13 governments as tax payers all around Europe, thus also within their country, expect the FPs to deliver excellent research solving societal problems and producing solutions in regional and national context, as this is how the FPs are framed (European Parliamentary Research Service, 2018). The consequence of low participation of EU-13 countries is that national contributions to the FPs don't lead to these national and regional solutions, which could frustrate tax payers as they will perceive FPs as invaluable. Still, many EU-13 governments do not raise national investments in R&I so they remain below EU-average. Also Structural Funds are only to a limited extent used for investments in R&I.

The lack of national investments are only one of the limitations to institutional cooperation identified in this research. Besides this, the inherited communist system still plays a role nowadays and transformation of research systems to a Western model, against a background of low investments in the past, constitute barriers to achieving research excellence. System learning is vital for post-communist countries to effectively compete with leading institutions in Western Europe, but the harsh competition in the FPs make system learning difficult. As evidenced by the low success rates of research proposals in FPs from post-communist countries, possibilities to learn the system by participating are limited (Puukka, 2018).

The widening measures introduced in H2020 offer an opportunity for institutions in low performing R&I countries to participate in the FP without having to compete with internationally leading institutions in Western Europe. In this thesis I used a case study of four Twinning projects between Dutch and post-communist institutions to analyse if the offered opportunities in H2020 give these institutions more potential to address limitations to institutional cooperation. In the sub-questions 2 to 4 I asked the following to answer if the Twinning projects address the limitations:

- *How are research partnerships between post-communist and EU-15 countries established and what motivates researchers to start cooperation?*
- *How do actors involved in research partnerships between post-communist and EU-15 universities perceive their cooperation?*
- *How do actors involved in institutional cooperation between post-communist and EU-15 institutions perceive Twinning instrument?*

By means of this case study I want to feed into the academic debate on how to effectively address the R&I divide. Many academic papers have been written on causes of the R&I divide, but little academic research has been conducted so far on how to address limitations. In the next section I will use the findings of this research to answer the main research question.

## 9.1 Conclusion

This thesis aimed to identify the limitations for institutional cooperation between post-communist and EU-15 institutions. Through analysing academic literature and policy documents barriers to participation of post-communist institutions have been identified. Consequently I asked to what extent the Twinning instrument introduced in H2020 offers remedies to the limitations of institutional cooperation between post-communist and EU-15 institutions:

***What are current limitations for institutional cooperation between institutions in post-communist countries and EU-15 institutions and to what extent does Twinning in Horizon 2020 address these limitations?***

The literature review of this thesis identified a multitude of limitations for institutional cooperation between post-communist and EU-15 institutions. Financial, institutional, network and individual barriers constrain institutional cooperation. Historical institutionalism seeks to

explain institutional contexts from a historical perspective and finds individuals can be constrained by their institutional past. Problems in institutional cooperation between post-communist and EU-15 institutions are found in external influences. As Twinning does not fund research, insufficient investments on the national level can constrain cooperation in Twinning projects. The low national investments date back to the transformation period and since then very few post-communist countries have boosted their R&I investment to above EU average. This creates a structural problem involving a lack of R&D personnel and personnel to support researchers. In most EU-15 countries every research institution has a department for EU affairs which often lacks in widening institutions (Ukrainski, Kanep, Kirs, & Karo, 2018). The path of structural low investments appears hard to break as evidenced by the current statistics on R&I investments (Schuch, 2014). Twinning projects can only to a limited extent address this structural problem. Institutions and individuals participating in projects such as Twinning are dependent on funding for research, which is in turn dependent on institutional context. By many of the interviewed researchers funding is stated as an instrumental reason to start cooperation. If funding for research is not available for Twinning projects in which it is deemed essential to objectives of the project, it limits the effectivity of the instrument and also makes it less interesting from an EU-15 perspective to cooperate.

On an institutional level the academic literature suggested limitations occur due to the inherited communist system, which was regarded as hampering innovation due to the formality of the system and the focus on production and economic impact. This in turn impedes the capacity to innovate. These structures still constrain researchers nowadays. In some national contexts searching for EU funding to support their projects is seen as an escape from national structures which are not funding projects at all or with high scrutiny on economic impact (Olko; Horn, 2019). These institutional barriers still play an important role in researchers' careers and can find their roots in the historical design of institutions. Organizational cultures within institutions also differ due to disparities in design. In Twinning however, these differences on an institutional level play a minor role as cooperation often involves only one department of the institutions. Twinning offers the opportunity to surpass institutional barriers as funding and its rules comes from the Commission side. The Commission appears to be flexible and sensitive to changing their rules in light of non-complementarity with national rules. Europeanization focuses on influence of the EU norms,

policies and rules in domestic contexts, which can lead to adaptation, transformation but also collision to these influences. In the literature review a lack of complementarity between EU and post-communist national rules was identified as a problem, but Twinning seems not to lead to collision with national rules, partly due to the flexibility of EU funding. The question remains if Twinning projects lead to adaptation or transformation of rules, norms and policies in the long term.

Barriers to access Western European established networks were also identified in the literature review. Divergent paths of Western and communist Europe have long closed off possibilities for the two different regions to cooperate in networks. In Western Europe matured 'closed' research networks have been formed based on trust and experience, which makes it difficult for post-communist institutions to join. Prejudices from the EU-15 side, as suggested by some of the interviewees in this research, make it difficult to join these networks and build up trust and experience with each other. Twinning seems to really break this historical path of closed networks, as my research shows Twinning projects provide a way for institutions to enter new networks with excellent Western institutions. My sample size is small with four projects, but also the evaluation of the Commission shows network building is achieved in a majority of the projects. Although my research confirms Twinning leads to more applications to calls in the FPs and also promotes applications by other institutions in post-communist states in the short term, only time can tell if this will lead to increased applications and participations in the FP in the long term. The theory of sociological institutionalism stipulates practices and rules are shaped by individual action and shows in the context of this research that individual researchers can break path dependence by promoting cooperation in their wider institutional environment. Furthermore it shows adopted practices and cultures by EU-15 institutions do not necessarily lead to most efficient outcomes. Most Dutch researchers I interviewed stated cooperation led to increased research excellence. So EU-15 institutions are missing out on new opportunities and research avenues if they stick to their already adopted and 'closed' informal research networks.

This research found limitations to institutional cooperation evolving from an individual level. Barriers include the lack of experience in transnational cooperation, language barriers, prejudices and cultural differences. These limitations seem to be addressed by institutional cooperation through the use of the Twinning instrument. The in-depth interviews of this



research showed many researchers from the EU-15 side have vague expectations about the cooperation with post-communist institutions due to several reasons, such as having low knowledge about academic level in these countries. Twinning addresses these barriers on an individual level as it allows individuals to cooperate and in this way eliminate prior expectations before the project. Also the lack of individual experience in transnational cooperation is addressed. For the researchers from widening institutions it offers the opportunity to coordinate an international project. The findings of the research however suggest individual researchers participating in the Twinning projects already had international orientation or experience prior to the project. It is questionable to what extent the results of this thesis are generalisable to national contexts, as many of the researchers state personal contact or an international orientation before starting a project is essential. Researchers or institutions in post-communist countries without these initial contacts could remain isolated to European influences for this reason, for example due to language barriers which makes it more difficult to participate in projects with English as the lingua franca.

This research has shown limitations to institutional cooperation are still present between post-communist and EU-15 institutions. These manifest in structural problems due to insufficient investments, institutional barriers due to historical design, network barriers and individual barriers. Twinning projects do address some of these barriers. As mentioned by one of the interviewees, it is individuals who cooperate in projects and not the institutions. Once individual cooperation is established it can lead to sustainable and improved cooperation. Still, individuals in projects are constrained by their institutional environments in cooperation. Structural problems like lack of finance or problems due to institutional structures do not disappear by Twinning. The successes achieved by Twinning, such as increased networks, intensified cooperation by co-writing papers, developing research excellence and an improved image are promising, but in future projects the identified barriers in this research might be more present as not every financing instrument is as flexible as the Twinning instrument.

## 9.2 Policy recommendations

This research suggests institutional cooperation on academic level is achieved. In some of the analysed cases it appears both from side of researchers in Dutch institutions as post-communist institutions Twinning contributed to increased research excellence, new avenues for research or individual development. In the framing of Twinning more emphasis could be

put on these mutual knowledge transfers. With changing the narrative of Twinning it could potentially attract more EU-15 institutions to participate in the projects. Due to institutional context information about the EU FPs is sometimes limited, as lack of support due to insufficient national investments is one of the identified limitations. In one of the analysed projects it was the EU-15 institution informing their post-communist partner institution about the opportunity for Twinning. By changing the narrative of the instrument and making the added value of participation in Twinning more visible to leading EU-15 institutions, the Commission could stimulate EU-15 institutions to also reach out of their 'closed' networks and look for partners in widening countries.

The findings of this research show successful Twinning projects involve coordinators and institutions from widening countries with an international perspective. One of the interviewees mentions a second application for Twinning was not successful, addressing it to barriers such as language. This research only analysed successful Twinning projects, but many Twinning proposals do not get awarded funding. In 2015 only, 552 proposals were submitted, of which only 66 projects got awarded funding (Useliene, 2018). It would be valuable for the Commission to conduct research on why proposals do not get funded. When the goal is to spread excellence and widen participation, it could be threatening if only leading institutions within post-communist countries manage to apply successfully for Twinning projects. It could eventually lead to a divide within countries and regions where some institutions manage to increasingly participate in FPs, while other institutions remain isolated. The Commission could use the insights of the conducted research to come up with targeted support for these institutions. In fact, the Parliament already insisted on adding a component to the SEWP pillar to provide support to institutions for writing applications to European projects, which was added in the partial agreement on FP9 Horizon Europe (European Parliament, 2019). The Commission could further strengthen this new support mechanism by first identifying problems in application processes of widening institutions to better address their needs in the future.

This research found some of the project participants missed a research component in the Twinning instrument. This is further supported by the evaluation on Twinning (COWI, 2017). Adding a research component, like in the REGPOT program of FP7, would however fundamentally change the Twinning instrument. The flexibility of Twinning was appreciated

by project participants and could potentially be limited by adding a research component leaving less flexibility for organizing trainings or conferences. As Twinning projects often involve consortia of multiple partners, adding funding for research could make decision making on the project harder (Ghysels, 2019). However, adding a research component could be sought in different ways than from the FP funding. The Commission should investigate synergies with different funding programs such as ESIF to explore new avenues for research funding. At the moment synergies with such programs are still constrained due to for example state aid rules, which make it harder for researchers to find different funding channels. Besides this, the Commission could investigate whether to consider research funding in the evaluation of Twinning proposals. Excellence and impact of projects can increase when there is a clear plan on how to fund research activities within Twinning. The disadvantage hereof is that institutions from countries with low national and regional research investments could potentially be worse off if this would be taken into consideration. This should be carefully considered during evaluations and impact assessments on the Twinning instrument.

### 9.3 Limitations and outlook

This research specifically looked at the Twinning instrument, which is only one of the SEWP instruments and only one of the many instruments in the FP of the EU. It is therefore questionable to what extent the findings of this research are generalisable to other kinds of projects. Other SEWP measures, such as Teaming and ERA Chairs involve much more involvement from different stakeholders such as regional and national governments (Albuquerque Silva, 2017). Institutional barriers to cooperation could play a bigger role in these projects. Twinning is in this sense a first step to cooperation, but establishing a Centre of Excellence involves much more resources and therefore trust for cooperation. The eCorda database of projects evidences many Teaming Phase 1 projects, in which a business proposal on the project is written, do not make it to Teaming Phase 2 in which the actual Centre of Excellence is founded. Further research should be conducted on institutional cooperation in such projects that involve more levels of governance.

As Twinning could be seen as a first step to institutional cooperation, this research is limited by the fact the instrument is relatively new as it was only introduced in 2014. This research can therefore not assess to what extent it leads to sustainable cooperation in the long term and to what extent it helps institutions applying to different European projects. Other

European projects in the FP are namely evaluated on excellence and impact and do not take geographical considerations into account like the Twinning instrument. The competition for other projects is thus harder. Twinning does however give post-communist institutions access to networks that have been able to acquire research funding in the past from FPs in a competitive environment. Now being part of these networks due to the results of Twinning might give them a competitive advantage compared to the past, as the expertise of these institutions increase chances for funding. If this is the case could be analysed via a repetition of this research in five or ten years, which can provide valuable insights to what extent participation patterns have changed due to this initial first step of cooperation: Twinning.

One of the limitations of this study is the small sample size used. Four Twinning projects were analysed, which is only a small sample out of the 97 projects funded until 2018 through H2020. The findings of this research do however to a great extent correlate with the findings of the evaluation on Twinning of the Commission. This makes the findings of my research more generalisable to the perceptions of coordinators in other Twinning projects. The evaluation of the Commission did however not take into consideration perceptions of participants from EU-15 institutions. This impedes the credibility of my findings as it cannot be backed up with further evidence from evaluations. My case study only analysed perceptions of Dutch researchers, but it is questionable if researchers from other EU-15 countries share same perceptions as Dutch researchers. One of the interviewees mentioned the researchers in other institutions looked to the project from a different point of view and moreover institutional context differs across EU-15 countries. Some institutions are more hierarchical than others, which impacts institutional cooperation via the Twinning instrument. Further research with a bigger sample size should be conducted to get better insights on perceptions from the EU-15 side on institutional cooperation.

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## Annex I Questions for semi-structured interviews

1. How did you get in touch with the other institution? Who did you get in touch with?
2. What motivation did you have to start the project together with the identified partner(s)? Was there any internal/external support
3. Why did you chose this partner to cooperate with? (Is it a new partner?) If so, why not choose a partner that you already have experience with?
4. What role did EU funding play in deciding to start with the project?
5. Were there any difficulties in starting the project together due to differences in how both organizations operate or because of cultural differences?
6. How would you describe the cooperation with the other organization during the project?
7. How do you perceive the Twinning instrument?
8. What were the main results of the project? Would you consider it a success?
9. Did you have different expectations before the project?
10. Did the project lead to integration between the partners in the project?
11. What are the next steps for the project?
12. Would you participate in a project with this partner again?
13. Did the project encourage you and your institution to participate in projects under the 'Widening Participation' pillar more often?
14. Do you perceive there is a gap between the EU policy makers and the academic community?

## Annex II Positions on widening participation in Horizon Europe

| Country Government    | Position on widening participation in future research programme <sup>23</sup>  |
|-----------------------|--|
| Government of Austria | The Framework Programme has to adhere to the principle of excellence. All Member States should create the optimum preconditions for this purpose, by means of reforms in the European Research Area. In particular, preconditions will have to be created for stronger synergies between the Framework Programme and other EU instruments (ESIF, EFSI, etc.). (Bundesministerium für Wissenschaft, Forschung und Wirtschaft, 2017)   |
| Government of Belgium | Excellence, as a result of international competition, should remain the main evaluation criterion for research and innovation proposals. Belgium acknowledges the existence of a lack of participation of some member states (MS). However, the main principle of the FP, a pan-european competitive selection based on excellence, cannot be watered down by adding corrections of a geographical, political or financial nature (Government of Belgium, 2017)  |
| Government of Croatia | Equity should be recognised as a guiding principle. Enhancing spreading excellence and widening participation through dedicated instruments and as a cross-cutting issue throughout the Programme (both financially and by further developing instruments) (Government of Croatia, 2019)   |
| Government of Cyprus  | Strong supporter of all the Actions under the Programme “Spreading Excellence and Widening Participation”. Continue and strengthen the Widening Actions under FP9, both in terms of financing and of new actions. For Twinning sponsorship of co-supervised PhD or post-doc positions with mobility/secondments of the researchers between partner organisations could be examined. FP9 actions should be linked with ESIF funding and national R&I programmes.  |
| Government of Czechia | Czechia wants inclusiveness and promotion of the cooperation across Europe. “Widening” instruments should be maintained as an integral part of the 9th EU Framework Programme. Czech Republic would welcome switching its nature from the currently used Coordination and Support Action (CSA) to the Research and Innovation Action (RIA). This should be accompanied by an appropriate increase of the budgetary allocation per Twinning project and for the Twinning instrument as a whole (Government of Czech Republic, 2017) |

<sup>23</sup> Only official positions of governments or their agencies are considered. For Bulgaria, Malta and Romania no information was available

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|-----------------------|--|
| Government of Denmark | Excellence should continue to be the governing principle of the framework programme and one of the main criteria for evaluating all proposals. ESIF should continue to stimulate research and innovation capacity ( Ministry of Higher Education and Science - Denmark).   |
| Government of Estonia | It is important to continue supporting measures for widening participation and spreading excellence. In favour of synergies between ESIF and H2020, but points out difficult administration. Widening measures should be continued. The list of eligible activities should be more flexible and also allow for the allocation of funds for conducting research (Ministry of Education and Research, 2017).   |
| Government of Finland | Measures seeking to close the so called innovation gap between EU countries should not weaken the quality of research and innovation funded by the Framework Programme. To support this goal we should create and utilise synergies between the Framework Programme and other EU funds. (Ministry of Economic Affairs and Employment of Finland & Ministry of Education and Culture, 2018)   |
| Government of France  | The principle of allocating FP funding on the basis of excellence and impact must be maintained. A “Widening Participation” programme could therefore be introduced within the Excellence pillar, and rolled out regionally. Financially, this programme could draw on structural funds (Autorités Francaises, 2019)   |
| Government of Germany | Supports strong funding lines in the programme area Sharing Excellence which have huge potential to narrow the innovation gap between the Member States. Other parts of Horizon Europe must remain without any quotas or special evaluations for individual countries or groups of countries (Die Bundesregierung, 2018)   |
| Government of Hungary | Continue and strengthen the „Spreading excellence and widening participation” actions and introduce „Widening” as a horizontal aspect in all actions aiming to achieve wider societal and economic impact. We would propose to consider the introduction of possible new dedicated actions related to e.g. research infrastructures. Stimulate synergies between national funding and ESIF (National, Research, Development and Innovation Office Hungary, 2017) |
| Government of Ireland | Excellence should continue to be the primary criterion for the award of EU funding (Department of Business, Enterprise and Innovation, 2017)   |

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| Government of Italy                                 | Italy would strongly favour a boost of the ‘widening participation and spreading excellence’ concept in the next FP. Regions should be considered as basis for criteria (Ministero dell’Istruzione, 2017)  |
| Government of Latvia                                | The future Framework Programme should be based on the principle of “inclusive excellence” and open participation model. Spreading excellence and widening participation” (SEWP) part and COST actions must be strengthened in FP9 with increased budget. Continuation of widening actions. New funding scheme in SEWP: Small-scale research and innovation actions (RIA) (Ministry of Education and Science of the Republic of Latvia, 2018)   |
| Government of Lithuania                             | Scientific excellence and quality principle and criteria should remain fundamental in the programme. Efforts for widening participation aimed at inclusive excellence at the Member State level should be continued. A flexible and less time-consuming tool such as Twinning with a possibility to include 10% of the total project budget dedicated for research costs (including consumables) could have a very positive effect on balancing the ERA potential and capacities (Lithuania, 2018) |
| Luxcor (official position government not available) | The better integration of EU13 countries is very important and the WIDENING programme is to be continued (Luxcor, 2017)  |
| Government of the Netherlands                       | Strict separation of building R&I capacity and excellence principle H2020. National investment and ESIF funds can be used to build capacity (Government of the Netherlands, 2018).   |
| Government of Poland                                | The cornerstones of the future Framework Programme should be on one hand “excellence” and on the other “effective and open participation model for all” . Use SEWP instruments and include new mechanisms. Apart from maintaining the current Teaming and ERA Chairs, the new instrument, based on experiences of FP7 RegPot scheme should be introduced. (Government of Poland, 2017)   |
| Government of Portugal                              | Some form of a strengthened and more effective “Widening” programme must continue beyond H2020 into FP9. FCT thus strongly defends a strengthening of the widening principle for Fp9, with further innovative mechanisms targeting the real challenges that have been identified in H2020 (Office of the Minister for Science, Technology and Higher Education, Government of Portugal, 2017)  |
| Government of Slovakia                              | Excellence must remain the basic principle in supporting research and innovation at the European level. Believe SEWP instruments for increasing the participation should be further strengthened in the future, even   |

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|                              | financially (Ministry of Education, Science, Research and Sport of the Slovak Republic, 2018)  |
| Government of Slovenia       | Excellence should be one of the most important principles. The instruments for widening participation should continue, possibly be expanded and significantly enlarged in accordance with their ambitious objectives (Slovenian Expert Group, 2017)  |
| Government of Spain          | Excellence and cooperation should be maintained and promoted as the main drivers of the Framework Programme. Wants a reconsideration of list of widening countries (State Secretariat for Research, Development and Innovation, 2017)  |
| Government of Sweden         | Projects in FP9 should be selected on the basis of excellence, with the highest ranked applications being funded. SEWP activities should build on experiences in FP8 (Government Offices of Sweden, 2017)  |
| Government of United Kingdom | Continued focus on excellence. SEWP activities should be continued, but be kept distinct from rest of FP. Dedicated expert support could be provided to organizations in widening countries to provide help and advice during the application process. (Department for Business, Energy & Industrial Strategy, 2018) |

| <b>EU institution</b>                  | <b>Position on widening participation in future research programme</b>   |
|--|--|
| European Economic and Social Committee | In favour of continuation instruments. Participation of EU-13 countries as a prioritisation criterion among equally good projects, provided the competing applicants meet the same excellence criteria (Xavier Lobo, 2018)   |
| Committee of the Regions               | Welcomes increase budget for spreading excellence, limitations on synergies between structural funds and FP (Clergeau, 2018)   |
| European Parliament                    | Proposed increase to 4.39% of spreading excellence budget, earmarked. 1.25 remuneration level for researchers from widening countries, more selection criteria, projects with highest amount of partners in widening countries should get bonuses (Nica, 2018) (Ehler, 2018) (European Parliament, 2018) |

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| Council of the European Union | Spreading excellence must continue and be strengthened (Council of the European Union, 2017) |
| European Commission           | Continue the widening measures and double the budget (European Commission, 2018b)            |

| <b>International Interest organization in the field of research</b> | <b>Position on widening participation in future research programme</b>  |
|---|---|
| European University Association <sup>24</sup>                       | Welcomes increase of the budget for 'spreading excellence' and total budget, but notes that investment is also needed on national level (European University Association, 2018)   |
| Russell Group <sup>25</sup>   | Focus should remain on excellence, but welcomes sharing excellence for maintaining dedicated actions to help widen participation and supporting more flexible, bottom-up initiatives to encourage innovative approaches to sharing excellence |
| LERU <sup>26</sup>  | Welcomes increase of budget: participation should be facilitated through specific support measures, but also depends on national efforts (Reillon, 2018, pp. 17-18)   |
| The Guild <sup>27</sup>   | Closing the gap is essential to safeguard quality and sustainability of science in the EU (The Guild, 2018)<br><br>Welcomes increase in budget, but say 2.5% of FP budget should go to 'spreading excellence' (The Guild, 2018, p. 3)         |
| Science Europe <sup>28</sup>  | Targeted measures, but opposed to geographical considerations for evaluation of principles: excellence should be sole criterion (Science Europe, 2018)  |

| <b>Joint positions of country groups</b> | <b>Position on widening participation in future research programme</b>             |
|--|--|
| Danube-INCO.net                          | Widening measures are good, but better remuneration is needed for researchers from |

<sup>24</sup> Association representing more than 800 universities from 48 European countries

<sup>25</sup> Represents 24 leading UK universities

<sup>26</sup> Network of 23 leading innovative European universities, all from EU-15 countries

<sup>27</sup> Network of 19 research-intensive universities, including universities from EU-13 countries

<sup>28</sup> Association of European Research Funding Organisations and Research Performing Organisations

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|  | widening countries. This position paper was approved by all Danube countries except Germany and Austria (Representatives of Danube Region)   |
| Joint position EU-13 knowledge institutions                  | More widening measures to prevent multi-speed Europe, more attention to widening in mobility schemes and more synergies with Structural Funds (Representatives EU-13 institutions, 2019) |
| Western Balkan 6 <sup>29</sup>                               | Welcomes increased budget, advocates strengthening research dimension of Twinning actions and better measure of impact on target institution (Regional Cooperation Council, 2018)        |
| Governments of Slovakia, Slovenia, Italy, Hungary and Cyprus | Support increase of the budget for 'spreading excellence' (joint position in the Council) (Reillon, 2018)  |
| Visegrad group <sup>30</sup>                                 | Effective mechanisms supporting further development of an inclusive European Research Area should be strengthened (Viesegrad Group, 2017)  |

<sup>29</sup> Group of countries consisting of Albania, North Macedonia, Albania, Kosovo, Montenegro and Serbia. As associated countries they can also make use of widening actions

<sup>30</sup> Group of countries consisting of Slovakia, Poland, Hungary and Czechia