

Strong Research Performers” vs. “Strong Teaching Performers” in European Higher Education: a Comparative Quantitative Perspective

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Introduction

Teaching and research are still the two fundamental dimensions of the academic enterprise, despite the increasing role of various, as they are termed in Europe, “third mission activities” (Kwiek 2013). Few academic studies of the academic profession have addressed the nexus of teaching and research from a consistently quantitative perspective. Most comparative studies available until recently were either focused on a small cluster of countries or based on qualitative material combined with publicly available statistical data. At a European level, studies were either of a general nature and based on often incompatible national methodologies, or referred to relatively simple, aggregated data produced by the OECD or the EUROSTAT, the European Commission’s statistical office. This paper explores the teaching/research nexus in European systems through large-scale comparative data on the research and teaching time allocation (academic behaviors) and teaching or research role orientation (academic attitudes).

Traditionally, only research has been related to prestige, and prestige-seeking is the core of the academic enterprise. Reputation is “the main currency for the academic” (Becher and Kogan 1980, p. 103) and it derives from research rather than from teaching (Altbach 2007; Clark 1983, 1987). Individual research output makes a difference between high performers and low performers in science. The distinctiveness of European higher education has traditionally been in its ability to combine the two core university missions. The Humboldtian tradition in this respect has been surprisingly strong across Europe, but not in other world regions, especially not in

developing countries expanding their higher education systems rapidly in the last few decades. Traditionally, the role of research in academia was clearly defined: as Clark formulated it, “it is research, as a task and as a basis for status that makes the difference. ... The minority of academics who are actively engaged in research lead the profession in all important respects. Their work mystifies the profession, generates its modern myths, and throws up its heroes” (Clark 1987, p. 102). The academic prestige and institutional promotions in research universities are still related exclusively to research achievements. Research is done “in time freed from teaching,” professors are “saving hours for research” and time spent on teaching is “time diverted,” as Clark (1987, pp. 72-73) stressed. Faculty members, particularly in research universities, value research over teaching because, as Dill argues, among other things, “in competitive research and labor markets, which are becoming more common around the world, time spent on research can lead to increased grant revenue and future earnings for the individual faculty member” (Dill 2005, p. 181).

Data and Methods

Two recent large-scale comparative surveys of the academic profession, the *Changing Academic Profession 2004-2012* (CAP) global project and the *Academic Profession in Europe: Responses to Societal Challenges 2009-2012* (EUROAC), its European twin project, made comparative academic profession studies “data rich” for the first time. Both projects gave rise in the last few years to a long list of quantitative studies (Bentley et al. 2013; Cummings and Finkelstein 2012; Teichler et al. 2013). The global project is based on a survey of over 25,000 academics in 19 countries globally, and the latter is based on a survey of over 7,500 academics from five European countries. This paper

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uses data from the CAP and EUROAC datasets to discuss eleven European countries (the author was coordinating the Polish EUROAC research team in 2010-2012, with about 3,600 returned surveys). Both projects were using the same questionnaire, originally used in the 1992 Carnegie Foundation global survey of the academic profession. Consequently, we follow here the “Gold standard” in social sciences (and in higher education studies): research is based on primary data.

The paper uses three independent variables to explore four items of interest: total self-reported weekly work hours, total weekly self-reported hours spent in teaching (and those spent in research), and self-reported orientation to teaching vs. research. The three independent variables selected are academic field, gender, and age (for lack of space, we do not report findings on institutional type and career stage). Both descriptive statistics and logistic regressions for all countries were used but inferential results are not discussed here for the same reason. Please contact the authors should you wish to have this data. The eleven countries for which primary data is available represent all major European higher education models and come from all types of European welfare states systems.

Findings: Academic Behaviors

There is a clear distinction between two types of higher education systems in Europe. Both behavioral patterns (how academics work, expressed in working hours spread across different academic activities) and attitudinal patterns (what academics think, expressed in self-reported academic teaching/research role orientation) are consistently coherent across the two families of nations. Type 1 nations include Switzerland, Finland, Germany, Norway, the United Kingdom and Austria, and Type 2 nations include Poland, Italy, the Netherlands, Portugal and Ireland. We term Type 1 systems “strong research performers” and Type 2 systems “strong teaching performers.” We make no reference to actual research output in two system types, though, which could also be a dependent variable defined through a composite “publication index.”

In terms of academic behaviors, a paradigmatic Type 1 system of higher education is Switzerland, and a

paradigmatic Type 2 system is Poland (Figures 1 and 2). The difference in the time allocation between teaching and research across the age groups of academics in both system types is striking: while in Switzerland “young academics” (a term we will use to refer to academics up to 39 years old) spend about 25 hours per week on research activities, in Poland they spend on research about half of that time (14 hours). At the same time, while Swiss young academics teach about seven hours per week, their Polish colleagues teach almost three times more (19 hours). In Switzerland, research time is sharply decreasing with age, while teaching time is sharply increasing with age. In Poland, in contrast, there is a stable distribution of teaching and research time across all age groups of academics: Polish academics are teaching about 20 hours per week and they are spending about 14 hours per week on research activities. There are no differences between the teaching and research time allocation between young, mid-career (academics in their 40s and 50s) and old academics (in their 60s). The two contrasting patterns of teaching and research behaviors are consistent across all eleven European systems studied, with some minor deviations.

Thus in Type 1 systems, in terms of time allocation, young academics are very high research performers (20-25 hours on average) and very low teaching performers (6-9 hours on average); and old academics are high teaching performers (18-20 hours on average) and low research performers (10 hours on average). Consequently, in Type 1 systems, there is a powerful intergenerational division of labor between young and old academics. Research time in such countries as Switzerland and Finland goes down drastically from about 25 hours per week (and in Germany, Norway, and the UK from about 20 hours) for young academics in their 20s and 30s to about 10-12 hours for academics in their 50s and 60s.

In all Type 2 systems, in contrast, both young and old academics are stable high teaching performers and stable medium (or low) research performers. The pattern of time allocation is constant across all age groups, with high teaching time (about 20 hours), and low research time: with only a small difference between Polish and Italian academics spending about 15 hours on research, and the other three countries (the Netherlands

FIGURE 1

HOW LONG DO FACULTY SPEND ON VARIOUS ACADEMIC ACTIVITIES (WHEN CLASSES ARE IN SESSION):
BY AGE GROUPS (HOURS PER WEEK): SWITZERLAND

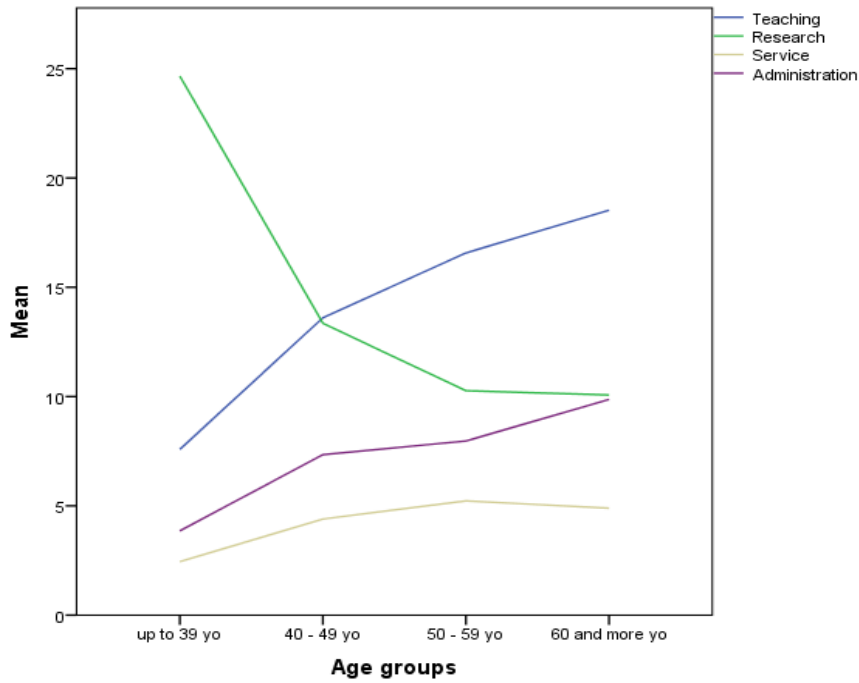
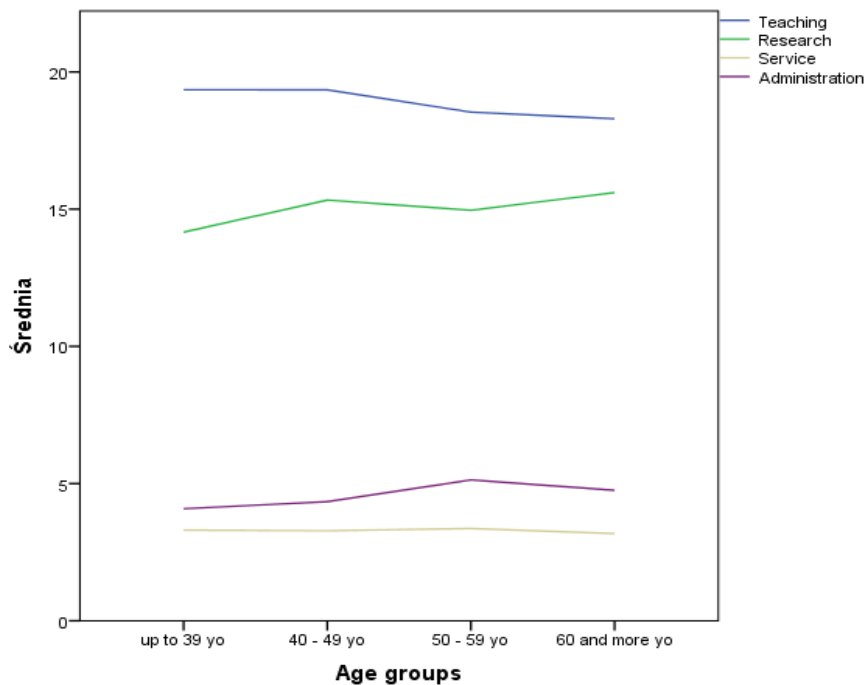


FIGURE 2

HOW LONG DO FACULTY SPEND ON VARIOUS ACADEMIC ACTIVITIES (WHEN CLASSES ARE IN SESSION):
BY AGE GROUPS (HOURS PER WEEK): POLAND



Ireland, and Portugal) spending only about 10 hours on research throughout their careers.

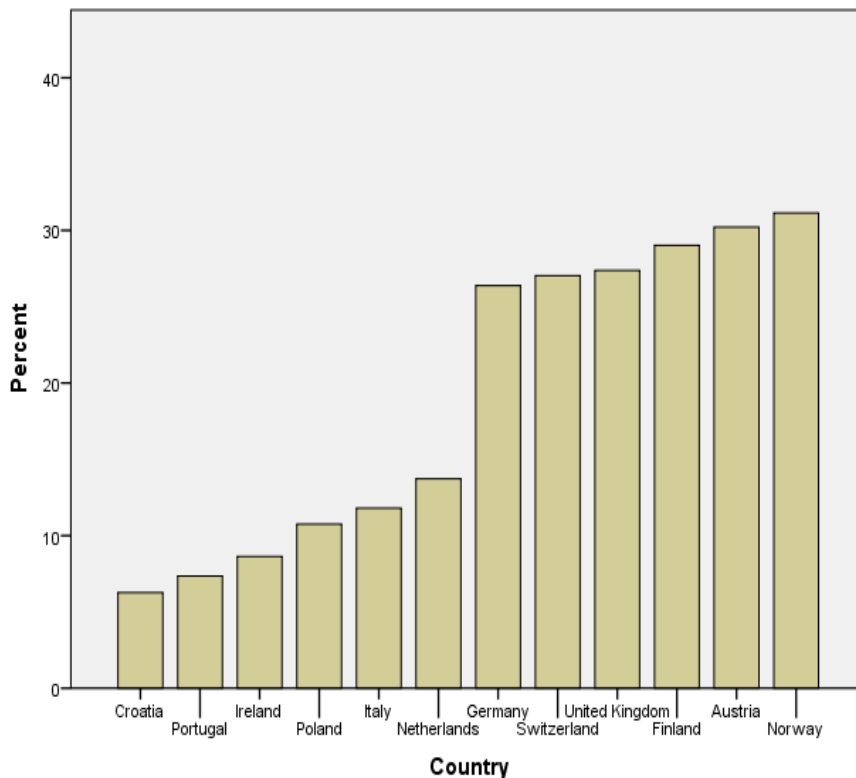
Findings: Academic Attitudes

In terms of academic attitudes, in general, the emergent pattern closely mirrors the pattern of academic behaviors discussed above. European systems studied through academic behaviors can be grouped into exactly the same Type 1 and Type 2 systems. In both CAP and EUROAC surveys, academics were asked the following question about their role orientation: “Regarding your own preferences, do your interests lie primarily in teaching or in research?” with four possible answers: “primarily in teaching,” “both, but leaning towards

teaching,” “both, but leaning towards research,” and “primarily in research.”

In Type 1 systems the share of academics heavily involved in research (whom we term here “hardcore researchers”) is between two and three times higher than in Type 2 systems. In the former systems the share ranges from 26 percent (Germany) to 30-31 percent (Norway and Austria), and in the latter systems it ranges from 7-8 percent (Portugal and Ireland) to 11-14 percent (Poland, Italy, and the Netherlands). Figure 3 shows the share of hardcore researchers in all countries studied. The present analysis explores age groups but further analysis for hardcore researchers shows considerable variations across academic disciplines, gender and career stages.

FIGURE 3
RESEARCH-ORIENTATION, ALL ACADEMICS (“REGARDING YOUR OWN PREFERENCES, DO YOUR INTERESTS LIE PRIMARILY IN TEACHING OR IN RESEARCH? ANSWER “PRIMARILY IN RESEARCH” ONLY) (PERCENT)



With age groups as an independent variable, the patterns of research orientation are similar: in Type 1 systems, a share of “hardcore researchers” is generally more than 40 percent among young academics (the highest share is 47 percent for Finland and the lowest is 34 percent for Switzerland, with Austria, Germany, Norway and the UK in the 40-43 percent range) and generally only 10-20 percent among old academics (the highest share is for Austria, the UK, Switzerland and Norway, in the 13-21 range). The share is less than 10 percent among old Finnish and German academics (9.5 and 8.4 percent, respectively). Consequently, the slide in research orientation with age is the highest in Finland and Germany, and it is by about 40 percentage points in the former and by about 30 percentage points in the latter. In contrast, the slide in research orientation between academics up to 39 years old and 60 years old and older for Type 2 systems is much smaller. It is generally by about 10 percentage points, or even non-existent, as in the case of Ireland (10.1 and 9.4 percent) and Portugal (6.1 and 6.6 percent). The differences are shown in Table 1 at the end (similar patterns across European systems emerge also for “research-oriented” academics more traditionally grouped together as those showing role preference “primarily for research” and for “both, but leaning towards research.” Research orientation across age groups again sharply divides Type 1 and Type 2 systems).

Both Type 1 and Type 2 systems show strong coherence between academic behaviors and academic attitudes across age groups with reference to teaching and research. The allocation of time for research and for teaching changes with academics’ age roughly together with their role orientation: in Type 1 systems, young academics with strong research orientation are devoting three to four times more time to research, and in older age groups, decreasing research commitment is accompanied by substantially less research time. In Type 2 systems, the time allocation is stable across age groups, together with stable role orientation. There seem to be no major clashes between academics’ self-declared teaching or research orientation and actual teaching and research hours. Low research orientation of young academics is accompanied by medium to low research hours. As research hours are low (or medium) but stable

in all age groups, there seems to be no conflict caused by sharply declining research interests with age. Beliefs and work practice seem to be meeting in all countries studied, and this is perhaps one of the reasons why European academics are overall quite satisfied with their jobs (Bentley et al. 2013).

Further Steps: Gender and Academic Disciplines

Finally, gender and academic disciplines can be combined with age groups in exploring the teaching/research nexus. In terms of academic attitudes, the male/female differentiation in research orientation is very significant for all age groups and all systems but no patterns similar to Type 1 and Type 2 systems established for all academics can be drawn. For young “hardcore researchers,” the gender difference in share is very small for Austria (42 male academics vs. 40 percent female academics), Germany (42 vs. 40), and Italy (21 vs. 20) or even non-existent as in Portugal (6.2 vs. 6.2). The difference is highest for the United Kingdom (51 vs. 33), Norway (49 vs. 36), and Switzerland (30 vs. 39). In almost all countries the share of female young “hardcore academics” is lower (and exceptions include Finland, Switzerland, and the Netherlands). Only in two countries the share of “hardcore researchers” exceeds 50 percent: these are young female researchers in Finland and young male researchers in the United Kingdom (see Table 2 at the end of the article). Also in all countries studied, there is a clear disciplinary pattern in research orientation: research orientation in Type 1 systems is the highest in what we have grouped together under two headings: “life sciences and medical sciences” and “physical sciences and mathematics” (and is generally in the 30-40 percent range) and the lowest in “humanities and social sciences” (in the 15-25 percent range). In Type 2 countries, it is the highest for “life sciences and medical sciences” and “physical sciences and mathematics” (as in the Netherlands, Poland, and Portugal, and is generally in the 10-20 percent range), and relatively high for “humanities and social sciences” (as in the Netherlands and Italy, in the 15 percent range). Type 1 systems, not surprisingly, show on average higher research preference in all academic disciplines.

In terms of academic behaviors, in all Type 1 and Type 2 systems female academics work fewer hours per week than male academics. Only in Poland female academics work longer hours (46 vs. 44), and their combined working time (teaching, research, service, administration, and other activities) is the highest in Europe. Not surprisingly, both Swiss male and female academics show the longest research hours and the shortest teaching hours in Europe. In all Type 1 systems, both male and female academics spend more time on research than on teaching, with two exceptions: women academics in Finland and in the UK. There is also a clear disciplinary pattern in working hours across academic fields: in Type 1 systems, research hours are longer than teaching hours in such fields as “life sciences and medical sciences” and “physical sciences and mathematics” and teaching hours are longer in “humanities and social sciences” and “professions.” In Type 2 systems, teaching hours are longer in all academic fields.

Policy Implications

European universities are not in a state of equilibrium and the dynamics of changes can for the first time be quantitatively analyzed across countries, generations, disciplines, institutional types, career stages, and gender. There are several interesting implications of above findings. There are huge intergenerational differences between young and old academics in Type 1 (“strong research performers”) systems. The academic universe of young academics in Switzerland, Finland, Norway, Germany, the United Kingdom and Austria seems fundamentally different from that of old academics in these countries. There is high intergenerational clash between academics in their 20s and 30s (with very high research orientation combined with very heavy research involvement) and academics in their 50s and 60s (with their steeply declining research orientation and heavy teaching loads). When a young generation of academics gradually replaces older generations, will there be a big research-orientation shift in these countries? Will they be even more “strong research performers” than today,

leading to an even greater contrast between Type 1 and Type 2 systems in Europe? It is very possible.

The drivers of behavioral and attitudinal differences between generations could be, for instance, research funding made more available (on an increasingly competitive basis) to younger academics or almost purely research-based promotion requirements. In the context of the overall increasing competition in academia, individual research achievements can be viewed as the only competitive advantage (Kwiek 2012a, 2012b). High teaching hours for young academics in such countries as Italy, Poland, Ireland, Portugal, and the Netherlands (Type 2 systems or “strong teaching performers”) may effectively cut them off from research achievements comparable to those from Type 1 systems. Their high teaching involvement effectively reduces the number of hours left for research. Although there seem to be no intergenerational conflicts regarding the role orientation in Type 2 systems, this comes at a cost of possible low research performance of young academics, and overall low research performance in these systems. A new generation of academics in “strong teaching performer” systems does not seem to be willing to be more attached to research than older generations, and in many disciplines their preference for research is lower (as studied through “new entrants” vs. “full professors” variables). National recruitment and promotion policies seem to have an increasing significance: who gets recruited and who is retained in academia will define the future of the teaching/research nexus in Europe.

Consequently, the division of labor between teaching and research in the future has both national and cross-national implications. Effectively, the gap between current systems which are “strong research performers” (owing to their young faculty with research-oriented working habits and high research orientation) and systems which are “strong teaching performers” may grow even bigger if the latter do not adjust their national and institutional recruitment and promotion policies to the changing European realities.

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TABLE 1

RESEARCH-ORIENTED FACULTY, BY AGE GROUPS (QUESTION: “REGARDING YOUR OWN PREFERENCES, DO YOUR INTERESTS LIE PRIMARILY IN TEACHING OR IN RESEARCH?” ANSWER: “PRIMARILY IN RESEARCH” ONLY) (PERCENTAGE)

Age Groups/ Countries	Austria	Finland	Germany	Ireland	Italy	Netherlands	Norway	Poland	Portugal	Switzerland	United Kingdom
Up to 39	40.9	47.3	41.0	10.1	20.7	21.6	42.8	17.6	6.1	34.1	41.4
40-49	20.0	25.2	19.8	7.6	15.2	9.6	36.2	10.7	8.1	20.6	27.6
50-59	23.1	14.1	13.2	6.9	10.7	12.6	20.2	6.2	5.3	12.9	16.4
60 and more	21.1	9.5	8.4	9.4	6.2	9.7	16.0	5.7	6.6	13.0	18.0

TABLE 2

RESEARCH-ORIENTED FACULTY, BY GENDER AND AGE GROUPS (QUESTION: “REGARDING YOUR OWN PREFERENCES, DO YOUR INTERESTS LIE PRIMARILY IN TEACHING OR IN RESEARCH?” ANSWER “PRIMARILY IN RESEARCH” ONLY, M—MALE, F—FEMALE) (PERCENTAGE)

Age Groups/ Countries and Gender	Austria		Finland		Germany		Ireland		Italy		Netherlands		Norway		Poland		Portugal		Switzerland		United Kingdom	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Up to 39	41.8	39.7	44.2	50.4	41.8	39.6	13.6	7.1	21.3	19.7	18.3	24.4	48.8	36.1	22.1	13.9	6.2	6.2	30.3	38.8	51.4	32.5
40-49	18.5	22.2	28.1	21.1	18.0	24.2	8.2	7.1	15.8	14.2	9.8	9.1	39.7	31.7	12.7	8.9	12.3	3.2	17.9	25.1	30.7	24.3
50-59	27.7	12.3	19.5	7.2	8.8	22.1	8.1	3.9	13.4	5.5	14.6	8.8	16.3	26.3	8.2	2.6	7.9	1.9	11.1	17.8	17.0	15.6
60 and more	22.8	0.0	8.6	10.9	8.2	9.2	12.8	0.0	6.8	4.1	9.4	11.7	17.2	12.5	5.6	5.3	7.7	2.6	15.1	2.0	14.9	25.2