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Different Approaches to Quality Assurance and Cost Sharing in Higher Education: Comparative Analysis

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Different approaches to quality assurance and cost sharing in higher education: comparative analysis

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Our study uses a qualitative comparative analysis method in order to assess the impact of national accreditation schemes and also other relevant features of the higher education systems of 20 OECD countries on quality of the higher education sector measured by world rankings of national higher education systems. The analysis shows that higher education systems with accreditation system focused mainly on inputs, lacking involvement of professionals in the accreditation process, having a single body granting accreditation for the respective type of institution or degree, not having English as an official language, and not allowing public universities to charge tuition fees do worse in the higher education system rankings. There were different driving forces behind the introduction of formal quality assurance schemes in different world regions and countries. The legacy of the iron curtain seems to be present also with regard to the approaches to quality assurance and cost sharing in higher education.

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Introduction

There were different driving forces behind the introduction of formal quality assurance schemes in different world regions and countries. In Western Europe, the main driving force was certainly higher education massification accompanied by the increased role of government in higher education. Until the 1970s, quality in higher education was supervised via administrative channels such as the legal requirements for the establishment of institutions and study programmes (and funds provided by government to fulfil the requirements), formalized and centralized rules for academic staff appointment as well as for student admission. In the 1970s and 1980s, quality assurance as a special tool in university governance and public policy was discovered. The Netherlands, the United Kingdom, and France were the 'pioneer countries' in Western Europe, which introduced the first formal quality assurance policies in the mid-1980s (Schwarz and Westerheijden 2007).

In the Central and Eastern Europe during the communist regime, quality assurance was not an issue. The quality of higher education was just declared and taken for granted (Šebková 2007; Kohoutek 2009). After the fall of communism in the 1990s, formal quality assurance schemes were introduced as a response to the increased demand for higher education and the entrance of new private higher education providers into the sector (Šebková 2007; Schwarz and Westerheijden 2007). The state-controlled accreditation schemes were implemented in the region in order to redefine the minimum levels of quality. The aim was to keep 'rogue providers' out of higher education (Van der Wende and Westerheijden 2003; Schwarz and Westerheijden 2007).

Contrary to Europe, where the quality assurance schemes were introduced by government initiatives driven mainly by the accountability rationale, in the United States, accreditation was originally introduced in order to protect institutions from public authorities, in order to keep the government out of higher education (Weissburg 2008; Stensaker 2011). Higher education institutions started to form voluntary membership associations in the 1880s – the very first one was the New England Association of Colleges and Secondary Schools, which was created in 1885 (Weissburg 2008). Therefore, the United States can be regarded as the founding fathers of accreditation in higher education (Kohoutek 2009).

The issue of quality assurance in higher education has been widely discussed and analysed. There have been many studies, which dealt with quality assurance policy and practice in a specific country or region or analysing the impact on specific higher education institutions. Nonetheless, no research study has empirically and comprehensively analysed the impacts of quality assurance systems on performance on a macro (national) level as pointed out by Westerheijden (2010). Capano and Pritoni (2020) tried to explore the determinants of (teaching) performance in 12 higher education systems in Western Europe. The index of evaluation including accreditation related criteria was included as one of the determinants analysed. However, it only considered whether the accreditation framework (agency) was established or not.

Hence, our research interest was to identify whether and how the national quality assurance systems affect the quality of the higher education sector. In our study, we will empirically analyse the impact of national quality assurance (accreditation) schemes on quality of the higher education sector. The method of Qualitative comparative analysis (QCA), which was introduced and further developed by Ragin (1987, 2000, 2006, 2008), will be used for this purpose. To be more specific, the QCA method will be used in order to assess the impact of national quality assurance (accreditation) schemes and also other relevant features (explained in the following text) of the higher education systems of 20 OECD countries on the quality of the higher education sector measured by a world rankings of national higher education systems.

To explain the terminology used, the term quality assurance is quite broad and quality assurance schemes may use various tools (Schwarz and Westerheijden 2007). At the beginning of the new millennium, accreditation became the most dominant form of quality assurance in Europe (Stensaker and Harvey

2006). In the United States, it has always been the case. Accreditation-like processes have also been recently predominant in non-European OECD countries.

We are aware that university rankings, as quality measurement tools, have been looked upon by scholars very critically right from the beginning. Despite all the criticism and controversial nature, scholars frequently conclude their papers admitting that rankings are 'fait accompli', so we need to make sure it is used and interpreted carefully in an informed way (Hazelkorn 2007; Federkeil 2008; Rauhvargers 2014; Dobrota et al. 2016). We believe, bearing in mind all the shortcomings, that the rankings still arguably possess the best way to comprehensively and understandably measure the quality of higher education, both on an institutional and national level. Therefore, the two established rankings of higher education systems are used as the variable (Outcome in QCA terms) reflecting the quality.

Each national quality assurance (accreditation) system is somehow unique and has its specifics. However, while analysing the accreditation systems, we identified two main patterns with regard to the general accreditation approach. The first one can be called *improvement-oriented* as there is an emphasis on quality improvement, process of teaching and learning, and self-regulation through the internal quality assurance mechanism. The second one can be called *input-oriented* as it is primarily focused on inputs, e.g. academic staff ranks and their publications, programme curriculum features, individual course description or library resources. Westerheijden (2001) regards systems of programme accreditation focusing on standards for inputs (academic staff, curriculum plans, facilities) as a 'first generation accreditation' system, which was implemented in the mid-90s in Central and Eastern European Countries. It was caused by the situation in the region as a redefinition of the minimum quality levels after the fall of communism was needed (Van der Wende and Westerheijden 2003). In some countries included in the study, though, the accreditation approach remains unchanged till the end of the period observed. The input-oriented systems have been criticized for neglecting the actual process of learning and the learning outcomes. In our study, the actual impact of those two main accreditation approaches will be analysed empirically.

The national quality assurance (accreditation) systems can also be divided into two groups according to the possibility of competition between the accreditors, i.e. whether the higher education institutions in the system are free to choose the accreditation agency. According to Blackmour (2010), a greater number of agencies exercising the regulatory activity in higher education leads to a greater risk of suboptimal outcome and contradictory regulation. The factor of competition will be examined as well.

One of the roles of the national quality assurance (accreditation) should be providing a signal to the employers in the labour market that the university graduate possesses the relevant knowledge, skills and competencies. The accreditation schemes may also be distinguished, considering the involvement of labour market representatives in the accreditation process. It can be expected that the presence of labour market representatives should help to fulfil the signalling role of accreditation, which should be reflected by a higher quality of higher education institutions and their graduates. The real impact of this factor on quality is also a subject of our analysis.

The study is not limited to the influence of the accreditation-related factors only. There are two additional features of national higher education systems included in our study. The reasons are explained in the following paragraphs.

The issue of cost sharing in higher education has been frequently discussed around the world for decades. The limitation of equal access to education is generally the crucial argument expressed against tuition fees charged to students enrolled in public schools. On the contrary, the potential increase of funds in higher education, stronger incentives for students to complete their studies and also to demand higher quality are usually the main arguments voiced in favour of tuition fees in higher education, including the public sector. While there have been many studies dealing with the human capital investments through higher education, starting with Becker (1964), up to the present, as well as many studies analysing the impact of tuition fees on higher education enrolment, summarized by Leslie and

Brinkman (1987) or Hübner (2012), there are only few academic studies measuring the impact of tuition fees on the actual quality of higher education. A study of the U.S. Department of Education (Gilmore 1990) indicates positive correlations between price and institutional quality. However, it does not say explicitly that higher quality is caused by a higher level of tuition fees charged, as the conclusion is rather that higher prices do reflect higher quality. Kemnitz (2010) shows that the introduction of tuition fees can lead to quality improvement depending on the level of (de)centralization. There were studies analysing private sharing of the cost in higher education and demand (Johnstone 2003; Usher 2005; Flannery and O'Donoghue 2011). Capano and Pritoni (2020), when looking for the determinants of the (teaching) performance in the Western European higher education systems, included the freedom to charge fees to students (as one of several sub-indicators) to the index of institutional autonomy. Barr (2004) points out that the introduction of tuition fees in Australia and the UK did not lead to extra funds in the system as originally intended. Again, it does not say, though, anything about the impact on quality as such. Therefore, in order to reduce the lack of empirical evidence, we include in the study a factor of tuition fees and their possible impact on quality.

Finally, we include a distinction between English speaking and non-English speaking countries to analyze the influence of this factor as it has been often argued that university rankings tend to favour universities from English-speaking countries (Marginson 2007; Li and Tang 2011; Huang 2012; Dobrota et al. 2016), so that's why we didn't want to omit this important factor in our analysis.

Data and Method

The factors introduced above were analysed in the decade from 2003 to 2012. The period was chosen considering that many countries introduced a formal system of accreditation at the beginning of the new millennium, and also taking into account the time lag of policy influence on the quality of universities and the whole sector. The country sample was influenced by availability of the relevant data.

The accreditation[3] approach is depicted by *Variable (Condition) A*. Czech Republic, Slovakia, Poland, and Latvia are the countries where the accreditation officials were predominantly concerned with inputs such as academic staff credentials, facilities or library resources, i.e. input-oriented approach prevailed. The Czech accreditation system was already criticized by OECD experts in 2006 in their evaluation report for focusing on the inputs instead of considering the whole institutional performance (Šebková 2009). Kohoutek (2014) points out that the Czech and Slovak accreditation systems shared the same shortcomings of strong reliance on programme inputs especially concerning academic staff ranks. In Poland, the declared emphasis on internal quality assurance was only formal as the main reasons for not granting accreditation were related to input requirements (Chmielecka 2009). Rusakova and Rauhvargers (2009) add that the improvement-oriented elements were not enforced, thus only formal also in Latvia.

In all remaining countries[4] in the sample the main emphasis was placed on the process of student learning, although the accreditation systems of the countries within the group are certainly not identical self-improvement and an internal quality assurance mechanism, i.e. an improvement-oriented approach, as mentioned in the introduction

The factor of competition between accreditation agencies is reflected by *Variable (Condition) C*. In a majority of the countries in the sample, there was no competition between the accreditation agencies, i.e. there was only one national (regional) accreditation body granting the accreditation for the respective

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[3] The term accreditation is not used in all countries in the same context, e.g. in UK is term accreditation used rather for professional bodies and programmes. Australia, New Zealand,UK, and Finland used quality audit as the main tool for quality assurance (which shares many similarities with institutional accreditation approach). Combination of accreditation and audit elements were used in Sweden and Norway.

[4] We consider the system prevailing in the period concerned. In France the system was introduced in 2006, in Hungary in 2005.

type of institution or degree.[5] Germany, the Netherlands, Belgium[6], Chile and Japan were the few countries with a so called open accreditation system, i.e. there was more than one official recognized accreditation agency eligible to conduct the accreditation process[7]. Therefore, higher education institutions were free to choose by which officially recognized agency they (or their degree programmes) wanted to be accredited. There were six officially recognized accreditation agencies operating in Germany (Kehm 2010; Serrano-Velarde 2008; Schade 2007). Since 2006 the National Accreditation Commission in Chile licensed private accreditors to conduct accreditation procedures (Espinoza and Gonzales 2013). In the period observed, four institutional certified accreditors operated in Japan (NIAD-UE 2014). The Netherlands Accreditation Organization produced an annual list of agencies satisfying the set requirements for quality and expertise (Jeliazkova and Westerheijden 2007). Serrano-Velarde (2008) as well as Kehm (2010) mentions the Netherlands as a good example of an open accreditation system. The Dutch accreditation scheme served as an inspiration for the Flemish accreditation system implemented in 2004 (Van Damme 2007).

Participation of the labour market representatives in the accreditation process is captured by *Variable (Condition) L*. While labour market representatives were in some countries official members of the national accreditation bodies or reviewing panels, in some higher education systems the professional or vocational degrees were accredited separately by a specialized agency or professional association composed of practitioners. I have included both cases into one group for the sake of simplification for a binary truth table. Labour market representatives were official members of the national accreditation bodies or reviewing panels in Poland[8] (Dziennik Ustaw 2005), Australia (Tertiary Education Quality and Standards Agency 2012), Belgium (Van Damme 2007), Finland (Kettunen 2012; Hansen, et al. 2014), France (NIAD-UE 2012), Germany (Schade 2007; Kehm 2010), Hungary, (Rozsnyai 2009, Rozsnyai 2007), and Latvia (Rusakova and Rauhvargers 2009). Professional and vocational degrees were accredited separately by a specialized agency or professional association composed of practitioners and professionals from the relevant field in Canada (Weinrib and Jones 2014), Chile (Espinoza and Gonzales 2013), Japan (NIAD-UE 2014; Hou 2015), Netherlands (Jeliazkova and Westerheijden 2007; NIAD-UE 2011) Sweden (Foss Hansen 2009), United Kingdom (Brennan and Williams 2007), United States (CHEA 2010; Brittingham 2009), and New Zealand (Kirkwood and Cameron 2013, Wahanga Tatari 2011). In all those countries the labour market representatives were somehow involved in the accreditation process.

Participation of the labour market representatives in the accreditation process was not required in Czech Republic (Šebková 2009), Slovakia (Kohoutek 2014) Estonia (Vilgats and Heidmets 2011), and Norway (Foss Hansen 2009; Hansen et al. 2014).

The factor of tuition fees charged by public universities is depicted by *Variable (Condition) T*. There were no tuition fees charged to the full-time national students at public schools in Finland, Sweden, Norway, Czech Republic, Poland and Slovakia. In all remaining countries[9] of the sample, public schools did charge tuition fees in the period observed.[10][11] In all the countries of the sample, with the exception

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[5] In some countries, there was a special agency or association granting accreditation to professional (vocational) degree programmes.

[6] In Flanders

[7] Even for the institutions (degrees) of the same kind.

[8] Since 2005

[9] In Germany, seven federal states introduced tuition fees in the year 2006 or 2007 (Achelpöhler et at. 2007).

[10] OECD, Education at a Glance, https://www.oecd-ilibrary.org/education/education-at-a-glance_19991487. We have examined all studies, which provided the information on tuition fees in the period from 2003 to 2012.

[11] "There is a dual track tuition system in Estonia. Those students who are admitted to state-funded places at the universities do not pay tuition. Universities can charge tuition from students admitted beyond state-commissioned study places. Universities can decide upon both the amount of the tuition fee as well as the number of students to charge." (OECD 2013, p. 233)

for two countries[12], there was a majority of students enrolled in public universities[13] (OECD n.d.; Slantcheva and Levy 2007; Chernoshtan and Verovska 2016).

Finally, *Variable (Condition) H* captures the factor of English language as outlined in the introduction. The English-speaking countries in the sample are Australia, Canada, New Zealand, UK, and USA.

This information is summarized here in the binary truth table below using the abbreviations, as we suggested previously.

Table 1 Summary truth table

Country	L	A	C	T	H	HESS 2016	HESS 2018	AVG HESS	U21 - 2019
USA	1	1	0	1	1	1	1	1	1
UK	1	1	0	1	1	2	2	2	3
Australia	1	1	0	1	1	4	3	3,5	8
Germany	1	1	1	1	0	3	4	3,5	16
Canada	1	1	0	1	1	5	5	5	6
France	1	1	0	1	0	6	6	6	17
Netherlands	1	1	1	1	0	7	7	7	10
Japan	1	1	1	1	0	10	10	10	20
Sweden	1	1	0	0	0	14	14	14	4
Belgium	1	1	1	1	0	15	17	16	13
New Zealand	1	1	0	1	1	16	16	16	14
Finland	1	1	0	0	0	19	20	19,5	9
Norway	0	1	0	0	0	32	30	31	11
Chile	1	1	1	1	0	31	32	31,5	34
Czech Republic	0	0	0	0	0	38	41	39,5	26
Poland	1	0	0	0	0	43	46	44,5	31
Estonia	0	1	0	1	0	49	47	48	50+
Slovakia	0	0	0	0	0	50+	50+	50+	33
Hungary	1	1	0	1	0	50+	50+	50+	35
Latvia	1	0	0	1	0	50+	50+	50+	50+

[12] Japan and Chile

[13] In Belgium and UK was a majority of students enrolled in so called government-dependent private institutions (government-dependent private institution is one that receives more than 50% of its core funding from government agencies).

QS Higher Education System Strength Rankings (HESS) is one of the two rankings currently available, which are focused on national higher education systems as a whole rather than on the individual universities.

For the purposes of the analysis, the country´s average rank of the HESS Rankings recent issues is calculated and used (Quacquarelli Symonds 2016, Quacquarelli Symonds 2018a).

The QS Higher Education System Strength Rankings methodology compares the performance of the national systems in the following four areas: System strength, Access, Flagship institution performance, Economic context. In order not to rely only on the HESS ranking, we'll do the same analysis also using the data of the second recognized ranking of higher education systems i.e. Universitas 21 Ranking of National Higher Education Systems. The ranking evaluates the performance of the national systems in four areas as follows: Resources, Environment, Connectivity and Output Variables used are standardised for population size (Melbourne Institute of Applied Economic and Social Research 2019).

Regarding the estimation method, the Qualitative comparative analysis (QCA) method, which was introduced and further developed by Ragin (1987, 2000, 2006, 2008), has been chosen as the appropriate for the study. QCA allows the researcher to deal with complex interactions among interrelated variables and model conjunctural causation (situation when an outcome depends on a combination of causes). As Misangyi et al. (2017) point out, this approach enables researchers to more adequately theorize and empirically examine causal complexity.

In a nutshell, QCA uses algorithms based on Boolean algebra seeking to identify conditions (combinations of conditions) that are sufficient to produce the outcome (Ragin 1987; Warren et al. 2013; Legewie 2013). QCA is also particularly suitable for an analysis of small to medium-N data samples (Rihoux, 2006, Legewie 2013; Rihoux et al. 2011), which is the case of our data sample (N=20). There two key QCA measures: consistency and coverage. Coverage is a measure of empirical relevance - the degree or proportion to which an outcome is explained by given conditions. Consistency is considered to be the more crucial measure and reports the degree to which cases exhibiting the outcome also exhibit the condition (Ragin 2006).

Analysis results

Using QCA, we explore the effects of the national quality assurance (accreditation) system, the approach to cost sharing in higher education, and the official language of the respective countries on the quality of the higher education sector measured by a world ranking of higher education systems.

The explanatory variables are strictly binary (0-1). For the purposes of the analysis, the ranking has been standardized to range from 0 to 1 (1 for the countries ranked 50+, 0 for the best ranked country) according to the methodology used by Longest and Vaisey (2008).

Table 2. Table of configurations

bestfit	Freq.	Percent	Cum.
LACTh	5	25.00	25.00
LAcTH	5	25.00	50.00
LAcTh	2	10.00	60.00
LActh	2	10.00	70.00
LacTh	1	5.00	75.00
Lacth	1	5.00	80.00
lAcTh	1	5.00	85.00
lActh	1	5.00	90.00
lacth	2	10.00	100.00
Total	20	100.00	

The table shows 9 possible configurations of the designated variables(conditions) in the sample. The most frequent configurations (25%) are LAChT and LAcHT, i.e. in both cases the systems with the accreditation approach mainly focused on the internal quality assurance mechanisms and processes, labour market representatives involved in the accreditation process, and public schools charging tuition fees.

The results, using HESS and presented in the table below, show that there is just one configuration (type of higher education system) valid – exceeding the consistency threshold of 0.7 and being significant. This combination is leading to a low position in the ranking (lower quality of higher education system). In the QCA terms, these are the conditions producing the outcome. Accreditation system focused mainly on the inputs to the teaching and learning process (a), with no involvement of the labour market representatives in the accreditation process (l), no competition among accreditation agencies (c), public schools not charging tuition fees (t) have a negative impact on the ranking of the national higher education system. It also seems that non-English speaking countries (h) generally perform worse.

Table 3 Consistency and coverage (using HESS)

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Y-Consistency vs. Set Value
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Set	YConsist	Set Value	F	P	NumBestFit
lacth	0.889	0.700	5.49	0.030	2
lActh	0.667	0.700	.	.	1
lAcTh	0.889	0.700	.	.	1
Lacth	0.833	0.700	.	.	1
LacTh	1.000	0.700	.	.	1
LActh	0.528	0.700	8.12	0.010	2
LAcTh	0.639	0.700	0.05	0.818	2
LAcTH	0.189	0.700	36.09	0.000	5
LACTh	0.422	0.700	9.62	0.006	5

```
Y-Consistency vs. Set Value
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Set	YConsist	Set Value	F	P	NumBestFit
lacth	0.889	0.700	5.49	0.030	2

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Common Sets
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lacth

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1 Solutions Entered as True
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Coverage
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Set	Raw Coverage	Unique Coverage	Solution Consistency
l*a*c*t*h	0.168	0.168	0.889

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Total Coverage = 0.168
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Solution Consistency = 0.889
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Sample Coverage is quite low however, confirming the usual trade-off between these two measures (consistency is often working against coverage). However, coverage should be always calculated and assessed only after addressing and assessing properly consistency (Ragin 2006; Thiem 2010).

The analysis results can be also represented the other way rounds as configuration LACHT leading to the high rank. Accreditation system focused mainly on the internal quality assurance mechanisms and processes (A), labour market representatives involved in the accreditation process (L), the presence of competition among accreditation agencies (C) and public universities charging tuition fees (T) have a positive impact on the ranking of the national higher education system. It also seems that English speaking countries (H) generally perform better.

The final results of the analysis using Universitas 21 are presented in the table below.

Table 4 Consistency and coverage (using Universitas 21)

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Y-Consistency vs. Set Value
Set       YConsist  Set Value    F         P         NumBestFit
lacth      0.757     0.700      2.09      0.164        2
lActh      0.378     0.700       .         .           1
lAcTh      1.000     0.700       .         .           1
Lacth      0.757     0.700       .         .           1
LacTh      1.000     0.700       .         .           1
LActh      0.189     0.700     75.41      0.000        2
LAcTh      0.757     0.700      0.23      0.635        2
LAcTH      0.184     0.700     44.03      0.000        5
LACTh      0.562     0.700      2.61      0.123        5
```

While again, l*a*c*t*h is the configuration (type of higher education system) with the highest Consistency, it does not seem to be statistically significant for this type of ranking. Reduction of the threshold from 0.7 to 0.65 would increase the significancy (the combination becomes significant with p below 0.05). However, it is uncommon to set the consistency threshold below 0.7 even in special cases like ours.

Consistency of 0.757 is not as high as in the case of the first ranking, but the value exceeds the usual critical benchmark level of 0.75 set by Ragin (2006). Sample Coverage is again quite low.

For both rankings the l*a*c*t*h is the configuration (type of higher education system) that has the highest consistency in leading to the bad outcome, i.e. low rank, low quality of higher education system, albeit when using Universitas 21 it does not seem to be statistically significant as in the case of HESS.

To be concrete, Czech Republic and Slovakia are the cases (countries) in the sample with the accreditation system focused mainly on the inputs to the teaching and learning process (a), with no involvement of the labour market representatives in the accreditation process (l), no competition among accreditation agencies (c), public schools not charging tuition fees (t) and with no English as the official language (h). In our sample, there are no cases (countries) with the opposite configuration LACHT, which seem to lead to the high rank.

Discussion and Conclusion

Based on the QCA results, we conclude that higher education systems with accreditation system focused mainly on inputs, lacking involvement of professionals in the accreditation process, having a single body granting accreditation for the respective type of institution or degree, not having English as an official language, and not allowing public universities to charge tuition fees do worse in the higher education system rankings.

As regards the questions raised in the introduction, the answers are following. The improvement-oriented accreditation schemes seem to have better impact on quality than the ones focused only on the inputs to the teaching and learning process. Apparently, the main emphasis on quality improvement (self-regulation through internal quality assurance mechanisms) is very important. The issues related to

the input-oriented schemes, i.e. the neglect of the teaching and learning process and student learning outcomes, seem to be problematic and the critique of this approach (Šebková 2009; Kohoutek 2014) appears legitimate. The presence of labour market representatives also proved to have positive effects as well as the possibility of competition between accreditation agencies. It seems that the practitioners make sure that the curriculum is composed in a way which reflects the current needs of the labour market. Thus, it has a positive impact especially on the skills and competencies of the graduates, which lead to their higher employability and better prospects in the labour market. Contrary to Blackmour (2010), we conclude that the open accreditation system, i.e. competition between the agencies lead to a higher quality.

As regards the factor of English language, we conclude that the English-speaking countries do better in the ranking. The study did not aim to analyse, whether it is really caused by the quality of the higher education system, or by a possible bias of the ranking in favour of English-speaking countries. It is easier to publish and get cited for native English speakers. It is also easier for universities located in an English-speaking environment to attract more international students. It is a question whether a university in an Anglophone country is better than a university, which is otherwise identical, in for instance continental Europe.

We are aware that the study may be limited by certain shortcomings of the selected method and usage of rankings as the quality proxy, which was discussed and analysed in the respective parts of paper. However, we believe that our research brings new important findings in the field of quality assurance and cost sharing in higher education.

Based on our research findings, we would recommend that the improvement-oriented accreditation schemes (emphasizing the processes and outcomes rather than the inputs) with labour market representatives involved in the process as well as well as the open accreditation system with the possibility of a competition between the agencies is implemented in the respective countries (where it is not that case yet). We would also recommend that tuition fees are introduced at public schools. This combination of the national quality assurance system and cost sharing in the higher education proved to have a positive impact on higher education quality in (continental) European as well as Asian countries, therefore English as the official language in the country is not the crucial attribute. As for the level of tuition, we would recommend rather a moderate level, which is the case in France, Germany, Netherlands or Belgium (OECD n.d.). The reason is that, in the counties concerned (i.e. post-communist and Scandinavian countries), in which public universities are free of charge, there is not the tradition of cost sharing in the higher education, and thus the Anglo-Saxon model with high tuition fees would not be suitable and would not fit well in the whole higher education system. However, tuition charged even in a moderate amount proved to have a positive effect on the performance based on our conducted empirical analysis.

There has been certain development in the countries with the undesirable combination of conditions (features of the higher education system). In the Czech Republic, the former accreditation scheme was altered by the Higher Education Act amendment in 2016. The option of institutional accreditation was introduced and emphasis to internal quality assurance mechanism was incorporated to the accreditation standards. The Board of National Accreditation Bureau, which serves as the executive body, now includes one labour market representative. Very similar changes appeared in Slovakia due to the Higher Education Act amendment in 2018, which introduces the emphasis on the internal quality management system of the universities, which should primarily responsible for the quality. The in-debt analysis of the changes, however, will be the subject of our future research, which should confirm or refute, whether the accreditation schemes have really shifted to a system paying attention to student learning, or all the declared changes are rather formal.

As for the issue of cost sharing, in both countries, there have been unsuccessful attempts made by politicians to introduce tuition fees at public universities.

Even though it is not necessarily the case for all the countries in the sample, there seems to be a certain pattern with regard to the geographical location (and the related historical heritage) of the countries. In the countries from the CEE region (former soviet bloc) still tend to prevail the 'first generation' model of accreditation focused predominantly on the inputs (academic credentials and publication record). As pointed out in the introduction, the state-controlled accreditation schemes were implemented in the CEE region in order to redefine the minimum levels of quality after the fall of communism in the 1990s. A similar trend can be observed with regard to the involvement of the labour market representatives in the accreditation process, though not so significant. In no CEE country in the sample was the competition between the accreditation agencies allowed in the period observed (and it is still the case). As for the cost sharing, only the Scandinavian and half of the CEES countries in the sample had their public universities free of charge.

To conclude, the legacy of the iron curtain seems to be present also in terms of the approaches to quality assurance and cost sharing in higher education.

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