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# Excellence of Universities versus Autonomy, Funding and Accountability

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Universities see a need for major changes in their organisational structures and functioning to be able to respond adequately to current social expectations. A greater provision of funds and an increase of university autonomy are priorities of today's university policy. This article presents the results of relating excellence and autonomy through data from the Academic Ranking of World Universities of the University of Shanghai and the indicators developed by the European University Association for four types of university autonomy: organisational, academic, staffing and financial.

## 1. Presentation

The role of universities has suffered a deep change during the last decades. Besides universities' traditional functions – research and teaching – new ones have emerged because of recent demands that respond to economic, social, and cultural progress. These demands are increasingly complex and relevant due to the contribution of higher education to social and economic development, its capacity for competition in an international context, and excellence as an aim in research activities and education. Another point to consider is that the transfer of knowledge through applied sciences and technology created by university departments has increased thanks to university entrepreneurship – start-ups or spin-offs – and research units founded in collaboration with private firms. Furthermore, there is a need to assess the university's role in lifelong learning, training according to labour market needs. The acquisition of new skills and entrepreneurial attitudes extends beyond the traditional horizons, limited to the accumulation of knowledge, completing, this way, the development of human capital.

Against this backdrop, reforms and new Higher Education national laws in Europe have been numerous in the last 30 years.<sup>1</sup> Since 1986 this has been particularly

evident in 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Switzerland, Sweden and the United Kingdom. These countries made 35 large reforms. Chronologically, the first changes took place in Finland in 1986 with the approval of the Higher Education Act, and in the Netherlands with the University Education Act (Higher Education: Autonomy and Quality). France and Portugal are also good examples, with the Law for Freedom and Responsibilities of Universities (LRU in France in 2007) and Portugal's Legal Regime of Higher Education Institutions from the same year.

These 30 years represent a period of considerable university reforms, similar to what occurred in 1968 in other regards. It was very important even without considering the changes produced because of the implementation of Bologna process principles. As a result, we have seen a change in the relationship between governments and universities. This adjustment in the relationship between politics and universities could be summed up by the idea of more independence in exchange for the implementation of better accountability systems.

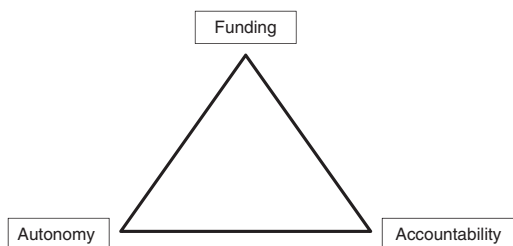
New ways of governing and management in universities are an immediate result of changing governance models. There are more rigorous funding models, better linked with performance and results in public universities. It is a combination of transparency and stimuli for a well-done job. This evolution has not happened at the same speed in all the countries. Nevertheless, the campuses with the most excellence in teaching and research are usually located in those countries with more advanced reforms in the governance of higher education institutions.

In summary, university autonomy has been increasing because of a reduction of regulation and adoption of efficient accountability systems. In addition, staffing autonomy is a permanent demand from universities to gain self-reliance in hiring and also in managing the workload for teaching and research. The professionalisation of management is an argument for staffing autonomy. The presence of professional staff suitable to each function is unavoidable in those new services related to a university's 'third mission' (the way the institution relates to its territory and participates actively in its economic and social development). Regarding university governing boards, external members are getting more relevance linking the university with regions and society. Finally, some systems lack differentiation between universities, which might be solved with more autonomy and specific funding, mainly in public systems.

## 2. Autonomy, Funding and Accountability

The above introduction points to a relationship between the autonomy of universities and their excellence. However, as shown in Figure 1 it is also important to take into account funding and accountability. Therefore, autonomy, funding and accountability cannot be considered isolated from each other. Each one is part of an indivisible one. The interaction between them determines the results of university policy. The three elements are necessary for an optimum balance. It is not enough to only take two of the elements.

Substituting accountability for the incentive system, Philip Aghion analysed the oscillation of the three elements underlining their interdependence.<sup>2</sup> He remarks that



**Figure 1.** University autonomy, funding and accountability.

if one only increases the funding and the autonomy, this could lead to misguided resource management. If only the autonomy and the incentives expand without a variation of funding linked to results, we could improve the efficiency but not provide faculties with the means required to reach excellence. Finally, if the funding and the incentives are increased and the autonomy remains the same, there will be low efficiency because the institution is not able to transform itself and take its own decisions.

In the following, we will now look into the effects of funding, accountability and autonomy on the excellence of university systems. In so doing, we will use the ARWU ranking as an indicator for the excellence of university systems.<sup>3</sup> This ranking adds the score achieved for each ‘national’ university ranked between positions 1 to 500 in ARWU 2015. The score for universities from the first 100 positions was published by ARWU 2015. The university ranked in the first position scored 100 points, while the university in 100th place obtained 23.9 points. ARWU did not publish the score assigned for the universities ranked from positions 101 to 500. So, to create a solution for this data problem, we have given a uniformed score for the universities ranked in each range: 20 points for all the universities ranked from positions 101 to 200; 15 points for those ranked between positions 201 and 300; 10 points for the universities in the 301-to-400 range; and 5 points for those ranked between positions 401 to 500.

### 3. Funding and Excellence of University Systems

As we relate funding to the excellence of university systems, our indicator is the expenditure per student in tertiary education, provided by the OECD.<sup>4</sup> Relating this variable to the overall ARWU score per millions of inhabitants (Table 1) we find that countries with higher funding in higher education exhibit higher excellence in their university system. On top are Switzerland, Sweden and Denmark and at the lower end are the Mediterranean countries of Italy, Spain and Portugal. We can establish a high positive linear correlation between the funding and excellence variables (0.89). Results might be very similar if we take data for academic excellence from other rankings such as Times and QS.

### 4. Accountability and Excellence

Accountability increases transparency of universities and produces an increment of trust in society towards university. There are two main components in

**Table 1.** Expenditure on HEI per students for tertiary education and academic excellence.

Country	ARWU Score	Population (million 2015)	ARWU Score/ Population	Expenditure per student
Switzerland	183.1	8.24	22.2	25 264
Sweden	192.8	9.75	19.8	22 534
Denmark	108,0	5.66	19.1	21 254
Netherlands	237.5	16.90	14.1	19 276
United Kingdom	774.9	64.88	11.9	24 338
Austria	65.0	8.58	7.6	15 549
Germany	542.3	81.20	6.7	17 157
France	356.1	66.42	5.4	15 281
Italy	215.0	60.80	3.5	10 071
Spain	135.0	46.45	2.9	12 356
Portugal	30.0	10.37	2.9	9 193

accountability: the response of a university to social needs and efficiency in resources management. It is definitely a comprehensive explanation about how a university is performing its functions, how public and private resources are managed, the state of a university and its comparison with others. Such accountability can and should have a more social and political nature so that it is not limited to a mere economic vision of the subject. For this reason, it must be addressed by at least by five different stakeholder groups, and be elaborated with all the rigor required but with the appropriate language for each of them: the university community, future students and families, businesses and industries, the governments they depend on, especially in the case of public institutions, and, finally, citizens in general who must be well informed to feel closer to the subject (this is often the case in American campuses and is cited as exemplary). Ideally, the greater the autonomy a Higher Education Institution has, the greater the exigency that it must submit regarding accountability.

In addition, accountability is useful for benchmarking, especially at the international level, the diversity of academic activities, in particular research and science production. It is a process to make individually, and not between university systems by countries. For a better result, benchmarking should be made with enough homogeneity between the institutions for the comparison.

As an example, Table 2 shows one of the areas compared in the benchmarking for a selected group of European technological universities included in the 2016 Accountability Report of the Universitat Politècnica de València:<sup>5</sup> the relation between two variables, i.e. the published articles per professor (in SCOPUS) and the budget per student enrolled. We can see considerable differences both in terms of publications and budget per student. Die Technische Universität München stands out at top on both variables, while Universitat Politècnica de València is lowest on publications as well as in the lower group in terms of budget per student.

**Table 2.** Published articles per professor (in SCOPUS) and university budget per student enrolled.

Institution	Country	Published article/ professor	Budget per student (€)
Die Technische Universität München	Germany	8.1	37 205
Royal Institute of Technology	Sweden	2.8	32 671
Warwick	United Kingdom	1.3	34 030
Delft	The Netherlands	1.0	6 084
Universitat Politècnica de València	Spain	0.7	9 774
Technical University of Lisbon	Portugal	1.2	9 319

### 5. University Autonomy and Excellence of University Systems

In 2007, the Lisbon Declaration of the European University Association established that there are four fundamental dimensions of university autonomy: academic, financial, organisational and staff management.<sup>6</sup> Academic autonomy implies the freedom of the institution to select future students, the creation and elimination of curricula, the definition of fields of research and their aims and methodologies, as well as the implementation of appropriate mechanisms for quality assurance. Financial autonomy corresponds to the setting of tuition fees, the possibility of borrowing and many other economic and financial aspects involved in the preparation of budgets, while organisational autonomy means the capacity of universities to design, implement and modify their structures, and the composition and selection of governing bodies. Staff management autonomy, finally, includes the recruitment of academic and management personnel, the establishment of salaries and the procedures for promotion of faculty and staff.

In order to analyse the relationship of each of the four types of autonomy to the excellence of university systems we have used data presented by the European University Association in its study of autonomy published in 2011 ‘University Autonomy in Europe II’.<sup>7</sup> For each type of autonomy, this publication establishes a set of indicators with weighting factors. This methodology implies a survey that the EUA targeted at university leaders from each country for quantification about the development of the four components of university autonomy in their systems.

Table 3 shows the indicators and weights assigned by the EUA for organisational autonomy, staffing autonomy, academic autonomy and financial autonomy, respectively. For the calculation of the score of each of the four types of autonomy, the EUA designed a procedure by experts from each country that quantified the indicators.

Specifically, there are eight indicators for organisational autonomy, eight indicators for staffing autonomy, seven for academic autonomy, and seven for financial autonomy. Regarding the relevance of each of them, the weight of the indicators for

**Table 3.** Indicators and weights for the four types of autonomy according to the European University Association.

Organisational autonomy		Staffing autonomy		Academic autonomy		Financial autonomy	
Indicators	Weight	Indicators	Weight	Indicators	Weight	Indicators	Weight
Selection procedure for the executive head	14%	Capacity to decide on recruitment procedures of professors and researchers	13%	Capacity to decide on overall student numbers	14%	Length of public funding	14%
Selection criteria for the executive head	14%	Capacity to decide on recruitment procedures of administrative staff	13%	Capacity to select students (BA, MA)	14%	Type of public funding	13%
Dismissal of the executive head	12%	Capacity to decide on salaries of professors and researchers	12%	Capacity to introduce programmes (BA, MA, PhD)	16%	Ability to keep surplus	14%
Term of office of the executive head	9%	Capacity to decide on salaries administrative staff	12%	Capacity to terminate programmes	13%	Ability to borrow money	9%
Inclusion of external members in university government bodies	12%	Capacity to decide on dismissals professors and researchers	12%	Capacity to choose the language of instruction (BA, MA)	15%	Ability to own buildings	12%
Selection of external members for university government bodies	12%	Capacity to decide on dismissals of administrative staff	12%	Capacity to select quality assurance mechanisms and providers	11%	Ability to charge tuition fees for national/EU students	17%
Capacity to decide on academic structures	15%	Capacity to decide on promotions of professors and researchers	13%	Capacity to design content of degree programmes	17%	Ability to charge tuition fees for non-EU students	21%
Capacity to create legal entities	12%	Capacity to decide on promotions of administrative staff	13%				

**Table 4.** Total score for each type of autonomy per country and the indicator of excellence.

Country	Organisational autonomy	Staffing autonomy	Academic autonomy	Financial autonomy	ARWU Score/ million
Switzerland	44	95	72	65	22.2
Sweden	55	95	66	56	19.8
Denmark	94	86	56	69	19.1
Netherlands	69	73	48	77	14.1
United Kingdom	100	96	94	89	11.9
Austria	78	73	72	59	7.6
Germany	75	59	68	46	6.7
France	59	43	37	45	5.4
Italy	56	49	57	70	3.5
Portugal	80	62	54	70	2.9
Spain	55	48	57	55	2.9
Greece	43	14	40	36	1.4

organisational autonomy varies between a maximum of 15% and a minimum of 9%. The oscillation in the weight of the indicators used in staffing autonomy is between 12% and 13%. For academic autonomy, the range of weights is between 11% and 17%, while for financial autonomy the difference between the maximum and minimum values is the greatest, ranging between 9% and 21%. The highest value of each indicator corresponds to the option in which the university makes the corresponding decision and assumes the responsibility for having done so.

As an example, for each type of autonomy, the greatest value of the first indicator for organisational autonomy, 'selection procedure for the executive head', means that the selection of senior executives does not have to be validated by any external authority or government. Also, for staffing autonomy, the highest value for the first indicator, 'capacity to decide on recruitment procedures of professors and researchers', signifies recruitment is freely carried out by universities. The highest value for the first indicator corresponding to academic autonomy, 'capacity to decide on overall student numbers', implies the university decides on the total number of students. Finally, regarding financial autonomy, the last indicator, 'ability to charge tuition fees for non-EU students', means that the university is free to fix its price levels for tuition fees. Similar comments can be made for the remaining indicators in each of the autonomies.

Table 4 shows the results obtained by country and for each type of university autonomy (organisational, staffing, academic and financial management) as well as the ARWU Score per million inhabitants. It shows that the universities in the United Kingdom have the highest autonomy in terms of all four types. For organisational autonomy Denmark, Portugal and Austria exhibit scores above 75, while Switzerland and Greece have scores below 50. With respect to staffing autonomy the United Kingdom, Sweden, Switzerland and Denmark score above 75, whereas the

Mediterranean countries Italy, Spain, France and Greece are below 50. In terms of academic autonomy, it is only the United Kingdom that has a score above 75 and the countries below 50 are the Netherlands, Greece and France. A financial autonomy, finally, above 75 was found in the United Kingdom and the Netherlands

The results shown in Table 4 imply that the most linear adjusted relationship is between staffing autonomy and excellence, resulting in a correlation of 0.84, followed by financial autonomy (0.38), academic autonomy (0.39) and organisational autonomy (0.12). In all the cases, the correlation is positive even though in some cases, the linear correlation is almost zero. The average of the four types of autonomy related to excellence results in a correlation of (0.57) although, certainly, each type of autonomy should have a different weight accordingly.

In relation to the above results it can be concluded that, although university autonomy has had a great development in Europe, there are still many restrictions on its full use. The recent policies of economic austerity have reduced both financial autonomy and staffing. In addition, the capacity of European universities to own and use buildings is remarkable, although more symbolic than realistic in most cases. In addition, some academics view the strict and exhaustive procedures for accreditation of curricula within the new legal status for quality assessment agencies as serious limitations for university autonomy.

## 6. Conclusions

The above leads to an undeniable conclusion: for good university governance, it is imperative that academic results achieved by institutions be valued, recognised and considered in the allocation of new resources. In addition, there should be mechanisms for long-term funding of public institutions by governments so that universities have sufficient stability in planning their educational offer and consolidating research teams. One of the worst risks that universities can suffer is 'short-termism', so is the existence of operating regulations or organisational structures that limit their creativity and penalise their willingness to take risks and only 'work on what is safe'.

More university autonomy values the intervention of academics in their own areas. A good example of this is the ad hoc committees set up at the Massachusetts Institute of Technology (MIT), which have sought to give the floor to those who wish to contribute to innovative educational or research initiatives. It is an attempt to involve teachers and researchers without distracting them for too long from their academic tasks. The report from this committee says:<sup>8</sup> '[it is] absolutely essential for MIT operation, much more than the official committees, for being a source of dynamism and collegiality of our Institution'. This is a best practice of how university autonomy can be understood.

According to the above analysis, the university systems best ranked are also those with the highest expenditure and those, the same ones, with more autonomy, mainly in staffing and finances. The United Kingdom, Sweden, Switzerland, Denmark and the Netherlands form this solid group of the best-ranked university systems. It is not



a coincidence. It is a fact that universities permanently demand continuous progress of their governance regulation in order to increase their capacity to improve their results.

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