Chapter 3
Mergers and Classifications in Romania: Opportunities and Obstacles

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3.1 Introduction

The classification of Romanian universities, the first results of which were made public in 2011, and to a lesser extent the ranking of academic programs completed a few months later, have been among the most disputed recent additions to higher education reform in this country. While sometimes denounced, they seem to have been at least partly accepted by most academic actors as well as by the public. Nevertheless, this may have been the case because the effects of the classification and the rankings, at least as contemplated under the 2011 Law on national education which mandated them, as well as by the policy-makers which advocated them, have been slow to materialize.

The classification and the rankings were supposed to alter the resource-allocation mechanisms in higher education (or at least the funds allocated under such mechanisms), as well as to increase transparency and to reduce institutional homogeneity and mission creep by promoting organizational diversification.

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More broadly, they were designed to impact on the very dynamics of the university system. One of the less talked about – though hardly ignored – goals of the classification and of the rankings was to promote academic concentration. Mergers were mentioned explicitly in the Law on national education "the Law" and often came up in statements by the previous education minister while he was promoting the law or discussing the efficiency or performance of the academic system.

The commotion which initially greeted the publication of the classification and ranking results has recently died out. The budding interest in mergers seems to have subsided as well. Nonetheless, the two exercises remain legally-mandated and will be repeated periodically (new methodologies are in the process of being devised). They will likely continue to introduce significant incentives for and (arguably) barriers against new academic alliances and amalgamations. Changes in methodology notwithstanding, organizational strategies in Romanian higher education will be oriented in the future also by the potential impact of university collaborations or mergers on the institutions' positions in the periodic classification and rankings.

International practice in the field suggests that, especially where such exercises have a relatively strong bearing on institutional funding, as in Romania under the 2011 Law (e.g., Art. 194), mergers are either encouraged from the top down, by the decision-makers, or become tempting from the bottom up. As Rowley (1997) found in a meta-analysis of the relevant literature, changes in the funding model were the key secondary driver of university mergers (alongside institutional compatibility or complementarity, as the key primary driver). Some of the recent efforts in Romania (discussed presently) to explore possible mergers suggest that, indeed, improving one's standing in the classification and, thereby, one's access to the public purse may become an important strategy for consolidating the academic organization.

This chapter looks at the possible effects of the university classification exercise on the strategic options of Romanian academic organizations insofar as the question of academic concentration is concerned. Will mergers become a tempting option given the logic of the classification exercises and the Law's provisions on institutional funding and mergers? What are the likely barriers against academic amalgamation in the current legislative environment? Might higher education institutions (HEIs) look beyond the university system for merger opportunities? These are some of the key questions we approach below, partly by building on an analysis of the (so far only) university classification exercise in Romania.

The chapter starts by outlining the legislative framework governing academic concentrations and some of the recent, pioneering university merger initiatives. The following section sketches the classification exercise and spells out some of its likely implications on HE amalgamations. It then explores a set of succinct concentration scenarios from the perspective of said exercise. The final main section of the chapter takes a closer look into one of these scenarios – the merger of Romanian universities and public research and development institutes, a policy issue with potentially major repercussions for the RDI system as a whole.

3.2   The Legal Framework and the First (Modest) Wave of Merger Projects

3.2.1   A Brief Outline of Romanian Higher Education

In Romania as elsewhere in Europe and beyond, the drive to formally classify higher education institutions (HEIs) emerged as the expression of at least three types of preoccupations on the part of policy-makers. The first relates to the homogeneity of the higher education system; the second, to the reduced competitiveness and social and economic relevance of universities; and the third, to the questionable effectiveness of the allocation of public resources.

Almost two decades and a half after the change of political regime in late 1989, the Romanian university system is still quite homogenous. It is true that, along several dimensions, the higher education landscape appears increasingly diverse. For example, of the around 90 currently accredited universities, about half are private. Among both the private and the state HEIs there are large institutions (though the largest remain the public ones) as well as small universities. Some universities are comprehensive, some (e.g., the polytechnics) have a more specialized focus, while still others are more narrowly vocational (medical, arts, economics HEIs). Several universities offer doctorates, others do not; some provide distance education programs, some do not, and so on.

This being said, the system as a whole remains markedly homogenous (Miroiu and Andreescu 2010). Universities are almost identical in their organizational structures, partly as a result of the legislative framework(s) after 1989. They currently offer "Bologna-type" bachelor's, master's, and doctoral programs – and little beyond that. Indeed, programs in the same specialisms are frequently quasi-identical in structure wherever they are offered, partly due to overly prescriptive accreditation regulations. The learning experience is very similar across university and program types (with the exception of a few vocationally-oriented schools). Nor is this surprising, in light of the fact that the higher education system as a whole still caters to the traditional student fresh out of high school. The country has one of the lowest European rates of engagement in lifelong learning, far below the EU average, and distance or "open" education programs are few in number and questionable in quality.

This systemic homogeneity has been considered a hindrance to increasing the relevance of a university education, whether by responding to a wider audience, by providing a larger or more adequate spectrum of competences, by generating useful research results, or by engaging more directly the various societal stakeholders.

The second concern mentioned previously is the reduced competitiveness of universities, both nationally and internationally. The poor standing of Romanian HEIs in international university rankings (no university has yet gained entry into the top 500, much less the top 200, of the best-known international rankings) is commonly cited as a sign of the system's weakness and of its low research productivity. It may have also contributed to the fact that the public opinion – executives

included (WEF 2013)[1] – has become increasingly unfavourable or indifferent towards universities, thus hampering their efforts to recruit the very best high school graduates, many of whom now go to study abroad.

Thirdly, there is the matter of the inefficient allocation of public money, which partly explains the chronic underfunding of the (state) universities (the private, not-for-profit institutions have no access to public resources beyond the competitive R&D grants, European structural funds, and tax exemptions). The higher education financing system allocates the "core funding" by fully supporting the "non-fee-paying" students in public universities, currently amounting to roughly half of the student population in these institutions,[2] with the other half paying the full fee.

The financing arrangement has been criticized for dissipating funds among too many universities, in the absence of appropriate mechanisms for rewarding the quality of teaching, supporting significant research or responding to societal needs. It also resulted in extremely low tuition fees – usually around 500–700 Euros a year – in both the private and the usually more prestigious state universities (Andreescu et al. 2012). The low fees have been keeping the institutions perpetually starved of funds.

As a result, the university classifications and program rankings were proposed also as an instrument enabling decision-makers to improve the allocation of public money. The latest report by the National Council for Funding Higher Education (CNFIS), for instance, recommended that so-called "supplementary" funding for universities be distributed by taking into account performance in the program rankings exercise, rather than the older quality indicators which referred to universities as a whole (CNFIS (National Council for Funding Higher Education) 2013).

3.2.2 The Legal Framework Governing University Collaboration

The Law on national education was particularly emphatic in voicing some of the concerns above, while the classification of universities and the ranking of academic programs[3] were explicitly promoted as means to address these issues. A draft of the

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[1] The World Economic Forum in its *Global Competitiveness Report* asks executives in each country to rate their country's HE system on a scale from 1 to 7 in response to "How well does the educational system in your country meet the needs of a competitive economy?". In the 2012 edition of the report Romania, with a score of 3.1, ranked 108 out of 144 countries (the mean value was 3.7) (WEF 2013, 442). According to a recent survey commissioned by the Romanian Ministry of Education, 45 % of the students, 41 % of the parents, and 34 % of the teachers stated they believed corruption is present "to a large degree" and "to a very large degree" in Romanian universities (UTM 2013, 45).

[2] According to a "formula" which takes into account traditional enrollments in the state universities as well as the type (field) and level of programs in which the "state-budgeted" (non-fee-paying) students are enrolled.

[3] Although the law sets out that the ranking should be one of "academic programs", the first ranking exercise did not consider programs per se but rather "fields" (*domenii*) encompassing all the relevant programs in a university.

Law even set out (in Art. 12.2.d) that a future law on mergers would be submitted specifically in order to ensure that competitive universities absorb poorly performing institutions. This provision was not included in the final text, but the statute ties the classification to measures aimed at lowering administrative costs and at better allocating public money in higher education. It also clearly specifies that the legislation favours the absorption of weak universities by stronger institutions and that in the allocation of public funding preference will be given to universities which are either part of consortia, or have undergone a merger.

Despite this apparent directness of the Law on national education as far as academic concentrations are concerned, the broader legislative framework still contains a number of major uncertainties. The laws governing institutional cooperation in HE, while introducing some welcome clarifications, fail to adequately address formal types of collaboration such as consortia or mergers, despite the fact that the latter constitute the main target of these statutes. While decision-makers have repeated time and again that the country needs fewer HEIs or at least a more targeted concentration of public resources, it is important that this be appropriately addressed in national legislation.

The somewhat older Law on university consortia (no. 287/2004) is, to begin with, rather restrictive in a number of respects. At times, it inhibits significantly the potential and options for institutional cooperation. For example, it provides that an HEI may participate in only one consortium; it restricts the organizational objectives which may constitute the formal rationale behind joining such an entity; and it further limits the amalgamation of universities participating in a consortium to a merger by absorption. This last provision effectively rendered mergers resulting in the creation of a new academic entity a non-option until the adoption of the 2011 Law.

The Law has been only partly successful in clarifying this inadequate legal framework. While it enhances the range of merger options from absorption alone to merger to form a new institution (Art. 194), it does not provide additional details on how the concentration of public academic institutions should be realized. (While this lack of prescriptiveness is not unwelcome in itself, it does leave many key legal and procedural matters unanswered.) Furthermore, the Law applies, as far as university amalgamation is concerned, to public institutions alone. This leaves open major questions, particularly concerning the merger of public and private HEIs (which are currently roughly equal in number, though not in size and other respects). For instance, given the current state of Romanian higher education and the increasing pressures on private universities (Andreescu et al. 2012), strong/weak and weak/weak mergers (Harman and Harman 2008)[4] might prove tempting to both private and public universities, with the latter playing the role of the strong

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[4] The meaning of "weak" and "strong" in this context hinges on a set of criteria specific to a particular HE system at a particular time. In other words, the terms reflect not only – or not necessarily – some objective attribute of an organization, but also a normative perspective frequently pervading official views on what is desirable and what is not in the HE system in question.

actor. This is so especially if one takes geographical proximity into account (Rowley 1997; Patterson 2000), since in the large academic centres in Romania there is only one comprehensive public university. Nonetheless, public-private mergers remain completely outside the purview of the current legal framework.

The first attempts at forging university mergers in post-communist times were made in the context of the 2011 Law. It is not entirely clear to what extent the university classification played a part in these explorations, especially since, in some cases, they predated the publication of the final results of the exercise. Nonetheless, it is evident that some of the merger initiatives hit a legislative wall – the vague legal provisions alluded to above.

So far, only one important public-public merger took place, that between the Technical University in Cluj-Napoca (UTCN) and the University of the North in Baia Mare (UNBM). (On the legal barriers encountered during the merger and the hands-off approach of the education ministry, see the Munteanu-Peter Chap. 13 in this volume). Most of the other merger projects which engaged the attention of the public also involved the concentration of state universities, usually between or among institutions in the same major academic city.[5] There are also reports of a major university in one of the country's northern cities exploring a merger with a local private institution, but abandoning the project due to, among others, legal uncertainty concerning the fate of the latter's post-merger assets. Last but not least, a private HEI in Iasi recently absorbed a smaller one in the same city.[6]

Given the dearth of successful mergers so far, it remains risky to generalize about the extent to which such endeavours are rendered considerably more difficult by the current legislative framework. Nonetheless, it seems relatively safe to claim that, while we may expect bottom-up public-public projects to pass muster with the government, the current laws do little to directly encourage such undertakings. They do even less to promote ample top-down merger initiatives such as those embarked on by governments in, for instance, Australia, Canada, or China.

3.3 University Concentrations and the Logic of the Institutional Classification Exercise

3.3.1 The Classification and Its Context

What the Law on education fails to address directly, it may, nevertheless, tackle indirectly. The institutional classification and the program rankings it mandates may eventually provide good incentives for some HEIs to embark on the merger journey. The last merger case referred to, that between the two private universities

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[5] For example, the University of Medicine and Pharmacy and the Polytechnic in Timisoara; the University of Arts, the University of Medicine, and the Petru Maior University in Targu-Mures.

[6] The two are Petre Andrei University and Gheorghe Zane University.

in Iasi, was undertaken – at least officially – so that the larger institution may take over the smaller university's single successful program.

However, besides the legally more accessible public-public and private-private mergers, the classification may also encourage, as we shall see, mergers between universities and national research and development institutes (NRDIs) or other similar research entities. The current emphasis of the classification exercise on research may provide state[7] HEIs with an incentive to absorb public R&D institutes – the subject of a full section below. Furthermore, the recent decision to move some NRDIs from their current location in the ministries of the Economy, Environment, Regional Development, Communications, Labour, Health a.o. to the Ministry of National Education might facilitate such initiatives. Finally, since the privatization of (some) R&D institutes has been on the government's agenda, their amalgamation with private universities is at least conceivable.

Returning now to the classification exercise and its impact on Romanian HEIs, both the Law and various political statements by the former education minister and other policy-makers have underscored several objectives relevant to our discussion of university mergers. Specifically, it has been stated that the classification would have the following implications as far as the funding of universities is concerned:

- a more rational allocation of resources, depending on both the quality and the institutional profile (the "class") of the university;
- the preferential allocation of resources to merged universities or to institutions participating in consortia;
- the concentration of public resources targeting scientific research (for example, through differentiated public allocations for doctoral schools and master's programs).

As noted, it is still not very clear how public funding will be allocated in the longer term on the basis of HEIs' performance in the classification and rankings. So far, the promises in the Law have not been kept, but it may be too soon to expect this, given the radical nature of the statute. Furthermore, in this respect the law directly affects public universities exclusively. Nevertheless, both the classification and the program rankings would likely provide incentives for tighter collaboration and even merger beyond state higher education, to the extent that they are able to generate a reputational system affecting the academic market performance of public and private HEIs alike.

There are grounds to support the thinking that the current demographic and educational context might render the classification and similar instruments capable of triggering a restructuring of the higher education market in this country in the long-term. The key relevant trend is the marked recent drop in the number of viable candidates for studentship. The background relates to a broader demographic crisis: the birth rate dropped substantially in the nineties compared to the previous

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[7] We refer to public-public HEI-institute mergers simply because of the legal uncertainty of public-private amalgamations.
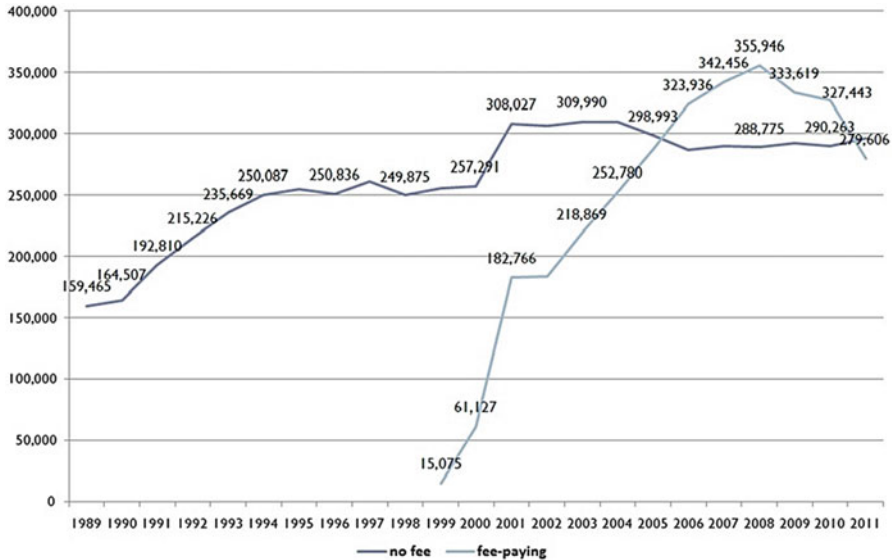
Fig. 3.1 Fee-paying and non-fee-paying students in public universities (1989–2011) (Source: Georgescu 2011, March 30–April 1)

decades, a tendency which continued into the new millennium.[8] Young men and women reaching high school graduation age today were born in the mid-nineties, the years with the lowest birth rate in at least half a century.

The demographic crisis is compounded by what the press has persistently dubbed "the disaster of the baccalaureate" (in Romania, the high school graduation exam). This alone means that the pool of candidates has become severely restricted as compared to recent years. Only around 50–60 % of high school graduates passed the exam over the past 4 years, an abrupt drop from the 90 % or more in and before 2009.[9] As a result, after the student population reached a peak in 2007–2008, it started a steady decline (Fig. 3.1).

This trend heralds a period of increasingly fierce competition for students in the coming years. Under such circumstances, institutional and program reputation will play a growing role in a HE market with a relatively large number of higher education providers (around 90 authorized or accredited universities, approximately half of which are private). As a result, the institutional classification and the program rankings are likely to have a significant effect on enrolments, given their impact on the perceived attractiveness of individual universities. This will further impact on changes in organizational behaviour.

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[8] The birth rate plummeted from 13.6 live births per 1,000 citizens in 1990 to 9.9 births two decades later (INSSE 2012b, 12), with the lowest plateau reached in the mid-nineties.

[9] See the maps at "Comparatie promovare bacalaureat 2009–2010–2011", http://examenebac. blogspot.ro/2011/08/comparatie-promovare-bacalaureat-2009.html

Beyond such broad considerations, what specific incentives would the classification of Romanian universities, as deployed in the first and so far only exercise of the type, provide for academic merger? What types of organizational strategies might prove fruitful from this perspective? The answer doubtlessly hangs on the broader framework conditions in Romanian HE, some of which were alluded to previously, and on the structure and implementation of the exercise. A key factor is the role of decision-makers, in particular the interest and ability of the Ministry of Education to keep mergers on the agenda and to create an adequate legal framework. Before probing further into the classification exercise, our assumptions in the following analysis are as follows:

- The broad logic, if not the exact detail, of the classification exercise will remain relatively similar over a number of iterations.[10]
- The classification exercise will become, as stipulated by the Law and the Ministry, a functional public policy instrument, with palpable consequences on the funding of students and institutions, on the allocation of research money, and so on.
- In retaining its current rationales, the classification exercise will have a non-negligible impact on institutional reputation, and the resulting classes will continue to be regarded as situated along a spectrum from most to least desirable.

3.3.2 The Classification and Its Classes

The current classification starts by specifying three predefined institutional classes of university. The relevant documents, and in particular the ministry order which details the classification and its methodology,[11] fail to properly explain why the classes were predetermined. The alternative way of designing the classification would have been to define the classes *after* a pilot exercise or even subsequent to one or more classification rounds, depending on the findings and on the structure of the HE system as revealed therein. (Of course, a "classless" classification would also have been possible, as in the U-Map exercise (van Vught 2010).)

The main rationale for the predefined classes becomes apparent from various analyses or pronouncements on the current state of Romanian education, such as the influential 2007 Report of the Presidential Commission on Education (Presidential Commission on Education 2007) or the public debates centred on this document and the 2011 Law. Specifically, the three categories of universities were defined so as to enable decision-makers to direct a larger share of public resources to

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[10] Any radical shift, for instance to a "European" classification system such as that advocated by U-Map (http://www.u-map.eu/), could change the game completely. Given Romania's mimetic policy-making in education, such a development is not unthinkable, though there is nothing to announce it yet.

[11] The methodology is detailed in the Order of the Ministry of Education (OMECTS) no. 5212 of 26 August 2011 and its Annex 1. This serves as the basis for our summary below.

universities performing more and/or better research. Secondly, they aimed to incentivize universities to merge, thereby reducing the overall number, as stipulated by Law and in response to frequent complaints about the excessive number of academic institutions in Romania.

There has been no formal explanation why the classification failed to consider anything beyond its three very basic categories – *research-intensive universities*, *research-and-education universities*, and *education- centred universities*. This is perhaps somewhat striking because the classification was designed at a time when "Europe" is considering a classification system which follows an entirely different logic (van Vught 2009). Indeed, the standard American university classification produced by the Carnegie Foundation for the Advancement of Teaching has been undergoing a process of substantial revision of its own, also in terms of its institutional classes (McCormick and Zhao 2005).

Under these circumstances – the specific classes adopted and their semi-transparent rationale – it is not surprising that the public opinion, a number of universities and academics, and occasionally even decision-makers treated the outcomes of the classification as a ranking of Romanian universities. The instrument was regarded by some scholars as heavily prescriptive rather than descriptive in nature (Vlasceanu et al. 2011). The press presented the findings under titles such as "The best/the worst higher education institutions in Romania",[12] thus turning the classification into a reputational instrument. The fact that there are no institutional rankings in the country certainly helped in this respect (the ranking of academic programs was introduced at the same time as the classification and its results were published later). The general sense that being classified as an education- centred university signalled a very poor showing made the universities concerned feel, in effect, *declassed*. Sometimes this led to vehement denunciations of the exercise which occasionally escalated to court cases.

It is also worth pointing out, in this context, that the publication of the classification results was not followed by any analysis of the variation within the three classes. Not only were the three categories pre-established, but neither the decision-makers, nor the analysts and commentators made an effort to distinguish among subtypes, to discuss the variety of organizational profiles or patterns under each category, or point to differences in performance within the classes. The prescriptive interpretation of the findings was dominant, particularly because the descriptive power of the instrument was slender by design. The outcome, quite easy to anticipate in fact, left the most influential academic actors relatively satisfied.

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[12] See Mediafax, at http://www.mediafax.ro/social/clasificarea-universitatilor-din-romania-care-sunt-cele-mai-bune-institutii-de-invatamant-superior-8705359. Or: "Cele mai bune si cele mai slabe universitati din Romania", http://www.realitatea.net/clasificarea-universitatilor-din-romania-vezi-topul_868158.html

3.3.3   The Classification and Its Algorithm – An Outline

The algorithm employed by the Ministry to distribute the Romanian universities among the three classes is too elaborate (for one thing, it involves too many indicators) to be presented in full detail in this limited space. Many of its details are not, however, particularly significant for our purposes. We therefore limit our discussion to an illustrative outline of the algorithm.[13] This, in short, is the current "formula for success" in Romanian higher education at this time.

The classification exercise entails the following procedure. After the data for the exercise is collected and computed, each university is assigned a number. This so-called "classification index" is the "score" achieved by each university at the end of the exercise. The index itself is expressed as a product of three "main" indicators, of which two – a *research indicator* and an *institutional evaluation indicator* – are relatively simple to compute. The third factor in the product is a more elaborate *aggregated indicator*.

The main research indicator is an extensive one – it accounts for the absolute size (i.e., independently of the size of the institution) of a university's research output. It is expressed as the sum of (a) the aggregated article influence score of all Web of Science articles and (b) the number of books published with international publishers by the academics in the relevant HEI (Fig. 3.2). The institutional evaluation indicator is based on the rating awarded by the Romanian Agency for Quality Assurance in Higher Education (ARACIS) during the most recent institutional
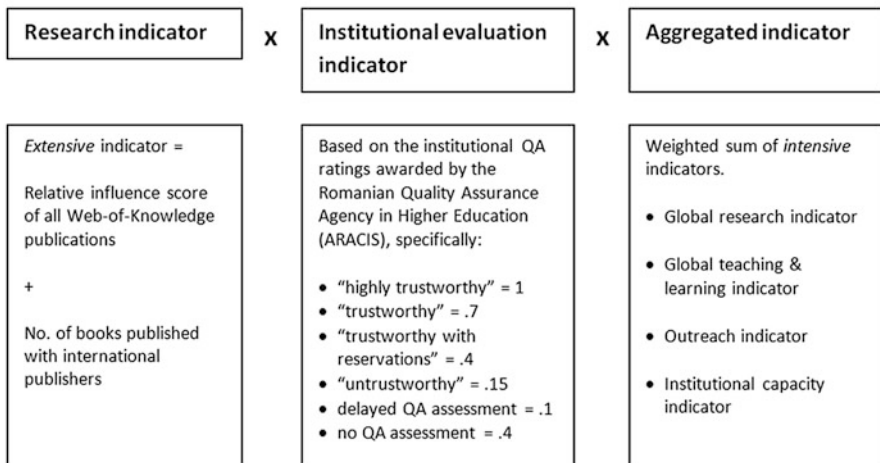
Classification index =

Research indicator	**X**	**Institutional evaluation indicator**	**X**	**Aggregated indicator**
Extensive indicator = Relative influence score of all Web-of-Knowledge publications + No. of books published with international publishers		Based on the institutional QA ratings awarded by the Romanian Quality Assurance Agency in Higher Education (ARACIS), specifically: • "highly trustworthy" = 1 • "trustworthy" = .7 • "trustworthy with reservations" = .4 • "untrustworthy" = .15 • delayed QA assessment = .1 • no QA assessment = .4		Weighted sum of *intensive* indicators. • Global research indicator • Global teaching & learning indicator • Outreach indicator • Institutional capacity indicator

Fig. 3.2 A simplified outline of the classification formula (I)

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[13] See Annex 1 to Ministry of Education (MoE) Order no. 5212/26.08.2011.

Aggregated indicator (expressed as a weighted sum, with weights varying for each field of study)

Global research indicator	Global teaching & learning indicator	Outreach indicator	Institutional capacity indicator
expressed as a weighted sum of • research output indicator (field-normalized) • research resources indicator (field-normalized) Comprises around 10-20 sub-indicators (depending on field).	expressed as a weighted sum of 9+ (depending on field) field-normalized sub-indicators.	expressed as a weighted sum of 19+ (depending on field) normalized sub-indicators.	expressed as a weighted sum of 24+ (depending on field) normalized sub-indicators.
computed for each field	computed for each field	computed for each field	computed for each institution

Fig. 3.3 A simplified outline of the classification formula (II)

evaluation. The indicator is, in practice, a weighting of the other scores – a coefficient with values ranging from 0.10 to 1.00, depending on the strength of the rating (Fig. 3.2).

Finally, the aggregated indicator is a weighted sum of four intensive (i.e., size-relative) "global indicators" covering scientific research, teaching and learning, outreach, and institutional capacity, respectively (Fig. 3.2). The four intensive indicators are themselves computed as weighted sums (with different weighting values depending on the academic field) of other lower-level indicators (differing in their number depending on the field) (Fig. 3.3). The latter are normalized for each academic field.

To classify HEIs into one of the three categories, the methodology establishes several alternative thresholds between the classes. To offer a single example, a *research-and-education* institution is defined as a university (a) whose extensive research indicator is less than 35 % of the same indicator of the HEI ranked immediately above it within the same type (comprehensive, technical etc.); *or* (b) whose extensive indicator is less than 70 % *and* whose aggregated indicator is less than 20 % of the first-ranking institution within the same type.[14]

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[14] A university is classified as *education-centered* if it ranks below a research-and-education institution and fulfills one of the following conditions: (a) its extensive research indicator is less than 35 % of the same indicator of the university immediately above it in the same type; or (b) its extensive research indicator is less than 70 % of the same indicator of the university immediately above it and it has an aggregated classification index amounting to less than 4 % of the index of the university ranking first within the same type. Furthermore, HEIs with a very specialized profile are pre-classified (and will not concern us in this analysis). This group includes: military schools as well as schools of information, of public order and of national security (classified as research-and-education HEIs); arts schools (separately classified as education-and-artistic-creation HEIs); physical education and sports schools (classified as education-centered); and schools of medicine and pharmacy (which may only be members of one of the two research-oriented classes). All other universities (i.e., except for the research-and-education, education-centered, and pre-classified ones) are categorized as research-intensive institutions.

A cursory look at the classification algorithm suggests that its logic favours (read: rewards with a higher classification index) particular types of institutions:

- those which do not fare poorly in any of the three main indicators: the product (as opposed to, say, a sum) at the core of the classification index penalizes any HEI with either comparatively poor research, or a comparatively modest showing in the institutional evaluation, or with a low aggregated indicator, despite an adequate performance on the other indicators.
- large institutions: the extensive, non-relativized research indicator rewards institutions with an extensive staff irrespective of their per capita output; conversely, a small institution, regardless of its level of productivity in per capita terms, will be almost certainly penalized.
- prestigious institutions: the coefficient of the institutional evaluation indicator amply rewards institutions rated "highly trustworthy". Since the ARACIS quality assurance evaluations have systematically confirmed the pre-existing public perception of HEIs, the classification algorithm favours, in effect, institutions with a good public reputation. The distance between the coefficients – especially between the "highly trustworthy" (1.0) and the "merely" "trustworthy" (.7) institutions – is sufficiently large to substantially influence the classification index.

It is noteworthy that each of the three factors above rewards traditional state universities. The old, comprehensive or technical, large, prestigious public HEIs are at an advantage particularly due their size and their traditional place at the heart of Romanian higher education, a positioning which probably played a part in their being rated by ARACIS, without exception, as "highly trustworthy". As far as the algorithm is concerned, these institutions exhibit no glaring weaknesses threatening to lower their classification index.

As expected, the three largest comprehensive state universities, the four largest technical universities, one large agricultural and veterinarian university, the pre-classified medical schools and the main state economics university all ranked as research-intensive. The rest of the smaller state universities in large urban centres, whether technical, professional or comprehensive, were classified – with a single exception – in the research-and-education class. The only (mild) surprise in the first classification exercise was the absence of any real surprise.

Three other closely related points underscore the somewhat non-transparent role played by research in the classification exercise. First, the algorithm employs a very large number of indicators. The four "global" indicators which make up the aggregated indicator each rely on no less than 10–25 lower-level indicators, depending on the field of study. Yet best practice in the field suggests that an index (set of indicators) of this type should be parsimonious (Bartelse and van Vught 2009; McCormick and Zhao 2005). Parsimony is essential not only because it lowers the costs and the administrative burden of collecting the data,[15] but more importantly, simpler formulae are comparatively clear and easy to relate to

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[15] Which is the reason why parsimony was considered an important principle behind U-Map and U-Multirank (Bartelse and van Vught 2009; CHERPA 2010, 69).

the expressed goals of the exercise. In other words, the outcome of a classification thus designed is easier to interpret. This is plainly not the case with the Romanian university classification.

Secondly, at least one dimension in the classification algorithm is covered by several indicators (to a greater or lesser extent), be they higher- or lower-level. This is most obvious in the case of academic research, which is composed of:

- the extensive indicator (the first term in the classification index product);
- the institutional evaluation by ARACIS (the second term in the product), which considers scientific output as well;
- the first indicator below the aggregated indicator, the so-called "global scientific research indicator", which is concerned with research exclusively;
- several other lower-level indicators spread out among the other three global indicators.

In effect, in the classification algorithm research is cubed: it is present to different degrees in each of the main terms of the index.

Thirdly, the thresholds previously mentioned are likely to render the classification inherently unstable. It is hardly clear, for instance, that changes at any point in the classifications – including changes resulting from mergers – will not generate ripple effects affecting the order of the scores in major and unpredictable ways. We are not aware of any experiments testing the algorithm's stability, but the convoluted and apparently arbitrary way of defining classes in terms of these particular thresholds is not convincing.[16]

As a result, the classification formula is less transparent than it should be. It privileges research, both in its relative dimensions (the field-normalized intensive lower-level indicators) and, significantly, in its absolute dimension. The algorithm appears to favour traditional public universities by design. In doing so it responds to the declared goals of the government in charge of HE policy until around the middle of 2012, particularly that of encouraging the concentration of universities around the best-performing institutions. Indeed, in many countries which have pursued top-down approaches to academic concentrations, this has usually been the dominant trend – "[. . .] to move from relatively small and often highly specialised institutions towards fewer, larger and more comprehensive institutions [. . .]" (Harman and Meek 2002).

3.3.4   The Classification and University Concentrations

Returning now to our original question: which are the types of academic concentration favoured by the classification algorithm? In other words, which types of HEI

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[16] We are even less persuaded by the presence of alternative thresholds, not to mention the fact that they are never justified.

are expected to score better – all other things being equal – in the classification through mergers? The assumption is that if the classification provides institutions with incentives to move towards the desired class; and if, furthermore, decision-makers incentivise mergers as a way of resolving the HE system's various challenges, then universities will consider merging to accede to the desired class or to retain their desirable position.

A simple look at the algorithm suggests that the university classification exercise favours mergers between:

- *very similar institutions*, since two identical institutions would double their score simply by doubling the value of the first term of a product (the extensive research indicator);
- *structurally isomorphic institutions*, i.e., very similar in structure, though possibly different in size, since, joined together, these institutions would significantly improve their extensive indicator and maintain intensive indicators similar to those of the individual, pre-merger institutions;
- *universities and research institutes*, since such a move could substantially increase the value of the extensive indicator.

A related point is that it always makes sense for the large, traditional state universities, which have been systematically rated in the QA evaluations as "highly trustworthy", to simply absorb smaller universities. They would thus preserve their "institutional evaluation" coefficient in spite of taking over a potentially less well-rated "unit".

Based on these observations, a typology of university merger scenarios from the perspective of the university classification exercise is outlined below. Terms such as "weak", "well-ranking", "higher class" or "middle category" are used, although they are, in principle, ill-suited for a classification exercise understood as a descriptive rather than a prescriptive undertaking. Nonetheless, the logic of the first classification and its impact on the public perception and on organizational reputation render such terms adequate in this context.

3.3.4.1 Typology of Mergers

Six main types of mergers can be identified in this context as described below:

1. *The absorption of smaller (perhaps mono-profile) but well-performing universities by large, prestigious universities.* This merger strategy would be attractive to the former, as they would be granted access to the advantages afforded by the superior class, namely more research resources, funding for doctoral schools etc. Currently, they would almost certainly be excluded from these benefits simply by virtue of their size, i.e., their comparatively small extensive research indicator. The large and prestigious universities would, on the other hand maintain their position in the first echelon.
2. *The absorption of smaller, poorly-ranking universities by large and/or high-ranking ones.* This kind of merger would assist the former in resolving a

reputational problem and would grant them access to new programs (e.g., more master's students funded from the public budget, as the Law promised to research-oriented institutions). The larger HEIs could secure a wider recruitment base and better capitalize on their access to resources. If their choice of a smaller university is smart, they could even secure their position in the research-oriented classes, since the extensive research indicator would go up anyway, and the institutional evaluation indicator would stay the same. The trick is not to lose too much on the intensive indicators.

3. *The merger of two or more small, poorly- or moderately-ranking universities.* A new, larger, and potentially better-ranking HEI might emerge as a result. The extensive indicator would certainly improve, while the institutional classification indicator would be retained (in the case of an absorption) or potentially improved (in the case of a new legal entity and a new QA assessment). These higher scores should be enough to offset any losses on the intensive indicators.

4. *Large, comprehensive universities in either of the two research-oriented categories absorbing professional (technical, medical, arts, agricultural) research-and-education universities.* Sheer size would be enough to improve substantially the extensive indicator, particularly in mergers involving technical, medical or agricultural schools, which typically have an adequate research output. The absorbing comprehensive universities would possibly attain the research-intensive class or consolidate their position in the latter. Professional universities would improve their chances of making it into the most prestigious category, gaining access to more funding for graduate education as well as the right to establish doctoral schools, which are currently limited to the top-class universities.

5. *The merger of traditional public comprehensive universities and research-intensive professional universities into "super-universities".* This is a special case of the previous scenario. Such universities would dominate the classification exercise. By exploiting the thresholds between the classes discussed above, they could even push some of the other traditional comprehensive institutions out of the top class. This is likely to generate more mergers of the same type, so, conceivably, the research-intensive category would come to accommodate 3–4 HEIs compared to the current 12 – the super-universities in Romania's largest academic centres, having emerged out of the merger of the local traditional comprehensive university, the traditional technical university, and possibly the local medical or agricultural school.

6. *The absorption by large and/or strong universities of one or more research institutes.* This move would be appealing to the former as it could substantially increase their extensive indicator. We develop this scenario in more detail in the next section.

This brief typology does not consider a variety of factors which are, ultimately, essential for the viability and success of academic concentrations: geography; the compatibility of organizational cultures (although it is important to note that the Romanian academic system is rather homogenous in this respect); institutional

complementarity and overlaps at the level of programs, recruitment pools etc.; historical relationships among the HEIs considering a merger, and so on. All these factors should be carefully considered in specific merger scenarios, but they are beyond the scope of this discussion. In the final section we focus on the last merger scenario proposed above, that between universities and research institutes, in an attempt to impart more depth to our analysis.

3.4 An Emerging Scenario: The Amalgamation of Universities and Public Research Institutes

In its most recent report on research, development and innovation (RDI) in Romania, the World Bank recommended efforts to reduce the fragmentation of resources by either privatizing or consolidating national research and development institutes (NRDIs) or, alternatively, by integrating them into universities (WB (World Bank) 2012). Though the latter proposal was, to our knowledge, never thoroughly considered by decision-makers, it did generate a political echo. The option is tempting as a way of reforming the system of national R&D institutes and, in the context of the ranking exercises, the weight accorded to scientific research in the classification algorithm might make such amalgamation attractive to various HEIs. There are early signs, for instance, that a few universities have already invested in full-time researcher positions, which are currently almost totally absent in the Romanian academic system (and the local academic tradition). Thus, in the summer of 2012, some universities advertised positions for scientific researchers – an atypical move in a system where practically every academic has a substantial teaching load.

We put forward here a broad-brush analysis of the reasons why the absorption of NRDIs (and possibly of other types of research institutes) by universities could be an attractive option to both parties, as well as to decision-makers in the field of RDI.

3.4.1 The Case for HEI-NRDI Mergers

HEI-NRDI mergers could help to address the following challenges and opportunities:

The increasing pressure to boost R&D in the universities, not least due to increased transparency resulting from the university classification and the academic program rankings. The strategic absorption of research institutes by HEIs would enhance the latter's research capacity and, as a result, their research performance as assessed in the classification exercise.

The currently peripheral role of higher education institutions in the Romanian R&D system. According to Eurostat data for 2011, a mere 11 % of all research

and development activities are carried out in universities, compared to a
European average of 49 %. This is likely to reflect the recent entry of universities
(or faculties) into the research arena. Taking over well-performing R&D
institutes could boost HEIs' presence in this sector.

The fragmentation of the current research landscape. In Romania, there are
currently several types of public R&D entities: NRDIs, institutes of the
Romanian Academy, as well as university institutes and a few other institutes
directly accountable to sundry public ministries. The merger of some institutes
into universities could reduce this fragmentation and alleviate some of the
problems it creates, such as the inefficient allocation of public R&D resources.

The large number of public research institutes in Romania. Not only is the R&D
landscape fragmented, it is also very populous: there are now over 150 public
R&D institutes, compared to, for example, 18 in Finland, a country with a much
higher GDP per capita. This generates confusion as to the individual mandates of
these institutions, as well as a lot of duplication in the system. Mergers with
HEIs could help to either reduce the number of institutes or relocate them within
an organizational context where they would play a more definite role.

*The relative success of public universities in producing scientific publications in
recent years*. In 2011, scientific production in Romania was concentrated in state
universities (59 % of the total), with the institutes of the Academy, the NRDIs
and the medical institutes lagging considerably behind (at 18 %, 18 %, and 2 %,
respectively) (Ad Astra 2011).[17] The absorption of public institutes by univer-
sities could offer the former an institutional environment which stimulates
productivity (measured in publications), while the latter could benefit from
dedicated research staff.

*Conversely, the relative success of institutes in raising research funding from com-
panies compared to HEIs*, though the numbers remain low in both cases. Thus,
according to Eurostat data (Business R&D expenditures according to sector in
2011), only 3 % of business R&D expenditures go to universities, compared to
25 % in the case of institutes. This disparity might signal better transfer activities
or infrastructure in institutes, as well as a higher level of trust on the part of
business. By comparison, universities are still struggling to demonstrate their
relevance to market-relevant research and innovation. By absorbing RDI insti-
tutes, HEIs could increase their reputation on the RDI market.

Similarly, *the institutes' comparatively greater success at securing patents*,
although the numbers are low in both camps. As the table below (Fig. 3.4) shows,
the institutes have traditionally performed better in this respect, although the gap
has been much reduced over the past 3–4 years.

"The compatibility of HEIs and NRDIs in terms of the type of scientific research
and of their scientific cultures". Both the national institutes and the universities
devote most of their efforts to fundamental research (56 % and 63 %, respectively,

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[17] The figure for private universities was an insignificant 0.6 %.

Fig. 3.4 Number of national patents per holder type (Source: Romanian Office for Patents and Trademarks)

	2006	2007	2008	2009	2010	2011
Individuals	483	499	465	535	567	645
Companies	146	113	123	155	168	164
Research institutes	127	116	207	218	292	322
Universities	48	91	179	137	354	291
Other	10	8	20	9	1	2
TOTAL	814	827	994	1054	1382	1424
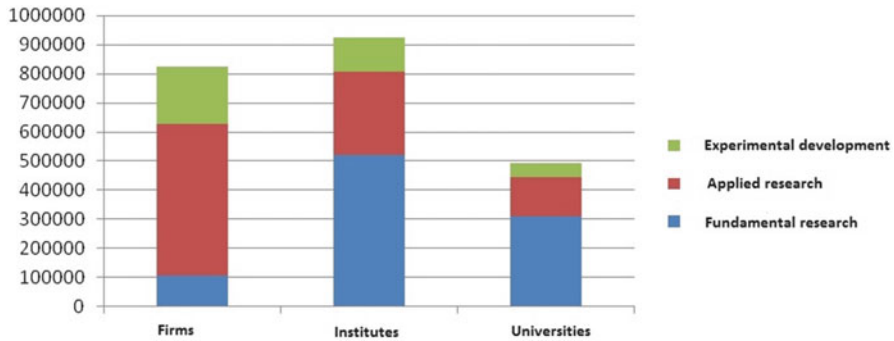
Fig. 3.5 R&D expenses according to institutional type (2011, 1000 RON) (Source: World Bank 2012)

of their total research expenses). The relative size of their applied and experimental research is also comparable (Fig. 3.5). Admittedly, this is probably an indication of both institutions' inability to connect their research to business, rather than a sign of their ambitions to excel at frontier research. This being said, in the case of HEI-NRDI mergers this compatibility might decrease the likelihood of a clash of professional cultures, at least as far as research is involved.

The complementarity of human resources. Although research output has become a (if not "the") key success indicator in higher education, both at individual and organizational level, even the most research-intensive universities engage a very small number of full-time researchers. Most of those who do research in academia also bear the burden of standard teaching loads, while the research load is in most cases poorly defined, if at all. Taking over institute researchers would ensure a substantial infusion of dedicated researchers, presumably without leading to an excessive duplication of roles. The broad structure of human resources in institutes and universities is also strikingly similar in certain respects, such as for example age (51 % of institute staff is below 45, compared to 56 % in the universities).

The reorganization of PhDs into doctoral schools (away from individual mentoring). The reform of the doctorate has shifted the centre of doctoral training to the universities, the exception being the institutes of the Romanian

Academy. The consequences are already becoming visible: although teaching remains paramount in universities, the latter are rapidly increasing the percentage of PhDs among their staff (60 %), while institutes are lagging behind (37 %) (INSSE 2012a). The absorption of institutes into universities could improve the linking of doctorates to scientific research, as well as enhance the employment opportunities.

Last but not least, one may add to the list above the general drive to reform the Romanian RDI sector, which is putting pressure on institutes and universities both to improve their research, and to make the latter more relevant to social needs and business interests. Romania's international commitments, the "conditionalities" in accessing European funds for R&D, and the struggle to keep up with global trends in the pursuit of knowledge and innovation are the most visible manifestations of this pressure. The merger of universities and research institutes could contribute to efforts to reduce fragmentation in the RDI system and enable each party to capitalize on the other's relative strengths.

3.4.2 *Caution Concerning University-Institute Mergers*

Notwithstanding the above, there are several reasons to regard the university-institute mergers with a level of caution. Firstly, Romanian universities are currently confronted with an accelerating decrease in their traditional student recruitment pool (fresh high school graduates). As noted previously, the poor *bacalaureat* success rates signal a crisis in pre-university public education. The demographic contraction has also led to a dwindling number of potential students. In these circumstances, intensifying research activity in the universities by turning some of the imminently excessive teaching-and-research positions into full-time research posts (research quality permitting), could become a way of alleviating the level of redundancies. Should this strategy be pursued in the HE system, the notion of bringing in new researchers will likely be met with resistance from academics.

Secondly, universities have no demonstrated expertise in managing R&D institutes. Currently, the number of functional entities of this type in Romanian HE is small and, with the exception of a few fields, there is no academic tradition to speak of in this respect. University administrators lack expertise in managing research institutes, while academic senates have limited skill in overseeing them. Organizationally, university decision-making remains to a considerable extent collegial, while the faculties enjoy substantial autonomy. This may complicate the position of absorbed research institutes, especially if they remain independent from the faculties. They would have little clout in the academic senate and restricted means to look after their long-term welfare. There is a danger that absorption could lead to the institutes' slow death.

Thirdly, there is the question of funding. Research and development institutes currently receive basic funding from the public RDI budget. The NRDIs are

allocated such institutional support through the NUCLEU program, while the institutes of the Academy are funded separately. Universities, however, receive little institutional funding strictly speaking, as the basic funding for HEIs – by far the largest part of the public funds they receive – is allocated for teaching students. The absorbing of institutes which do not generate additional matriculations could increase the already considerable financial burden on universities at a time when student numbers are in decline.

Fourthly, while we have argued that HEIs might have good reasons to want to absorb NRDIs, it is not immediately clear that the latter have an incentive to merge in this way. The evaluation of R&D institutes has, so far, remained mostly formal. The old accreditation system has been replaced with an evaluation-cum-certification formula officially designed to identify the best performing institutions and to restrict access to the basic funding scheme which came into force in 2012. The certification, which among others ensures access to basic funding, is awarded to institutions rated "A minus" or above. So far, however, all of the evaluated NRDIs – about a third of the total – were thus certified. This would ensure basic funding for all and call into question the notion that institutes are ready or compelled to seek other ways to secure their (already impoverished) existence. Basic funding at current levels seems able to support the system of R&D institutes in its present state – fragmented, non-competitive, and unproductive.

Finally, the risk of incompatibilities in organizational culture should not be completely discounted. Notwithstanding the similar profile of the research produced, the different primary orientation of activities in HEIs and NRDIs (teaching and, respectively, research) could lead to conflicts or to a failure of accommodation in the case of concentration. Furthermore, in many Romanian universities or faculties the culture remains essentially one of academic "locals".[18] As a result, resentment towards any "intruders", especially if they come from a different type of institution, would be unsurprising.

3.5 Conclusions

A question which has not been addressed directly in this chapter is whether university mergers are a viable and attractive option in Romania's current higher education system. Arguments in support of a merger drive have occasionally been put forward by decision-makers, while the complaint that Romania cannot afford its many universities has been heard quite frequently. Nonetheless, there is, to our

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[18] The academic cultures of "locals" and "cosmopolitans" were described by Gouldner (1957) in a series of classic pieces on the subject. One problem with Romanian universities is that the widespread practice of recruitment and promotion from within tends to make academics wary of outsiders.

knowledge, no study that seriously explores the desirability of academic mergers in this country.

This being said, mergers did appear on the government's agenda a few years ago. The Law on education openly advocates academic concentration, and the recently undertaken university classification and program rankings were justified as efforts to incentivize the absorption of small and under-productive universities by their larger and more research-intensive counterparts. It is appropriate therefore to explore scenarios of academic merger which could be supported, in practice, by the current classification of universities.

The scenarios we looked into briefly are, of course, ideal types. Some of them may also be hampered by the legal uncertainties we examined in the first part of the chapter. It is a task for future explorations to thoroughly flesh out these scenarios by considering other relevant criteria – geography, history, organizational culture, complementarity, and, indeed, legal obstacles. They may also require a re-thinking with the future classification and ranking exercises in mind, especially since the latter were subject to both methodological (Vlasceanu et al. 2011) and more general criticisms, not to mention contestation in the courts. Nonetheless, we believe that such scenarios are a relevant starting point in defining and calibrating higher education policy in this country, and particularly policies aiming at concentration in academia or, indeed, in the RDI system as a whole.

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