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R&D Evaluation Methodology and Funding Principles

Background report 2: Typology of Research Organisations and Effects of the EM Thresholds



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OP Vzdělávání
pro konkurenceschopnost

INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

R&D Evaluation Methodology and Funding Principles

Background report 2: Typology of Research Organisations and Effects of the EM Thresholds

March 2015

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1. Introduction

This report constitutes a background report to the Final report 1 – *The R&D Evaluation Methodology*. It reports on the analyses related to the typology of the Research Organisations and the effects of the thresholds envisaged for participation in the National Evaluation of Research Organisation (NERO) that informed the evaluation and institutional funding system design.

In this report - and all other reports in this study - the term “Research Organisations” (written with capitals) refers to research institutions that are recognised as ‘research organisations’ by Czech Law, based on current rulings. We consider these Research Organisations to be the institutions that need to be covered by the EM and funding principles.

In this chapter we first set out the current rulings to be recognised as a Research Organisation in the Czech republic and then briefly report on concepts in the innovation research literature that can provide an input for the discussion on which the recognition as Research Organisation.

The remaining of this background report is structured as follows:

- The analysis reported in Chapter 2 focuses on a verification and eventual update of the typology of Research Organisations used for the EM and the funding principles
- The analysis reported in Chapter 3 looks into the thresholds for participation in NERO and their effects on different types of Research Organisations

1.1 Current rulings on Research Organisations and their eligibility for institutional funding

The Czech Republic adopts a ‘bottom-up’ approach for the development of its research organisation base: any type of legal entity and institution can apply for the status of Research Organisation provided it complies to some specific conditions.

The RD&I Council is the responsible body for the assessment whether research organisations meet the definition of RO. It assesses the research organisations upon request by the funding providers (the responsible ministries) that gather all necessary documents from the ROs. The Council does the assessment once a year and the list of ROs is published by the RD&I Council on its website at the end of each year.

Research Organisations encompass a broad range of organisations, including

- The research institutes of the Academy of Sciences (ASCR)
- The public universities (HEI)
- Public research institutions outside ASCR (v.v.i.)
- State-owned research institutions
- Private companies
- Non-profit organisations (“public benefit corporations”, often including private universities)
- Associations

The legal basis is set out in the Act No. 130/2002 Coll., the Framework for State aid for research and development and innovation (2014/C 198/01), and in a nearby future, the application of the Commission Regulation (EU) No 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty.

Typology of the Research Organisations and the Effects of the EM Thresholds

Specific requirements are set out for **private institutions** to be recognised as a Research Organisation. The Act No. 130/2002 Coll. States:

“The Research Organisation shall be any legal person, State organisational body or ministerial organisational body, dealing with research and development,

- i) Whose primary purpose is to carry out basic research, applied research or development and to disseminate the results through teaching, publication or technological transfer; in the case of a territorial self-governing entity, the provisions concerning the primary purpose of the Research Organisation also applies to its organisational units,*
- ii) That reinvests any profits into the activities set forth in sub-paragraph i),*
- iii) To whose research capacity or results, entities that perform economic activities consisting of offering goods or services, which might apply pressure to it, do not have priority access.”*

This implies that all of the following criteria need to be met:

1. The entities must have a legal personality (i.e. not just a mere component of the entity)
2. The main objective is to carry out non-economic activities independently. Non-economic activities are
 - The *primary activities* of research organisations and research infrastructures, i.e.
 - Education in order to increase the number and improve the skills of human resources.
 - Independent R & D in order to gain more knowledge and better understanding
 - Wide dissemination of research results on a non-exclusive and non-discriminatory basis, for example, through teaching, open access to databases, publications and open software
 - Activities in the *transfer of knowledge*. Conditions are that
 - They are carried out by a research organization or research infrastructure (including their departments or branches) or together with other such entities or on their behalf
 - All profits from knowledge transfer activities are reinvested into the primary activities of research organizations or research infrastructure.
 - Research and development carried out on behalf of industry (Contract research or research services), where the research organization performs contract research and provides research services on the company’s conditions, cannot count.
3. Business entities that might exert a decisive influence on the assessed entity, e.g. as shareholders or members, shall not have preferential access to the results achieved
4. The entities keep separate accounts of their non-economic activities of research
5. The assessed entity has internal regulations dealing with the results of Research and Development

The concept of ‘**non-economic activities**’ and ‘**knowledge transfer**’ seems to be of increasing importance in the discussion in the CR on eligibility for institutional funding. The RD&I Council defines knowledge transfer as follows:

“Knowledge transfer is a process whose objective is the acquisition, collection and sharing explicit and tacit knowledge, including skills and competencies in

economic and non-economic activities such as research collaborations, consultancy, licensing, the incorporation of spin-off, publications and mobility of researchers and other persons who participate in these activities.

In addition to *scientific and technical knowledge* it includes also other kinds of knowledge, e.g.

- Knowledge concerning the use of *standards and legislation*, in which these standards are included,
- Knowledge of the *real conditions* of the operating environment and ways of *organisational innovation and knowledge management* in connection with the identification, acquisition, security, protection and exploitation of intangible assets.”

In current practice, recognition as a Research Organisation automatically implies **eligibility for institutional funding**¹. The RD&I Council, in fact, so far has not succeeded in identifying additional scientific criteria that would improve the focus for such funding. Nevertheless, the criteria for funding as they are defined in the Metodika indirectly define these scientific criteria, in the form of the volume of registered research results that directly governs the level of institutional funding. The sharpened focus on scholarly outputs in the Metodika 2013-2015 (the applied research results were excluded from Pillar I, which accounted for 82.5% of the RIV points) implied an indirect guarantee that the system would keep on focusing on supporting R&D.

1.2 A conceptual framework from the literature on innovation research

The development in innovation research gives some key concepts that constitute a potentially useful conceptual framework for the discussion on institutional funding and especially, the role of certain entities for *innovation and knowledge transfer*. It also sets a framework for the eventual categorisation of these actors.

In the last 20 years, both in science and policy the attention that was historically focused on manufacturing and technological innovation, has expanded to recognising the important role of *knowledge-intensive (business) services (KIBS)* for the development of a Knowledge-Based Economy. These firms are considered to play a crucial role as producers and providers of new knowledge.

Knowledge-intensive business services (KIBS) are firms that provide knowledge-intensive goods and services for other business firms; knowledge is their main production factor and the good they offer.²

A distinction is made between

- T-KIBS or technical KIBS, i.e. those with high use of scientific and technological knowledge such as R&D services, engineering services, computer services, etc.
- P-KIBS or professional KIBS, who offer more traditional professional services, e.g. legal, accountancy, and many management consultancy and marketing services.

¹ The State budget line is officially called, ‘institutional funding for the long-term development of research organisations’

² Dr. Esther Schricke, Dr. Andrea Zenker, Dr. Thomas Stahlecker, Knowledge-intensive (business) services in Europe, Fraunhofer, Directorate-General for Research and Innovation, 2012

Typology of the Research Organisations and the Effects of the EM Thresholds

Another way of categorizing the KIBS is according to their *degree of knowledge intensity*, specifically: Knowledge Intensive Business Services (KIBS) include both

- High (Technology) Knowledge Intensive Services, and
- Knowledge Intensive Market Services

In its NACE Rev.2, Eurostat defined these two types of KIBS in terms of the service sectors listed in Table 1, below.

Table 1 High Knowledge Intensive services and Knowledge Intensive Market services – NACE descriptions

	NACE class	Definition
High (Technology) Knowledge Intensive Services	J62, Computer programming, consultancy and related activities	Activities of providing expertise in the field of information technologies
	J63, Information service activities	This division includes the activities of web search portals, data processing and hosting activities, as well as other activities that primarily supply information. It includes the <u>provision of infrastructure</u> for hosting, <u>data processing services</u> and related activities. <i>Excluded are the activities of libraries and archives.</i>
	M72, Scientific research and development	This division includes the activities of three types of research and development: <ul style="list-style-type: none"> • <i>Basic research</i>: experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without particular application or use in view, • <i>Applied research</i>: original investigation undertaken in order to acquire new knowledge, directed primarily towards a specific practical aim or objective and • <i>Experimental development</i>: systematic work, drawing on existing knowledge gained from research and/or practical experience, directed to <u>producing new materials, products and devices</u>, to installing new <u>processes, systems and services</u>, and to <u>improving</u> substantially those already produced or installed
Knowledge Intensive Market Services	M70, Activities of head offices, management consultancy activities	This includes the provision of advice, guidance and operational assistance to businesses and other organisations on management issues. This provision of <u>business services</u> may include advice, guidance or operational assistance to businesses and the public service.
	M71, Architectural and engineering activities; technical testing and analysis	This division includes the provision of architectural services, <u>engineering services</u> , drafting services, building inspection services and <u>surveying and mapping services</u> . It also includes the performance of <u>physical, chemical, and other analytical testing services</u> of all types of materials and products.
	M74, Other professional, scientific and professional services	This division includes <ul style="list-style-type: none"> • The provision of other professional scientific and technical services, such as specialised <u>design activities</u>, • Education and continuing vocational education and <u>training</u> • Activities of <u>membership organisations</u> representing interests of special groups or promoting ideas to the general public.

Notes: Only the KIBS sectors that are relevant for this study are included in the table

Source: Eurostat, NACE Rev.2

2. The Research Organisations – typology and profiles

This chapter reports on the outcomes of the in-depth analysis of the R&D base in the Czech Republic in terms of institutions recognised as Research Organisations.

It is structured as follows:

- In Section 2.1 we give the finalised definition of the types of Research Organisations (RO) in the Czech Republic and describe the profiles of the different RO types.
- In Section 2.2, we provide (preliminary) indications on the size of the different RO type categories and their share of the institutional funding for RO budget line.
- We draw our conclusions on this topic in Section 3.

2.1 Typology of RO: Definitions and profile

For the analysis reported below, we grouped the RO based on information that we collected on each Research Organisation that was not an Academy of Sciences research institute or a Higher Education Institution. In addition, we have defined some sub-categories in order to deepen our analysis and improve the communication on the RO typology. As a result, the updated and detailed categorisation of Research Organisations in the Czech Republic is as shown in Table 2, below.

In the context of the EM and the Funding Principles, only the categorisation at the higher level will and should be used; this is the level where the **missions** of the RO types are identified.

Table 2 Detailed typology of the Research Organisations

RO Type Category	RO Type Category Abbreviation	RO Type Sub-category
Scientific Research Organisations	ScRO	ASCR
		HEI - private
		HEI - public
		Research Infrastructure
		Research hospitals
Industry & Business services Research Organisations	IBRO	AgriFood RTO
		Industry RTO
		Business services RO
Public Services Research Organisations	PSRO	Government Lab
		Policy services RO
National Resources	NatRes	Cultural services RO

2.1.1 Scientific Research Organisations - ScRO

In the context of an evaluation focused on Research and Development and informing institutional funding for research, Scientific Research Organisations are institutions that have as *primary function* to conduct research. This includes institutions that have as unique activity the conduct of research (e.g. the ASCR institutes) as well as research universities and hospitals that have the combined function of conducting research and

teaching future. It also includes institutions that conduct research in order to improve their services to the research community, i.e. the *research infrastructures*.³

The RO sub-category '*Research Hospitals*' includes university hospitals as well as other hospitals and institutes in the health sector. Our analysis showed that a distinction between these institutions for the purposes of the EM would be artificial: all hospitals and institutes train PhDs; many have clear links to the universities and employ the same professors; all of them, including the institutes, act as hospitals. In essence, the institutes in the health sector have the characteristics of specialised university hospitals.

These institutions play a significant role for the advancement of clinical medicine and the training of future doctors and researchers. So far, the institutional funding of these institutions was highly influenced by the propensity for publishing in the medical sciences, facilitated by the strong focus on research outputs in the Metodika.

2.1.2 Industry & Business services Research Organisations – IBRO

Industry & Business services Research Organisations – IBRO are institutions that have as primary mission to develop and transfer technologies and knowledge to the benefit of the industry and business sector. This category groups Research and Technology Organisations (RTOs) and consultancies offering expert services or other professional services to industry and business entities.

We made the following distinction:

Research and Technology Organisations - RTO are institutions that offer High (Technology) Knowledge Intensive Services as defined by Eurostat (see Table 1, above). They conduct applied research and experimental development – and therefore create knowledge - supporting *industrial innovation*.

- *Industry RTOs* do research and development related to machine tools, equipment and structures, power plant systems, metallic materials, plastics, building materials, membrane processes, organic compounds for electronics and other high-tech applications, etc. Benefitting industry sectors are the machinery manufacturing industry, the engineering and automotive industries, the processing industries, the power engineering, the chemical, and petrochemical industry. In terms of their legal status, the sub-category groups 4 private Research Organisations that historically acted as RTOs in the system (before the privatisation in 1994), 5 private research institutes that are subsidiaries to industry organisations, and 2 'new' RTOs.
- *AgriFood RTOs* include private as well as public research institutes in the AgriFood sector. Similar to the Industry RTOs, they provide technical services to support innovation in their industry sector. These RTOs are categorised separately from the industry ones due to the profile of their activities, at the boundary between Policy services (or even Government Labs) and RTOs: they have a strong focus on delivering support to the sectoral industry, in addition to supporting policy-making in the Ministry of Agriculture. Also this group of RTOs includes 9 public and private research institutes that historically acted as RTOs in the system (before 1994), 2 private research institutes that are subsidiaries of industry organisations, and 4 'new' RTOs. In contrast to the industry RTOs, the number of historical PRI exceeds the number of subsidiaries and 'new' RTOs in the sector.

³ The list of recognised ROs includes only one Infrastructure RO, i.e. CESNET. This is the Czech National Research and Education Network (NREN), part of the European GEANT structure.

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Business services ROs are institutions that offer Knowledge-Intensive Market Services to industry. Their knowledge base regards more the specific needs and market environment of the client and knowledge transfer is more based on the use of existing knowledge rather than the creation of new knowledge, in particular for those offering 'professional' services. They include

- Research Organisations offering engineering and technical testing and analysis services
- Research Organisations that offer 'professional' services, i.e. consultancy, training, management of professional associations, or other operational services such as support for the writing of EC project proposals. In most cases, the importance and value of research and development in the context of these organisations' services is rather dubious.

2.1.3 Public Services Research Organisations - PSRO

Public Services Research Organisations - PSRO are institutions that have as *primary mission* to develop and transfer knowledge and technologies to the benefit of the Public Sector.

This category groups the following Research Organisations:

- Government Labs, i.e. *state-owned institutes or public research institutes* governed by the State that have as primary function to provide services to the State departments. They produce knowledge the government needs in order to legislate or regulate, or produce 'public goods' such as standards, certification or weather forecasts that society needs but that private companies lack the incentives to make. The Research Organisations grouped under this sub-category would be considered Government Labs in any other country, no matter their legal form.
- Policy services ROs are private and not-for-profit entities that offer services predominantly to the public sector, collecting and developing strategic information for policymaking or providing advice to the public sector. Essentially, they are specialised consultancies and the line between their function as strategic information providers to the government or public agencies rather than the delivery of consultancy services may be difficult to draw. Especially some of the 'new' Public services ROs and their services portfolio raise doubts on the appropriateness of public *institutional* funding. Nevertheless, the State may need to ensure the capacity in the system to provide this specialised support according to its needs.

2.1.4 National Resource ROs - NatRes

These Research Organisations provide cultural services: they collect and curate national or regional cultural public goods and provide access to the public and researchers. This category of ROs includes archives, museums, and galleries.

Some of these ROs provide digital access to the information and/or created online accessible catalogues or databases, thus improving accessibility to their resources. Research activities, however, seem predominantly linked to the overall quality of their service delivery.

The question that arises here is to what extent the recognition of these institutions as Research Organisations, giving them access to the institutional funding for research budget line, is the only way for the Ministry of Culture financially to support these institutions and their activities.

2.2 Typology of Research Organisations in 2015: the numbers

For the analysis reported in this Section, we have categorised all Research Organisations that are currently recognised as such into the RO type categories and sub-categories.

Typology of the Research Organisations and the Effects of the EM Thresholds

This categorisation needs to be considered as **preliminary**: it is based upon our understanding of the Research Organisations' activities and in particular some ROs that we categorised as Industry/Business services RO may instead prefer to allocate themselves under the Public Services RO and vice-versa.

2.2.1 Overview

Currently (i.e. end of February 2015) there are in total **223 Research Organisations**, including the institutions recommended by the RD&I Council to be recognised as such in February 2015⁴.

From a numeric perspective, the Scientific RO category accounts for approximately half of the ROs. The three other RO categories take up a close-to-equal share of the RO base (between 15% and 17% - see Figure 1, below).

Figure 1 Number of Research Organisations – shares of the RO type categories (2015)

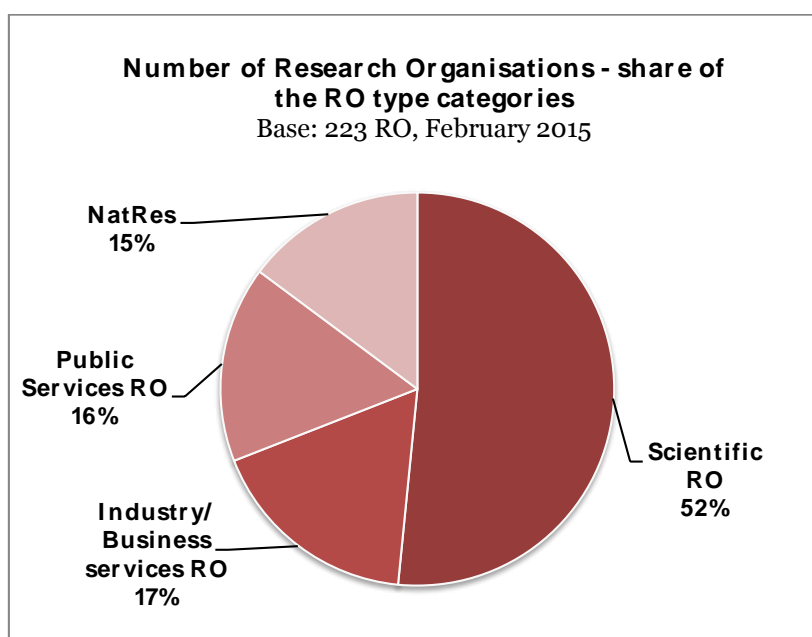


Table 3, below, breaks the categories of RO down into sub-categories and shows that from a numeric perspective,

- The Academy institutes are the most numerous sub-category in the Scientific RO category, followed by public HEI and research hospitals
- RTOs are the most numerous type of ROs in the Industry/Business RO category, and among these the AgriFood RTOs
- Public services ROs are predominantly Government Labs

⁴ In 2014 and the beginning of 2015, 17 new Research Organisations were recognised or recommended to be recognised by the RD&I Council. Among these 17 new ROs, 6 ROs provide services to the Industry and business sector, 8 belong to the PSRO category, i.e. 1 Government Lab and 7 Policy services RO, and 3 RO are national Resources ROs.

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It is remarkable that the majority of the new Research Organisations in 2014/15, i.e. 11 out of 17, are consultancies that provide services to industry/business (6 new ROs) or to the public sector (7 new ROs). The new business services ROs include consultancies offering services for proposal writing in the context of European Commission programmes and 2 organisations that have received (also) recognition of their status of training facilities. It may be interesting to investigate this pattern further; however, that goes beyond the scope of this study.

Table 3 Number of RO in the different categories and sub-categories (2015)

RO Cat	RO sub-cat	Total nr of RO	New RO in 2014/15
ScRO	ASCR	54	
	HEI - private	10	
	HEI – public and state*	29	
	Infrastructure	1	
	Research hospitals	21	
IBRO	AgriFood RTO	14	
	Industry RTO	11	
	Business sv RO	14	6
PSRO	Government Lab	26	1
	Policy sv RO	10	7
NatRes	Cultural sv RO	33	3
Grand Total		223	17

* This includes the Institute for Postgraduate Medical Education

2.2.2 Shares in institutional funding for RO

In a discussion on Research Organisations and the effects of the current system of RO recognition and eligibility for institutional funding it is important to consider the level of institutional funding actually allocated to the RO type categories.

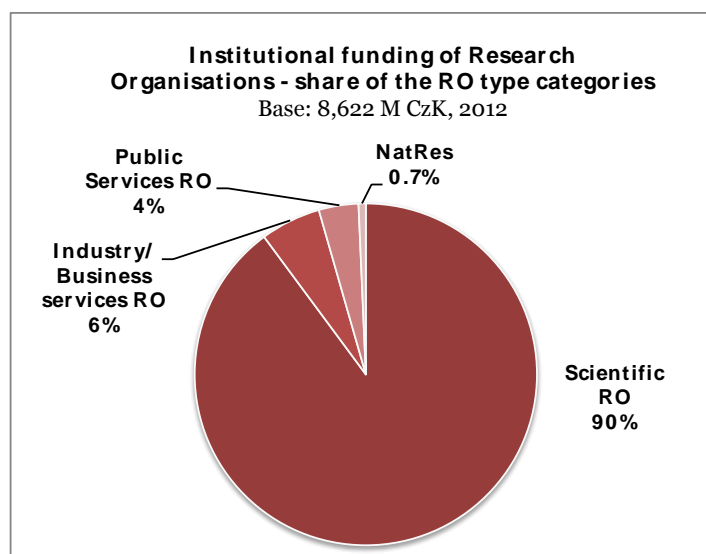
The breakdown of the institutional funding to the ROs in 2012⁵ (Figure 2, below) shows that

- Scientific ROs accounted for about 90% of the institutional funding for research organisations in 2012
- Approximately 6% of the institutional funding for research organisations was allocated to Industry/Business ROs
- Public Service ROs accounted for approximately 4% of the institutional funding for research organisations budget line
- National Resources RO accounted for approximately 0.5% of the institutional funding budget line

⁵ 2012 is the last year for which estimates of institutional funding budgets at RO level are publicly available online

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Figure 2 Shares of the RO types in the total institutional funding for research organisations budget line



Source: Návrh výdajů státního rozpočtu České republiky na výzkum, experimentální vývoj a inovace na rok 2012 s výhledem na léta 2013 a 2014 (tabulková část) / III. E Institucionální výdaje státního rozpočtu ČR na výzkum, experimentální vývoj a inovace na rok 2012 na výzkumne záměry a na rozvoj výzkumných organizací v členění podle organizací (v tis. Kč)

Table 4, below, shows that

- Approximately 60% of the institutional funding for Scientific ROs is allocated by the Ministry of Education (MEYS)
- AgriFood RTOs account for approximately 60% of the institutional funding for Industry/Business services ROs
- The MEYS is responsible for the institutional funding of approximately 60% of the Public Services ROs, predominantly in its function as funding body on behalf of the Ministry of Environment, Labour & Social Affairs etc

Table 4 Estimate of the share of institutional funding for RO allocated by the funding bodies (2012)

	ScRO	IBRO	PSRO	NatRes	Grand Total
ASCR	34%	0%	0%	0%	30%
MK - Ministry of Culture	0%	0%	5%	87%	1%
MO - Ministry of Defence	0%	0%	21%	0%	1%
MPO - Ministry of Industry	0%	28%	0%	0%	2%
MEYS - Ministry of Education	61%	8%	61%	0%	58%
MV - Ministry of Interior	0%	0%	11%	9%	1%
MZ - Ministry of Health	5%	0%	0%	0%	4%
MZE - Ministry of Agriculture	0%	63%	1%	3%	4%
Total (100%) – in M CZK	7,749	492	323	58	8,622

2.3 Conclusions

There is no reason to revise the broad categories of Research Organisations. The in-depth analysis shows that the four major categories identified are fully in line with the missions of the ROs in the Czech republic.

The analysis at the level of sub-categories allowed us to identify groups of Research Organisations for which one can question the appropriateness of public support by means of *institutional* funding:

- A certain number of Research Organisations are consultancies that offer professional services to industry or to the public sector. This regards the *Business Services ROs*, accounting for close to one third of the IBRO, and the *Policy services RO*, accounting for close to one third of the PSRO. The importance and value of research for the delivery of these services – and therefore the importance to support these organisations by means of public *institutional* funding (in addition to competitive funding) - is in many cases dubious.
- Another category of ROs that raises questions is the National Resources ROs. Also in this case, it is a question mark whether institutional funding for research is the appropriate way for the State financially to support the activities of these organisations.

It is striking that the ‘new’ Research Organisations (i.e. RO that gained their status in 2014/2015) are nearly all entities that belong to the two RO types mentioned above.

This trend towards including organisations offering “market services” rather than “high knowledge intensive services” (based on the Eurostat definitions) seems to indicate a trend in the recognition of ROs away from the basic criterion of R&D and a push towards funding ‘innovation’, based on a broad interpretation of the term ‘knowledge transfer’ activities (see the Council’s definition above).

So far the effects of this trend towards funding innovation on the allocation of institutional funding have been limited, thanks to the Metodika focusing on research outputs only: close to 90% of the institutional funding budget line is allocated to Scientific Research Organisations and in both the IBRO and PSRO categories, the share in funding of the consultancy organisations is very limited.

However, there are a number of **consequences for the EM and the funding principles**.

- The threshold that we defined for participation in the EM, based on the volume of eligible outputs, has a similar function as the criteria used for funding in Metodika, i.e. to ensure the focus of the evaluation exercise on Research Organisations that effectively conduct research and deliver knowledge-intensive services.
- In contrast to the Metodika, though, the EM assessment criteria value also the activities focused on transfer of knowledge beyond the sciences (so more than only publications); therefore, it can award activities directed towards innovation more than the Metodika.
- In relation to the overall institutional funding, we have built in appropriate mechanisms related to the threshold for the EM and our suggestions on how to deal with ‘small’ and new ROs in the institutional funding, essentially leaving the issue of eligibility for funding to the policy makers (see the Final report 2 – *The Institutional Funding Principles*).
- The issue remains in relation to the costs of the EM. Even if a threshold of 50 research outputs is taken into account, the considerable number of ROs included makes the evaluation a costly exercise.

3. The EM thresholds and their effects

This chapter reports on the analysis related to the thresholds that were defined in the EM and their potential effects on the different types of RO and the Research Organisations and their activities in general.

It is structured as follows:

- We set the context for this analysis in Section 3.1
- Section 3.2 holds the information on the number of RO and EvU that were active in research during the period 2009-2013, their type and profile
- In Section 3.3 we report on the outcomes of our analysis in case the threshold for participation in the EM refers to volume of publications only
- In Section 3.4 we consider the effects of the threshold for participation based on volume of publication in 1 OECD field
- We draw our conclusions in Section 3.5

Also for this analysis, we categorised all Research Organisations that are currently recognised as such into the RO type categories and sub-categories.

This categorisation needs to be considered as **preliminary**: it is based upon our understanding of the Research Organisations' activities and in particular some ROs that we categorised as Industry/Business services RO may instead prefer to allocate themselves under the Public Services RO and vice-versa.

3.1 Introduction

Concrete objectives of this analysis are to investigate, based on evidence, to what extent there is a need to revise threshold criteria for

- The registration of an Evaluated Unit (EvU) to the evaluation based on the EM
- The registration of a Research Unit (RU)
- The registration of an *Interdisciplinary* Research Unit

Threshold criteria for participation to the evaluation and registration of an RU are a combination of

- The minimum number of eligible outputs (minimum 50 over the evaluated period)
- The type of eligible outputs (scholarly outputs, non-traditional scholarly outputs, IPR-related outputs)
- The focus on one specific field (OECD FOS defined)

EvUs can apply for the registration of an Interdisciplinary Research Unit if they can provide proof that minimum 30% of their research is interdisciplinary across disciplinary areas. This should be based on the profile of their outputs/bibliometrics, *combined with* the profile of their researchers (CVs) and the research strategy.

In this section, the **basis for the analysis** are the raw data in the RD&I IS related to Research Organisations that registered at least 1 research output – no matter the type - in the RD&I IS for the period 2009-2013. That would be the evaluated period against which information is collected for an evaluation running in 2015. In the remaining of this document, we call these Research Organisations 'research-active Research Organisations'. The use of this extract also allows for an analysis of the EvUs, i.e. the profile of the entities at the second level in the public HEIs' structure.

3.2 Profile of the research-active ROs in 2009-2013 and their EvUs

3.2.1 Overview of the ROs

In the period 2009-2013, there were **205 research-active** Research Organisations (Table 5, below)⁶. These 205 ROs account for a total of **380 EvUs**⁷, i.e. ‘organisational units’ registered in the RD&I IS that produced research outputs.

Compared to the list of ROs valid for 2015, there was a slightly higher share of Scientific ROs in 2009-2013 (56 % of the total ROs, compared to 52% in 2015).

Table 5 Categorisation of the research-active ROs in 2009-2013

RO Cat	RO Sub-cat	Nr of RO	Nr of EvU
ScRO	Total	114	289
	ASCR	54	54
	HEI - private	9	9
	HEI – public and state	29	204
	Infrastructure	1	1
	Research hospital	21	21
IBRO	Total	33	33
	AgriFood RTO	14	14
	Industry RTO	9	9
	Business sv RO	10	10
PSRO	Total	28	28
	Govt lab	25	25
	Policy sv RO	3	3
NatRes	Cultural sv RO	30	30
Grand Total		205	380

Note: the 29 public and state HEI include the Institute for Postgraduate Medical Education

Source: RD&I IS, Technopolis calculation

The public HEIs registered 204 EvUs in the RD&I IS in the period 2009-2013. The public HEIs therefore constitute the major cost item for the Evaluation Methodology, not only in terms of number of EvU to cover, but also in relation to the estimated number of Research Units in the EM.

Based on the current thresholds for the registration of RU and not considering any potential Interdisciplinary Research Units, research-active Research Organisations in 2009-2013 can be estimated to account for a maximum of approximately **780 Research Units** (Table 6, below). Approximately 70% of these RUs refer to the public HEIs.

⁶ This excludes 3 ROs that were included in the RD&I IS for 2009-2013 but are no longer included in the 2015 list of Research Organisations. These 3 ROs are: the Criminal Police and Investigation Office, the Czech Mining Office Board and the Brown Coal Research Institute a.s.

⁷ Excluded are the HEI organisational units that are indicated in the RD&I IS as ‘non-defined’

Typology of the Research Organisations and the Effects of the EM Thresholds

Table 6 Estimated number of Research Units (2009-2013 data)

	Number of RO	Number of EvU	Number of RU (estimate)
Public HEI	29	204	556
ASCR	54	54	90
Other Research Organisations	122	122	138
Total	205	380	784

Source: RD&I IS, Technopolis calculation

3.2.2 Profile of the EvUs in the public HEI

The public HEI organisational units – i.e. EvUs - that are registered in the RD&I IS are predominantly faculties (see Table 7, below). They include also 45 specific Institutes and Centres, but close to no libraries or other research infrastructure.

In Appendix A.1 we provide a full overview of the profile of EvUs in the different public HEIs in 2009-2013.

Table 7 Types of EvU in the public HEI (2009-2013 data)

Type of EvU	Number
HEI level*	6
Faculty	144
Institute	23
Centre	22
Department	5
Infrastructure	2
Library	2
Grand Total	205

Note: * are HEI that have only 1 organisational unit registered in the RD&I IS

Source: RD&I IS, Technopolis calculation

Most of these Institutes and Centres were the result of **internal reorganisation**. Only few of the Centres funded through the European Structural Funds and none of those funded by programmes in the Science Foundation or the Technology Agency were included as ‘organisational units’ of the public HEI in the RD&I IS.

The few exceptions related to the Structural Funds that appear in the RD&I IS (i.e. are specifically indicated as ‘organisational units’, are:

- 2 out of the 8 European Centres of Excellence funded by the Structural Funds/MEYS (2007-2015), i.e. the *IT4Innovations* (High-Performance Computing Centre for the CR), categorised as an ‘infrastructure’ organisational unit in the table above, and the *Central European Institute of Technology*. Both of these Centres were indicated as organisational units for 2 different universities each.
- 2 out of the 40 Regional R&D Centres funded by the Structural Funds/MEYS, i.e. the *University Centre for Energy Efficient Buildings* and the *Centre for Nanomaterials, Advanced Technologies and Innovation*.

3.3 Effects of the EM threshold for participation based on volume only

3.3.1 Overview

Based on the volume of registered outputs only (i.e. 50 outputs in the evaluated period), in total **61 out of 380 EvUs**, i.e. 16% of the EvU, would be excluded from the evaluation exercise (Table 8). This includes 28 Research Organisations and 33 public HEI organisational units (EvU).

Table 8 Number and type of excluded EvU based on the volume threshold (2009-2013 data)

RO Cat	RO Sub-cat	Number of excluded EvU	Number of included EvU	Total number of EvU
ScRO	ASCR	2	52	54
	HEI - private	2	7	9
	HEI - public	33	171	204
	Infrastructure		1	1
	Research hospital		21	21
	Total		37	252
IBRO	AgriFood RTO		14	14
	Industry RTO		9	9
	Business sv RO	5	5	10
	Total	5	33	33
PSRO	Govt lab	5	20	25
	Policy sv RO	1	2	3
	Total	6	28	28
NatRes	Cultural sv RO	13	17	30
Grand Total		61	319	380

Source: RD&I IS, Technopolis calculation

In the light of our remarks in the previous section related to the appropriateness of considering consultancies and museums/libraries as Research Organisations, it is indicative that Research Organisations that do not pass the EM threshold of 50 publications are

- Half of the Business services ROs (5 out of 10), and none of the RTO
- A third of the Policy services ROs (1 out of 3), while only a fifth of the Government labs
- Close to half of the Natural Resources ROs (13 out of 30)

3.3.2 Effect of the choice of eligible threshold outputs

Our analysis shows that the ROs and HEI EvUs are excluded from the EM based on volume of registered research outputs *no matter which research outputs are considered*.

At the level of RO, there is no difference in the number or specific names of excluded ROs based on volume whether only the eligible outputs or any output are taken into account (see Table 9, below).

In other words: all of the RTOs and four fifths of the Government Labs have produced a sufficient number of *eligible* research outputs to be included in the EM. The choice of eligible outputs therefore does **not** discriminate applied research organisations.

Typology of the Research Organisations and the Effects of the EM Thresholds

Government Labs that do not reach the threshold are predominantly institutes linked to the Ministry of Defence or Interior (see Appendix B.1 for the full list of excluded ROs based on the volume threshold).

Table 9 Exclusion of ROs based on publication volume only – threshold versus any output (2009-2013 data)

RO Cat	RO Sub-cat	Threshold outputs		Any output	Grand Total
		Included	Excluded	Excluded	
ScRO	ASCR	52	2	2	54
	HEI - private	7	2	2	9
	HEI - public	28	1	1	29
	Infrastructure	1			1
	Research hospital	21			21
	Total	109	5	5	114
IBRO	AgriFood RTO	14			14
	Industry RTO	9			9
	Business sv RO	5	5	5	10
	Total	28	5	5	33
PSRO	Govt lab	20	5	5	25
	Policy sv RO	2	1	1	3
	Total	39	19	19	58
NatRes	Cultural sv RO	17	13	13	30
Grand Total		176	29	29	205

Source: RD&I IS, Technopolis calculations

In relation to the **EvUs in the public HEIs**, based on the mere volume of registered research outputs during 2009-2013, **33 out of the 204 EvU**, i.e. 16%, do not match the minimum threshold of 50 research outputs.

Table 10, below, lists the excluded EvUs.

In terms of profiles of the excluded EvU, these included close to one third of the Institutes/Centres in the public HEI, i.e. 13 out of 39 (see also Appendix B.2).

Also in this case, the choice of eligible outputs does not make any major difference.

The only exception is the Centre for Advanced Innovative Technologies in the VŠB - Technical University of Ostrava. Apart of the 23 eligible outputs, this Centre registered also 29 Functional samples, 15 Prototypes and 20 Software outputs, predominantly in the fields of Mechanical Engineering and Materials Engineering.

These 2 fields are the main fields of activity also for the Faculty of Mechanical Engineering at the VSB, which registered in total about 700 eligible outputs in these 2 fields. Whereas the Centre would therefore be excluded from the EM as an alone-standing entity based on the volume of eligible outputs, the activities of the Centre and its outputs can very well be included within the ones of the Faculty of Mechanical Engineering.

This would require the ruling that in case an EvU does not produce a sufficient number of eligible outputs, its activities and outputs can be included for evaluation within another EvU in the same RO, active in the same fields.

Typology of the Research Organisations and the Effects of the EM Thresholds

It should be reminded here that EvU in the public HEI refer to the HEIs' "Organisational Units" as they are registered in the RD&I IS, i.e. the entities at the second level of the organisational structure.

Table 10 Exclusion of EvUs in the public HEI based on publication volume only – threshold versus any output (2009-2013 data)

Research Organisation	Evaluated Unit	Total registered outputs 2009-2013	
		Threshold outputs	Any output
Academy of Performing Arts in Prague	Film and TV School	28	34
Brno University of Technology	Centre of Sports Activities	35	35
	Computer and Information Services Centre	1	1
	Faculty of Architecture	34	34
	Faculty of Fine Arts	14	14
Czech Technical University in Prague	Computing and Information Centre	1	1
	Masaryk Institute of Advanced Studies	40	40
	Technology and Innovation Centre	1	1
Czech University of Life Sciences Prague	Institute of Education and Communication	25	25
Institute for Postgraduate Medical Education	Institute for Postgraduate Medical Education	27	27
Jan Evangelista Purkyně University in Ústí nad Labem	Faculty of Health Studies	19	19
	Institute of Health Studies	7	7
	Research Centre competitive and sustainable regional development	3	4
Janáček Academy of Music and Performing Arts Brno	Faculty of Music	15	15
	Faculty of Theatre	15	15
Masaryk University	Institute of Biostatistics and Analyses	38	39
	International Institute for Political Science	1	1
	Support Centre for Students with Special Needs	31	32
Mendel University in Brno	Training Forest Enterprise Masaryk Forest Křtiny	1	6
Technical University of Liberec	Institute of Health Studies	17	17
Tomas Bata University in Zlín	University Library	4	4
University of Pardubice	Language Centre	6	6
University of West Bohemia in Pilsen	Faculty of Health Care Studies	42	42
	Informatization and Computer Technology Centre	2	6
	Institute of Applied Language Studies	8	8
	Institute of Art and Design	11	24
	University Library	1	1
	Institute for Lifelong learning	2	2
VŠB - Technical University of Ostrava	Centre for Advanced Innovative Technologies	23	87
	Centre for Information Technology	3	3
	Department of Education	1	1
	Department of Foreign Languages	14	14
	Department of Physical Education and Sports	6	6

Source: RD&I IS, Technopolis calculation

3.4 Effects of the EM threshold based on volume of outputs in one OECD field

3.4.1 Overview

The minimum threshold for the registration of a Research Unit in the evaluation requires a minimum volume of research outputs **in one specific field**. Indirectly, this is a threshold criterion also for the participation of an Evaluated Unit (not considering the possibility to apply for the registration of an Interdisciplinary Research Unit).

Based on the 2009-2013 data, the combination of these two dimensions would imply that **79 out of the 380 EvU** would be excluded from the evaluation, i.e. 21% of the total. This includes

- 20% of the EvUs in the public HEIs
- Half of the Business services ROs
- About 30% of the Government labs
- More than half of the National Resources ROs

Table 11 Number and type of excluded EvU based on the volume threshold in one OECD field (2009-2013 data)

RO Cat	RO Sub-cat	Number of excluded EvU	Number of included EvU	Total number of EvU
ScRO	ASCR	2	52	54
	HEI - private	3	6	9
	HEI – public & state	44	160	204
	Infrastructure		1	1
	Research hospital		21	21
	Total		49	240
IBRO	AgriFood RTO	1	13	14
	Industry RTO		9	9
	Business sv RO	5	5	10
	Total	6	27	33
PSRO	Govt lab	7	18	25
	Policy sv RO	1	2	3
	Total	8	20	28
NatRes	Cultural sv RO	16	14	30
Grand Total		79	301	380

Source: RD&I IS, Technopolis calculation

At the level of RO (i.e. considering the HEI at overall university level, e.g. the Charles University rather than a Faculty), this implies that 7 Research Organisations would not be able to register not even one Research Unit, despite the fact that their overall volume of research outputs reaches the threshold. This includes 3 National Resource ROs, but also 2 PSROs and 1 IBRO (Table 12, below).

Also in this case, the effect of an inclusion of all research outputs versus only the eligible ones would be minimal. Only 1 RO (the Occupational Safety Research Institute) would not be excluded if all outputs were considered eligible.

Typology of the Research Organisations and the Effects of the EM Thresholds

Table 12 ROs excluded based on the volume threshold in one OECD field (2009-2013 data)

RO Category	Research Organisation	Total registered outputs	
		Eligible outputs	Any output
ScRO	Jan Amos Komensky University Prague s.r.o.	76	76
IBRO	Hop Research Institute s.r.o.	90	116
PSRO	Centre for Higher Education Studies, v.v.i.	52	52
	Occupational Safety Research Institute, v.v.i.	57	62
NatRes	Moravian Library	65	85
	National Institute of Folk Culture	59	59
	West Bohemian Museum in Pilsen	94	94

Note: the categorisation of the ROs listed above as IBRO and PSRO is to considered preliminary

Source: RD&I IS, Technopolis calculation

At the level of EvU in the public HEI, an additional 11 EvUs in the HEI are excluded (compared to the EvU that were excluded based on volume only). These include 5 institutions/centres, amongst which the *2 Regional R&D Centres* funded by the Structural Funds/MEYS (the University Centre for Energy Efficient Buildings and the Centre for Nanomaterials, Advanced Technologies and Innovation).

For the *2 European Centres of Excellence*, the situation is different. Each of these centres (IT4Innovations and the Central European Institute of Technology) is listed as an organisational unit for 2 different HEI. In each of these HEIs, the volume and field focus of the research outputs allow for the registration of an RU.

Table 13 EvUs excluded based on the volume threshold in one OECD field (2009-2013 data)

Research Organisation	Evaluated Unit	Threshold outputs	Any output
Charles University in Prague	Center for Theoretical Study	137	137
College of Polytechnics Jihlava	College of Polytechnics Jihlava	63	63
Czech Technical University in Prague	University Centre for Energy Efficient Buildings	64	71
Czech University of Life Sciences Prague	Faculty of Tropical AgriSciences	72	72
Czech University of Life Sciences Prague	Institute of Tropics and Subtropics	145	154
Jan Evangelista Purkyně University in Ústí nad Labem	Faculty of Art and Design	71	71
Masaryk University	Language Centre	61	61
Silesian University in Opava	Faculty of Public Policies in Opava	175	175
Technical University of Liberec	Institute for Nanomaterials, Advanced Technologies and Innovation	192	247
Tomas Bata University in Zlín	Faculty of Logistics and Crisis Management	71	71
VŠB - Technical University of Ostrava	Department of Social Sciences	127	127

Source: RD&I IS, Technopolis calculation

3.4.2 The 30% threshold for Interdisciplinary Research Units

The question is to what extent the ROs and EvUs that are excluded from the EM based on the volume of their outputs in 1 field would be entitled to apply for an Interdisciplinary Research Unit.

This is of interest in particular for the 7 **excluded ROs**. Table 14, below, shows that only 3 of these 7 ROs would have the possibility to apply for an Interdisciplinary Research Unit – provided the threshold would be brought down to 20% of their research outputs. Seeing the profile of these ROs, however, one can consider such Interdisciplinary Research Unit to be truly of value only in the case of the Occupational Safety Research Institute.

Table 14 RO excluded based on volume in 1 field - potential for Interdisciplinary Research Units & cross-referrals (2009-2013 data)

	Private HEI	IBRO	PSRO		NatRes		
	Jan Amos Komensky University Prague s.r.o.	Hop Research Institute s.r.o.	Centre for Higher Education Studies, v.v.i.	Occupational Safety Research Institute, v.v.i.	Moravian Library	National Institute of Folk Culture	West Bohemian Museum in Pilsen
1. Physical Sciences		8					21
2. Engineering and Technology		9					
3. Medical and Health Sciences		4		46			
4. Biological and Agricultural Sciences	1	68					21
5. Social Sciences	55	1	49	11	10	2	1
6. Humanities	20		3		55	57	51
Total eligible research outputs	76	90	52	57	65	59	94
Cross-referral	Y	Y	N	N	Y	Y	Y
IRU 30%	N	N	N	N	N	N	N
IRU 20%	Y	N	N	Y	N	N	Y

Source: RD&I IS, Technopolis calculation

At the level of EvUs, Table 15 shows that for 7 of the 11 EvUs there is the possibility to register an RU grouping the research activities in one disciplinary area and eventually ask for cross-referrals. This risks excluding interdisciplinary research covering other areas, though.

Also at the level of EvU, the threshold of 30% for Interdisciplinary Research Units (IRU) seems high. It allows for an IRU application only for 3 of the 11 EvUs, including one of the 2 Regional R&D Centres (at the Technical University of Liberec). A threshold at 20% of the outputs would allow for an IRU application in close to all excluded EvUs.

Typology of the Research Organisations and the Effects of the EM Thresholds

Table 15 Public HEI EvU excluded based on volume in 1 field – potential for Interdisciplinary Research Units & cross-referrals (2009-2013 data)

		1. Physical Sciences	2. Engineering and Technology	3. Medical and Health Sciences	4. Biological and Agricultural Sciences	5. Social Sciences	6. Humanities	Total research outputs	Cross-referral	IRU 30%	IRU 20%
Charles University in Prague	Center for Theoretical Study	27	3	1	39	20	47	137	N	N	Y
College of Polytechnics Jihlava		3	8	4	2	45	1	63	N	N	N
Czech Technical University in Prague	University Centre for Energy Efficient Buildings		64					64	Y	N	N
Czech University of Life Sciences Prague	Faculty of Tropical AgriSciences		17		51	3	1	72	Y	N	Y
	Institute of Tropics and Subtropics	10	30	9	72	23	1	145	Y	N	Y
Jan Evangelista Purkyně University in Ústí nad Labem	Faculty of Art and Design					19	52	71	Y	N	Y
Masaryk University	Language Centre	1		1		18	41	61	N	Y	Y
Silesian University in Opava	Faculty of Public Policies in Opava		2	40		91	42	175	Y	N	Y
Technical University of Liberec	Institute for Nanomaterials, Advanced Technologies and Innovation	76	93	1	18	4		192	Y	Y	Y
Tomas Bata University in Zlín	Faculty of Logistics and Crisis Management	11	1	4	14	35	6	71	N	N	Y
VŠB - Technical University of Ostrava	Department of Social Sciences					69	58	127	Y	Y	Y

Source: RD&I IS, Technopolis calculation

3.5 Conclusions

The minimum volume threshold for participation in the evaluation, i.e. 50 outputs over the evaluated period, seems more than appropriate as well as useful and needed seeing the current trend in recognition of Research Organisations in the RD&I Council. In other words, the threshold allows in keeping the focus of the evaluation on R&D, as it was intended.

An outcome of our analysis is that the choice of eligible outputs does **not** constitute a discriminatory factor for applied research organisations and an expansion of the eligible outputs to include also the more applied research outputs would merely constitute an unnecessary factor adding on complexity to the system.

Typology of the Research Organisations and the Effects of the EM Thresholds

Also at the level of EvUs within the public HEI, the volume threshold does not seem to constitute a major problem.

However, for the sake of clarity, we may want to make a clearer distinction between

- The threshold for participation to the EM – based on volume of research outputs only, and
- The threshold for registration of an RU – based on research output volume in 1 field

This would clarify the possibility for an EvU to participate based on its application for an Interdisciplinary RU.

Quite obviously, it is difficult to identify the appropriate threshold for the application of an **Interdisciplinary Research Unit** based on raw data only. When considering only the ROs and EvUs that would not be able to register a Research Unit focused on 1 field only (based on the allocation of the research outputs in fields upon registration in the RD&I IS), the current ruling of at least 30% of the research outputs and research activities in general to be across disciplinary areas, sets a requirement that is high for most of these ROs and EvUs; a threshold of 20% would be more appropriate for them.

However, this concerns a very limited number of ROs (7 out of 205) and it is unclear how many of the researchers in the EvUs have registered their publications also against other EvUs. Most important, the reduction of this limit would inevitably foster a higher rate of applications for Interdisciplinary Research Units and therefore higher costs for the evaluation implementation as well as difficulties in contracting external experts. The question is therefore whether the costs would weigh against the benefits.

Appendix A Profile of the R&D base

A.1. Profile of the organisational units (EvU) in the public HEIs (2009-2013)

	HEI	Faculty	Institute	Centre	Department	Infrastr.	Library	Grand Total
Academy of Arts, Architecture and Design in Prague	1							1
Academy of Fine Arts in Prague	1							1
Academy of Performing Arts in Prague		3						3
Brno University of Technology		8	2	2				12
Charles University in Prague		17	1	3				21
College of Polytechnics Jihlava	1							1
Czech Technical University in Prague		8	3	3				14
Czech University of Life Sciences Prague		6	2					8
Institute for Postgraduate Medical Education	1							1
Institute of Chemical Technology Prague		4						4
Institute of Technology and Business in České Budějovice	1							1
Jan Evangelista Purkyně University in Ústí nad Labem		8	1	1				10
Janáček Academy of Music and Performing Arts Brno		2						2
Masaryk University		9	4	2				15
Mendel University in Brno		5	1	1				7
Palacký University Olomouc		8						8
Police Academy of the Czech Republic	1							1
Silesian University in Opava		2	1	1				4
Technical University of Liberec		5	1	1				7
Tomas Bata University in Zlín		6	1				1	8
University of Defence		3	1					4

Typology of the Research Organisations and the Effects of the EM Thresholds

	HEI	Faculty	Institute	Centre	Department	Infrastr.	Library	Grand Total
University of Economics Prague		6						6
University of Hradec Králové		4	1					5
University of Ostrava		6				1		7
University of Pardubice		7		1				8
University of South Bohemia in České Budějovice		8	1					9
University of Veterinary and Pharmaceutical Sciences Brno		3						3
University of West Bohemia in Pilsen		9	3	2			1	15
VŠB - Technical University of Ostrava		7		5	5	1		18
Grand Total	6	144	23	22	5	2	2	205

Appendix B Effects of the EM thresholds

B.1. List of ROs excluded based on the volume threshold – Preliminary classification

RO Cat	RO Name	Number of outputs registered 2009-2013	
		Eligible outputs	Any output
ScRO	Centre for Administration and Operations of the AS CR, v.v.i.	2	2
	Library of the AS CR, v.v.i.	37	45
	Akademie, o.p.s.	5	5
	College of European and Regional Studies, o.p.s.	31	31
	Institute for Postgraduate Medical Education	27	27
IBRO	BIC Brno, spol. s r. o.	1	1
	Center for Organic Chemistry s.r.o.	29	41
	Mikropur, s.r.o.	7	7
	SocioFactor s.r.o.	1	1
	Vitkovice ÚAM a.s.	5	7
PSRO	Centre for state security	2	3
	Institute for the Study of Totalitarian Regimes	31	31
	Institute of Criminalistics Prague	47	49
	Military Research Institute	1	17
	Sports Research Institute of Czech Armed Forces	43	47
	GaREP, spol. s r.o.	37	37
NatRes	Archaeology Centre Olomouc	1	1
	Gallery of West-Bohemia, Plzen	3	3
	Hussite Museum in Tábor	2	2
	Jewish Museum in Prague	3	3
	Museum of Czech Literature	39	39
	Museum of Eastern Bohemia in Hradec Králové	2	2
	Museum of Highlands Jihlava	19	19
	National Film Archive	1	1
	National Medical Library	4	4
	National Technical Library	26	26
	Security Services Archive	5	5
	Technical Museum in Brno	34	34
	Wallachian Open Air Museum in Rožnov pod Radhoštěm	8	8

B.2. Types of organisational units (EvU) in the public HEIs excluded from the EM based on volume thresholds

	Excluded EvUs							Total of excluded EvUs	Total EvUs
	HEI	Faculty	Institute	Centre	Department	Infrastr	Library		
Academy of Performing Arts in Prague		1						1	1
Academy of Fine Arts in Prague									1
Academy of Performing Arts in Prague									3
Brno University of Technology		2		2				4	12
Charles University in Prague									21
College of Polytechnics Jihlava									1
Czech Technical University in Prague			1	2				3	14
Czech University of Life Sciences Prague			1					1	8
Institute for Postgraduate Medical Education	1							1	1
Institute of Chemical Technology Prague									4
Institute of Technology and Business in České Budějovice									1
Jan Evangelista Purkyně University in Ústí nad Labem		1	1	1				3	10
Janáček Academy of Music and Performing Arts Brno		2						2	2
Masaryk University			2	1				3	15
Mendel University in Brno				1				1	7
Palacký University Olomouc									8
Police Academy of the Czech Republic									1
Silesian University in Opava									4
Technical University of Liberec				1				1	7
Tomas Bata University in Zlín							1	1	8
University of Defence									4
University of Economics Prague									6
University of Hradec Králové									5
University of Ostrava									7
University of Pardubice				1				1	8
University of South Bohemia in České Budějovice									9
University of Veterinary and Pharmaceutical Sciences Brno									3
University of West Bohemia in Pilsen		1	3	1			1	6	15
VŠB - Technical University of Ostrava				2	3			5	18
Total of excluded EvUs	1	7	8	12	3		2	33	
Total EvUs	6	144	23	22	5	2	2		205

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