Performance financing system of the high education in the Czech Republic – selected issues.

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Abstract

In the paper, we examine the response of public entities to change of the funding system. Our goal is to assess whether the responses of the monitored entities are in line with the intentions of government efforts. In other words, whether the instruments used and the method of implemented changes have led to fulfilling the original intentions of the government. In this sense, we have focused on examining several factors: 1) clarity of goals for the representatives of public bodies, 2) harmony and differences in the reactions of selected entities to change of the funding system, 3) comparing the intentions of the government and the resulting state, 4) identification of successes and inconsistency in the resulting state and the original intention, but also other externalities. Our research is based on an analysis of government documents, the implementation of structured interviews with representatives of selected universities and ultimately also on quantitative analysis of the year-on-year outcomes of the monitored universities. The findings and the methodology of "New Public Management" with a focus on the area of performance financing are theoretical basis of the conducted research, which is a key element of changes of the funding of universities in the Czech Republic, put into practice in recent years.

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1   Introduction

One of the essential elements of sustainable development of any country and its society is the existence of higher education. It is that part of education which has to provide other no less important services in addition to the actual educational activities. As the history of many nations has proven universities occupy an important role of some guardians of democracy. Independence and apolitical position of universities is essential for a modern and democratic society. Universities and research institutions are concentrating the education of the nation and provide space for the intelligence to realize and develop new ideas and thoughts. They thus set the stage for the development of science, research and innovation, which are an important aspect of the development of any society, not only in the economic sphere. In addition, at least a certain level of higher education in most developed countries is funded from public sources. At least in the European context it is the question of access to higher education, which is also the public interest. Regarding funding, it is a public service that is very demanding on inputs. In terms of government, it is, therefore, a relatively very complicated environment because:

- It is necessary to respect the independence of institutions of tertiary education
- It is necessary to provide them with sufficient resources of financing so that the condition of their independence from the state has been met, and the need of public interest has been covered, while
- The range of services that are provided by the tertiary education sector is broad and the outputs and societal benefits are difficult to quantify

Higher education and research are important but expensive public (provided) services. As some foreign studies show many academics do not prioritize effectiveness in spending of the public sources: „*Judging from the survey results, many of higher education′s leaders just do not care whether resources are used productively and effectively.*" (Priest, 2002, p. 18). We think that there are many questions which should be investigated in higher education in the Czech Republic in terms of its efficiency. In our article we decided to look at this area of the public sector, where we focused on the part of science and research. It is the area of tertiary sector which is very demanding in terms of inputs but to describe and quantify the scientific outputs is much more difficult than to quantify and evaluate the outcomes of educational part of tertiary education.

2   Theoretical discourse

Auranen and Nieminen (2010) focused their attention on the evaluation of the

efficiency of university funding systems in selected countries. They observed that in the last decade there was a decrease in direct government resources allocated into tertiary education and an increase of external resources. Despite this the public resources are the dominant source of university funding; however, a change in allocation system towards a higher proportion of performance-based funding has been observed in many countries. It is generally believed that the level of science, research and innovation is one of the main means to positively influence the economic and social level of the country. The main governmental instrument to influence the trends in the field of science, research and university education is the volume of public means that the country allocates to this field. However, the ability of the government to affect its development is limited just like the resources that are available. Therefore, besides the volume of the means directed to university education it is important to find a form of a distribution instrument that will support the growth of effectiveness of the expenses. This approach sometimes referred to as New Public Management emphasizes the way public resources are allocated as a means to achieve the higher effectiveness of public expenses. Aurenen and Nieminenn (2010, p. 822) summarized: "*Hand in hand with the rise of the New Public Management and expanding global techno-economics competition, an increasing prominence has been given to the idea that university systems employing output incentives and competition mechanisms are more efficient and productive than systems in which such incentives and mechanisms are employed less or not at all*".

According to Curisstine (Curisstine in Redburn, Shea, Buss 2008, p. 214-217) the trend in OECD countries is that some countries try to introduce performance defined goals in their budget processes but few countries really proceed in the accordance with the method of performance funding. This author states that a proper mechanism includes information on the observed act performed as early as in the budget documentation, connects expenses with outputs or goals achieved, measures the achieved outputs with these goals and re-uses the resulting information for the decisions on the allocation of future resources. The countries that have decided to change their university education funding system towards a higher orientation to outputs have usually done that by modifying the already existing funding system. The Czech Republic is no exception. (Jahoda, Hornakova, 2014)

The issue of performance research funding in the university education system has also been explored by Hicks (2012). He stated that a system should be called PRFS (performance-based research funding system), if it would have to meet the following:

- It must be possible to evaluate the research explicitly,
- The evaluation is done ex post,
- University funding must be based on research evaluation results,
- The system must be implemented at the national level.

The current settings of the university funding system in the Czech Republic meet the above listed conditions, and we can ask: What can we expect from the funding system based on performance-oriented approach? Hicks (2012) identified the following benefits, which can be related to the introduction of or a shift towards performance budgeting:

- Increasing productivity,
- Replacing traditional command-and-control systems with market-like incentives,
- Stronger service orientation,
- Devolution (making university autonomous),
- Formulating policy (government as purchaser of education services),
- Enhanced accountability.

Our research partly relates to Vanecek 2013 who investigated: "*the effects of evaluation and evaluation-based institutional funding on quantity and quality of research and development results.*" (Vaneccek 2013, p.3). He based his research on data analysis and concentrated on comprising with other countries results. Vanecek concludes: "*Although the quantity of the results in the Czech Republic has been increasing very quickly, their quality has been lagging behind the other countries in comparison.*" We realised to concentrate first more on institutional reaction on changes in financing system at national level.

3   A brief description of the historical aspects of the financing of universities in the Czech Republic

The method of financing the higher education as well as of all other areas of the public sector in the Czech Republic before 1989 was built on the familiar five-year plans which were so typical for socialist countries. In the period of transformation of the state from a planned economy to a market economy, the main objective of universities was to "catch up" with the European averages of indicators of highly educated population. According to the data from the Statistical Office of the Czech Republic, the percentage of university-educated people increased from 8,1% in 2003 to 14,6% in 2014 . In this period, the university sector focused on the teaching of students to which the structure of funding was also subordinated. Contribution per student was a determining factor in funding. Universities have adapted to such set methodology, and they often admitted students on the edge of their capacity. The rhetoric of the then government projects in the area of science and research points to a continuation in an

incremental approach to funding higher education and sets spending increases in tertiary education, science and research so that by 2010 the value of the gross domestic product would achieve 1% compared to the current budget.

After the initial expansion of educational activity outputs the new trends appeared in 2000 increasingly to direct the attention to the quality of outputs, including science and research outputs. Theoretically, we talk about performance-based funding with a change of the indicator emphasized. The attention has shifted from student/graduate indicator to research output indicator. In 2009, the White Paper on Tertiary Education for the Czech Republic was published (White paper on Tertiary Education, 2009). It described the demanded future development in the field of university education in the Czech Republic. The change in the perception of the demanded output of universities has been gradually leading to the higher observation of science and research results with the relations between science and tutoring being assumed. The high number of universities, arisen in the 1990s and 2000s, could need to be controlled by mechanisms diversifying universities. Universities should decide themselves whether their orientation will be towards science, research, and excellence or rather tutoring, which, however, needs to follow the labor market demands represented by customers, in this case, employers. In an ideal situation universities with a focus on tutoring would closely cooperate with partners - employers and nurture graduates that are "tailor-made" for a specific demand.

The mechanism that allocates means to universities usually has two forms. One channel means allocation by an institution; the other is by specific projects or programs. Steen (2012, p. 9) commented: "*Institutional funding can be defined as the funding of institutions with no direct selection of projects or programmes to be performed. Under this type of funding, it is the receiving institution that has discretion over the R&D projects that are to be performed, not the funding organisation.*" The mechanism of institutional means can focus on the output indicator, but it is not necessary. The outputs may differ by their focus and form. The government or the Ministry of Education, Youth and Sports (further on „MEYS") influences the behaviour of universities through the indicator composition. Project financing is another form of financing. Specific areas or targets of the government or the private sector are addressed through project financing. The rate of application of this approach has increased due to the possibility of drawing funds from the European Union. However, this form is not the subject of our research. (Jahoda, Hornakova, 2014)

4   The rules for granting allowances and subsidies for public universities

The research conduct is dedicated to examining the setting of performance-based

funding of such part of the funding of universities, which takes the form of institutional support. Bases for the determination of the Government's objectives are in particular: Country Note OECD, the White Book of Tertiary Education, and Lifelong Learning Strategy of the Czech Republic. The main objective declared by the long-term plan can be formulated as: "*Changing the orientation of the development of universities from quantity to quality, which should be reflected in the implementation of all the major functions and roles of universities. Priorities of the long-term plan of the MEYS, the so-called diversification of the higher education system in the Czech Republic are the means to achieve this goal*". The main instrument for achieving the defined objective is the funding system. Principles and rules of financing are specific means. These must aim to shift the strategic priorities of the state in higher education policy from quantity to quality. Higher education institutions are then expected that they should carry out a comprehensive analysis of their strengths and weaknesses, and process the intention of their long-term profilation. Based on this analysis, intermediate targets should be set and concrete tools and means should be identified that can be used for their implementation (changes in internal rules and the involvement of institutions in the respective programs).

Long-term plan specifies three priority areas, while it identifies specific targets for each priority area.

1. Quality and Relevance

Quantitative expansion must be linked with the diversification of universities: 1) cutting-edge research in an international environment and challenging educational programs of the master's studies and doctoral studies, 2) focused on the bachelor's studies, adult education, knowledge transfer, cooperation with enterprises or promotion of the region.

2. Openness

This priority is focused on the openness of universities within the framework of international cooperation, implementation of the Bologna process in the Czech Republic, the connection to the international scientific community and increase of the competitiveness in the international environment.

3. Effectiveness and Financing

This priority aims at a greater efficiency of higher education funding from public budgets. It aims to clarify the powers and responsibilities of key actors (Accreditation Commission, universities, Ministry and external actors). The transition to the new funding system is also an important element that will lead to the promotion of quality of education, science, research and experimental development.

4.1 Changing the rules for allocating subsidies

Around 2001 universities have begun putting their outputs into the Information System of Science and Research - Results Information Register (RIV) which was originally intended as a tool for measuring the scientific output of universities. Since 2009, this instrument started to work as a tool for allocating funds for the area of institutional support. The methodology from the year 2009 identifies only general categories of outputs such as:

1. Article in a periodical (according to the Nomenclature of IS VaV it is the type of result J)
2. Professional book (result type B) or a chapter in a professional book (result type C)
3. Article in a compilation (result type D)
4. Patent (result type P)
5. Utility model or industrial design (result type F)
6. Pilot plant, verified technology, variety, breed (result type Z)
7. Prototype, functional sample (result type G)
8. Result, realized by the provider (result type H)
9. Specialized map (type of result L)
10. Certified methodology and process (type of result N)
11. Software (type of result R)
12. Research report containing classified
13. Information pursuant to special legislation (type of result V)

Points were assigned these general categories under which the funds for institutional support were redistributed. In this way the universities acquired resources through publications according to their proven publishing strategies, and an emphasis on the character of publishing category has not yet been placed.

In 2010 the methodology, which regulated the rules of assessment of outcomes for the years 2010 to 2012, entered into force. After this change, certain types of outputs were specified compared to the previous methodology:

1. Article in a periodical (according to the Nomenclature of IS VaVaI it is the type of result J) with internal breakdown:
    o Jimp-article in the impact journal WoS
    o Jneimp-article in a reviewed journal in the world renowned databases (ERIH A, ERIH B, ERIH C, SCOPUS)
    o Jrec-article in a Czech peer-reviewed journal

2. Professional book (result type B) or a chapter in a professional

book (result type C)
3. Article in a compilation (result type D)
4. Patent (result type P)
5. Utility model or industrial design (result type F)
6. Pilot plant, verified technology, variety, breed (result type Z)
7. Prototype, functional sample (result type G)
8. Result, realized by the provider (result type H)
9. Specialized map, certified methodologies and processes (type of result N)
10. Software (type of result R)
11. Research report containing confidential information pursuant to special legislation (type of result V)

Still valid methodology for evaluating science and research has been published for the years 2013-2016, and the fundamental change it brought about is the determination of the 3 pillars of rating:

Pillar I: Branch evaluation of published results. For each branch group, the methodology identifies relevant types of results and their potential maximum percentages in the point values. This feature introduces a so-called peer review evaluation of the selected results of books, chapters and articles in non-impacted peer-reviewed journals. This pillar evaluates the results through the RIV system, namely according to the following criteria:

1. Article in a periodical (result J) with internal breakdown:
   - Jimp-article in a journal registered in the Web of Science (hereinafter WoS)
   - J SC-article in a source registered in SCOPUS, which is not registered in WoS
   - Jneimp-article in a reviewed journal in the ERIH database that is not registered either in WoS or in SCOPUS
   - Jrec-article in a Czech peer-reviewed journal that is not registered either in WoS, SCOPUS or in ERIH
2. Professional book (result type B)
3. Chapter in a professional book (result type C)
4. Article in a compilation (result type D). (Proceedings must be registered in the database of Conference Proceedings Citation Index – Science or Social Science & Humanities /formerly ISI Proceedings/ of the companies Thomson Reuters /New York, USA/ or in the database SCOPUS)

Pillar II: It is another element of quality assessment of selected results, where each institution shall submit a number of excellent results, which will be judged by the so-called "Expert Verification and Evaluation Panel". This panel will select a maximum of 20% of the best results that will get a special bonus.

Pillar III: This pillar focuses on the evaluation and bonuses of patents and applied research results and unpublished results.

Given the objective of the work, and for a certain degree of simplification, we will be interested in the results in Pillar I. The amount, by which universities compete through the quality assessment of science, represents just over 18 % of the total grant of the MEYS for universities funding.

5   Definition and explanation of the goals

Our main objective was to assess whether the reactions of the monitored objects are in line with the intentions of government efforts. In other words, whether the instruments used and the method of implemented changes have led to fulfilling the original intentions of the government. Given the general objective of the research, we asked ourselves the following research questions:

How are defined the objectives of government policy in the area of science and research in the Czech Republic? Can we identify the correspondence between what the government documents declare and how the colleges explain the rules? Do the chosen methods lead to fulfil the stated objectives? To what extent do the colleges identify themselves with government objectives in the field of science and research? Is it being achieved the targeted state in the area of science and research via selected methods?

For such determined research questions, we have then put together an array of sub-areas on the investigation of which we have focused:

1) Clarity of goals to representatives of public bodies
2) Similarities and differences of responses of selected entities to changes of the financing system
3) Comparing the intentions of the government and the outcome
4) Achievements and non-compliance of the outcome with the original intent, but also other positive or negative externalities

6   Analysis of the performed research

This article is part of a broader research and given the scale; it focuses on a

sub-part of the whole. In order to answer the defined goals, we have chosen the standard examination process, while at the beginning there was conducted an analysis of the documents to describe briefly the development of changes in rating methodologies of research organizations that had an impact on the investigative issue. Approach "New Public Management" was chosen as the theoretical context of exploration, with emphasis on performance-based management, which are prevalent doctrines, which became the basis for ongoing changes. It was also stated a brief overview of the defined government's goals and chosen methods. Due to identify them, we believe that even this adjustment took place in a spirit of theoretical concept NPM, whose purpose is to perceive the performance of the public sector as something that should be encouraged in a wide range of public sector (Nemec, 2014). Data analysis and structured interviews were other methods. The data that were used in the preparation of this research were obtained from publicly published outputs of the information system for monitoring the scientific output of the research institutions. Although the article was processed at the end of 2015, the latest available data on the evaluation of research organizations are only available for 2012 and earlier. Evaluations for the years 2013 or 2014 have not yet been published at the time of processing the article. We have supplemented this data with information obtained through structured interviews, which were implemented during 2014. In total, 16 structured interviews were conducted to date. The addressed respondents consist of two groups: 1) Bursars and 2) Vice-Deans of relevant faculties, whose competencies include the agenda of science and research of the organizations. Totally, we addressed 30 representatives from 15 faculties. In each institution, both the bursars and the vice-dean were approached. Only in the case of 4 institutions, we managed to conduct an interview with both the addressed, i.e. the vice-dean and the bursars. In other cases, the interview was conducted either only with the bursars or just with the relevant vice-dean.

Overall, 16 structured interviews were successfully carried out. According to the fields and functions the respondents can be classified as follows:

- Economic Faculties: Bursars: 6, Vice Dean: 3

- Law Faculties: Bursar: 1

- Faculties of Science: Vice Dean: 1

- Philosophical Faculties: Bursars: 2, Vice Dean: 2

- Faculties of Technology: Vice Dean: 1

In this article, we made a comprehensive synthesis of information obtained from all previously conducted structured interviews, and more specifically, we processed the data for four selected research institutions. Two of these institutions

are the Faculties of Economics, and the two institutions are Philosophical Faculties. In the case of three faculties in the analysis, we focused on the statement of bursars and vice-deans, and in the case of the fourth institution we work only with the statement of faculty secretary. We, therefore, analyse the statements obtained from 7 structured interviews, and complete publishing activity of those faculties for the years 2009 to 2012. We have focused on the evolution of the number of publications in various publishing categories and point values obtained on the basis of the selected publications strategy. From the resulting timeline of publications, the annual movements in the number of publications of each institution are then calculated for each category. Analysed data are included in Table 1.

When evaluating the information obtained through structured interviews, we obtained the synthesized data through the consensus of the respondents in the answers to each question. Interviewers tried to formulate always the same questions and follow a uniform structure of areas in the interviews. One group of questions has focused on how the respondent versed in issues of science and research evaluation, and which overview the respondent has of changes in previous years.

As mentioned above, this analysis works with the data file of sub-part of the total examined problems, and the analysed results work with the data for four institutions. In the actual evaluation of the research, we will take into account the division by sector, as this is one aspect that plays an important role in assessing the possibility of publishing of higher education institutions. However, this paper will not address the issue of interdisciplinary comparison of scientific outputs. Although in data analysis we focus so far only on the timeline and the development of publishing activities, which would point to the fact that the choice of industry-diverse institutions would not play an important role, yet the industry-related institutions were selected. We analyse the data of two economically and two philosophically oriented institutions.

One of the methods utilized in the analysis are the outputs of controlled interviews. To preserve the anonymity of respondents, we will be marking the faculties only with the letter A to D and with the attribute by field, i.e. economic and philosophical. In both cases, it is a faculty representative who works at universities outside of Prague.

7 Evaluation of the obtained data

According to the most respondents (81%) that are the permanent changes of evaluation system what cause the most serious problem for the Czech research part of tertial education system. Change in publishing strategy cannot be implemented in the short term. A respondent of D institution answers the question

of how he would define the weaknesses of the system of financing: "*Variability. It is that the system is not stable, that it is changing basically every year, that the draft amendments, always the methodology pass the commenting process, and a minimum of 6 variants were in 2012, if I remember correctly, it was the minimum version.*" Stable rules are necessary to stabilize the scientific results. A strong consensus of respondents has also been reported in the question of whether the system and its methodology can be regarded as a quantification of outcomes of science and research. Totally 12 out of 16 respondents consider the current system settings such as focusing on the achievement of performance, which does not mean that the quality of science and research is also increased. Only 5 out of 16 respondents believe that the main objective of the Ministry is monitoring the quality of the universities. For example, a respondent of A institution states: "*So the basic thing is, I do not know if the ministry may know it, but maybe they should know what they want .... What they want and what we can realize here. ... Meanwhile, according to the methodology and according to what was prepared here for this, I would say it was one big mess.*"

The current system settings and its methodology motivate the organizations or scientists to higher performance. This generalization is due from 15 respondents' answers, which is 94% agreement. All of the monitored institutions are supporting their researchers to higher publication in journals with the highest score. The most used tools are financial instruments, whether in the form of development programs of institutions, various prizes of the Dean / Rector for the best publishing performance and in some cases even an increase of the wage supplement to wages of employees. Respondents also state the so-called negative tool, which are the minimal publication standards and the potential consequences arising from their mostly repeated non-compliance. In most institutions visited, the respondents stated that changes to the system were reflected in their internal rules so that there is a significant link between output produced by academic and his financial reward. This confirms almost 90% of respondents. Analysed data also confirm this summary statement. In 2010, there is considerable change to the publication strategy where all of the monitored institutions have reduced the publications in newspapers without scoring, and success in publishing in assessed categories has increased. This development, along with raising the evaluated outcomes, is pointing to the adaptation of publishing activities in accordance with the change of methodology. These dynamics are distinctive from the beginning of the monitored period, and in 2012, it has been less pronounced.

Publishing statistics of both economics faculties are characterized by a high proportion of publications in journals with a zero rating. This indicator is the highest in all the monitored years. Virtually in all the years, the share of results published in unranked journals, however, decreases in both economic faculties. The only exception is the year 2012, where the institution B has seen an increase in the value in this category.

Respondent of institution B stated in an interview that within response to a change in methodology they tried to instruct their scientists for a greater share of

publications in the category Jrec. The success associated with increased publication activity in this category is evidenced also by the above data. Both respondents of institution B reported that they have a system of incentives for workers directly linked to the methodology. Additionally, they then motivate them through higher financial evaluation at the successful publication in Scopus (i.e. result type D) and in category Jrec. As part of the motivation, they also have a minimum standard of publication. It, however, does not change as quickly as the methodology, since it would not be feasible.

Table 1: Analysis of publication strategy of selected faculties

Year	Type of result in the ratings	Institution A - Economical			Institution B - Economical			Institution C - Philosophical			Institution D - Philosophical		
		Adjusted number of results, taking into account the co-authorship	Adjusted point share of the evaluated VO in the result	Year-on-year percentage change in the number of publications	Adjusted number of results, taking into account the co-authorship	Adjusted point share of the evaluated VO in the result	Year-on-year percentage change in the number of publications	Adjusted number of results, taking into account the co-authorship	Adjusted point share of the evaluated VO in the result	Year-on-year percentage change in the number of publications	Adjusted number of results, taking into account the co-authorship	Adjusted point share of the evaluated VO in the result	Year-on-year percentage change in the number of publications
2012	BC	14,00	378,12	-20%	3,18	77,33	-82%	59,06	2142,91	-16%	11,46	351,58	-60%
	D	45,14	134,66	52%	51,08	149,37	-31%	13,00	59,05	-18%	1,00	2,69	-29%
	Jimp	11,49	335,36	41%	8,00	252,91	60%	10,68	207,80	64%	8,26	361,36	19%
	Jneip	0,00	x	0%	0,00	x	0%	26,83	318,05	-24%	12,00	101,34	-20%
	Jrec	11,84	33,60	-30%	34,61	98,98	12%	92,17	361,65	-8%	90,39	276,92	2%
	Jsc	15,17	228,41	16%	8,49	74,04	8%	34,11	675,62	180%	6,05	300,56	-22%
	neu	84,99	x	-2%	162,36	x	69%	243,22	x	-9%	31,15	x	43%
	total	182,63	1110,15		267,73	652,63		479,06	3765,09		160,31	1394,45	
2011	BC	17,45	639,46	43%	18,15	773,05	272%	70,33	2919,14	4%	28,47	1244,18	-13%
	D	29,65	255,34	29%	74,08	649,99	106%	15,86	139,02	44%	1,40	12,10	-30%
	Jimp	8,17	161,40	2%	5,00	69,87	25%	6,50	112,01	0%	6,93	133,68	9%
	Jneip	0,00	x	0%	0,00	x	0%	35,33	695,91	-11%	15,00	241,51	108%
	Jrec	16,96	111,08	-5%	30,85	323,12	11%	100,00	921,00	7%	88,79	736,81	42%
	Jsc	13,08	180,25	118%	7,83	106,56	65%	12,20	160,53	-20%	7,72	173,94	36%
	neu	86,48	x	-33%	96,19	x	-49%	267,21	x	13%	21,80	x	16%
	total	171,80	1347,54		232,10	1922,60		507,43	4947,61		170,12	2542,22	
2010	BC	12,21	444,74	19%	4,87	200,55	-52%	44,74	1927,27	-13%	32,65	1384,33	34%
	D	23,00	198,41	28%	36,03	311,28	177%	11,00	97,50	32%	2,00	17,50	x
	Jimp	8,00	131,32	19%	4,00	52,60	243%	6,47	90,85	224%	6,39	149,93	219%
	Jneip	0,00	x	0%	1,00	21,60	0%	39,89	898,67	14%	7,20	113,72	-40%
	Jrec	17,90	138,64	11%	27,73	191,00	54%	93,88	937,98	-5%	62,64	664,05	55%
	Jsc	6,00	77,22	-22%	4,75	64,27	-25%	15,27	205,88	80%	5,67	75,12	55%
	neu	129,92	x	-23%	189,30	x	-18%	236,44	x	-24%	18,73	x	-20%
	total	197,03	990,33		267,68	841,29		447,69	4158,16		135,28	2404,65	
2009	BC	10,29	282,55		10,15	392,32		51,64	2214,02		24,42	994,75	
	D	18,00	155,52		13,00	112,32		8,33	73,42		0,00	0,00	
	Jimp	6,71	117,56		1,17	16,99		2,00	99,61		2,00	36,96	
	Jneip	0,00	x		0,00	x		35,00	753,43		12,08	229,43	
	Jrec	16,17	99,00		18,00	191,00		99,17	941,02		40,33	420,06	
	Jsc	7,67	98,61		6,33	79,91		8,50	111,67		3,67	44,54	
	neu	168,30	x		229,66	x		309,33	x		23,53	x	
	total	227,14	753,23		278,30	792,54		513,97	4193,18		106,04	1725,73	

Source: IS R&D 2013, available from: <https://www.isvav.cz/h13/organizationVoDetail.do?rowId=VOL>

Results of philosophical faculties show that brisk decline in the number of unrated outcomes occurs in both cases in 2010. Subsequently, a clear trend cannot already be observed. For the philosophical faculties, a relatively high proportion of publications in the category BC and Jrec is typical. Economic branches publish more in category D. While the philosophical faculties show the publishing activity in all the categories examined, the economic branches have almost no publications

in the category Jneip. This diversity will be caused by publishing patterns of academics and the inclusion of articles that are typical for the field, within those categories.

If we shall suppose that the strongest measure for evaluating the quality of science is the publication success in the category Jimp, then we can say on the basis of samples analysed that due to changed financial instruments, it has managed to achieve an increase in quality of scientific outputs of the observed faculties. Throughout the reporting period, the annual change in the number of publications in the category Jimp did not get into negative values, and each of the institutions monitored is continuously increasing the success of publications in that category. Surprisingly, both philosophical faculties show in 2011 an increase in the number of publications in this category without the point value, which persists even in 2012 in the case of faculty D. Such an outcome would point to the departure from the track of successful publishing trends - tracked through the lens of the evaluation methodology.

5   Conclusion

It can be concluded from the synthesis of the theoretical requirements and analysis of documents governing the objectives of government policy that targets of government policies are set up in the spirit of the principles of performance funding, which is one element of the concept of NPM. The evaluation criteria are clearly defined and structured by the methodology. On the other hand, the practical research of interviews revealed that the objectives and intentions of the government in the field of science and research are not understood by all respondents - the representatives of the universities. It is, therefore, possible that the Ministry of Education, Youth and Sports, which is responsible for the fulfilment of government's objectives in the field of science and research should choose more suitable communication channels towards universities. Or it is also possible that respondents, although these are the persons, which are directly affected by the issues of evaluation and funding of science and research, do not pay enough attention to higher intentions of the government. This article did not pay attention to these aspects in its analysis.

Based on the data analysis and structured interviews, we concluded that the most successful conflict of change in evaluation methodology of science and research and publication activity of the monitored institutions could be seen in 2010. In general, however, there are annual decreases in publications that do not bring to the institutions any point value in favour of publishing in prestigious journals - viewed through the lens of the set methodology. Also, results from structured interviews confirm the increased efforts of the management of institutions surveyed to motivate their researchers to publish in journals evaluated.

In connection with the assessment of whether the chosen methods lead to specified

objectives, we must take into account the fact mentioned above that not all representatives of universities understand the setting of government targets. It resulted quite unambiguously from structured interviews that the respondents observe a pressure on the increased scientific output. But they do not perceive this increased output as a definite shift to better science. Rather than improving the quality of outputs, they are feeling the pressure to increase the quantity of publications in a narrowly specified portfolio of publishing categories. Hence, there is also the answer to another question raised by the research, namely the question of identification of universities with government objectives. If the goals are clear for respondents in terms of monitoring higher-quality of science and research, so the vast majority agrees with this objective, a smaller part but believes that the appropriate tools were chosen for it. A strong consensus of respondents appeared to criticize the MEYS in terms of frequent changes in methodology and non-compliance with the schedules during disclosure of the evaluation. This statement is also confirmed by the fact that even this research could only be performed on data that are three years old. More recent data are still not available.

In conclusion, it can be stated that the analysis carried out confirmed that the publication strategies of universities during the reporting period was able to adapt to changes in the methodology of evaluation, which confirms the hypothesis that the government is successful in achieving the targeted state in the field of science and research via selected methods. Also, respondents' answers are consistent with this conclusion.

In the next stages of work on this research, we would like to focus also on linking changes in methodology and publishing strategies to specific financial impacts on the universities. We would like to use the obtained data to build models that would allow comparisons with foreign models of funding and evaluation of results of science and research. The options appear when we perform a comparison of time series at the outputs of individual countries on the issue of monitoring and evaluation of science and research. In conclusion, it can be stated that the analysis carried out confirmed that the publication strategies of universities during the reporting period was able to adapt to changes in the methodology of evaluation, which confirms the hypothesis that the government is successful in achieving the targeted state in the field of science and research via selected methods. Also, respondents' answers are consistent with this conclusion.

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