

Chapter 7

Determinants of Academic Job Satisfaction in Germany

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7.1 Introduction

Academic contributions are strongly dependent on individual commitment and motivation. In a changing environment, where universities as well as other higher education institutions are in processes of transformation, academics increasingly find themselves caught between discordant institutional goals. Universities aim both to pursue outstanding innovative research which strikes the balance between a basic, applied commercial or social emphasis and to educate students. These manifold academic tasks have to be taken care by the academic staff. In most cases, the same individual scholars are in charge of multiple tasks (Kreckel 2008). To fulfil varied tasks can be perceived as complementary or as opposing, as enriching or as distracting from the pursuit of any single task. The academics' schedule entails freedom and requires making decisions to prioritise and to select foci. Therefore, the actual academic work is strongly shaped by an individual commitment and motivation, and this is closely linked to professional satisfaction. The aim of the subsequent analysis is to explore how changing environments, contractual conditions, resources, time budget and the managerial style prevailing within one's institutional setting influence the academics' personal overall satisfaction.

Satisfaction in one's professional life is a key element in making a profession attractive (Cabrita and Perista 2007b), and it can contribute to success at work and personal well-being. Actually, overall job satisfaction is addressed in most surveys on employment, but few studies aim to explore the factors which determine the job satisfaction of the academic profession.

There are several concepts of job satisfaction. A most elementary approach to satisfaction explains it as the result of a comparison between the target (expectation)

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Table 7.1 Institutional type and academic rank of academics in Germany (percentage)

	Universities	Universities of applied sciences	Research institutes
Senior position	14	69	29
Junior position	86	31	71
Total	100	100	100
Total (<i>n</i>)	(1,017)	(132)	(465)

Source: CAP data set (May 2010)

Question A9: How would you describe your current institution?

Question A10: What is your academic rank?

and the perception of the actual condition (realisation of expectation). According to this approach, an insufficiently realised expectation leads to dissatisfaction (Rudow 1994, cited by Enders 1996). Rose views job satisfaction ‘as a bi-dimensional concept consisting of intrinsic and extrinsic satisfaction dimensions. Intrinsic sources of satisfaction depend on the individual characteristics of the person, such as the ability to use initiative, relations with supervisors, or the work that the person actually performs; these are symbolic or qualitative facets of the job. Extrinsic sources of satisfaction are situational and depend on the environment, such as pay, promotion, or job security; these are financial and other material rewards or advantages of a job. Both extrinsic and intrinsic job facets should be represented, as equally as possible, in a composite measure of overall job satisfaction’ (Rose 2001, cited by Cabrita and Perista 2007a). In the ‘Changing Academic Profession’ (CAP) survey, satisfaction is addressed with the question ‘How would you rate your overall satisfaction with your current job?’; that means that to a certain extent, satisfaction is viewed as underlying the personal interpretation of the respondents.

The subsequent analysis of the 2007 CAP survey focuses on the responses of the German academics in an international comparative perspective. The sample comprises respondents from German universities, universities of applied sciences and public research institutes.

7.2 The German Academics Surveyed in the CAP Study

A total of 1,709 academics responded to the German CAP survey. The subsequent analysis excludes respondents from types of institution represented only marginally in the study (e.g. colleges of fine arts) and thus is based on 1,630 responses from academics at universities, universities of applied sciences and public research institutes. The sample has been weighted in order to make it correspond closely with the overall population of academics at these three institutional types.

Table 7.1 shows that the proportion of junior academic staff varies in Germany substantially by institutional type. At universities, we note that six times as many junior academics are employed as senior academics (persons in positions equivalent to professor and associate professor in the US higher education system).

Table 7.2 Institutional type and gender of academics in Germany (percentage)

	Universities		Universities of applied sciences		Research institutes	
	Senior	Junior	Senior	Junior	Senior	Junior
Male	81	62	80	81	91	79
Female	19	38	20	19	9	21
Total	100	100	100	100	100	100
Total (<i>n</i>)	(135)	(787)	(86)	(36)	(115)	(276)

Source: CAP data set (May 2010)

Question F1: What is your gender?

Research institutes also have a quantitative dominance of junior staff. In contrast, most academic positions at universities of applied sciences are professorial positions. These differences are due to the fact that junior academics are predominantly assigned research tasks and that universities of applied sciences are primarily expected to provide teaching (cf. the information on the academic profession in Germany provided in Teichler 1990, 2007; Kehm 1999; Bracht and Teichler 2006). It should be added here that the career patterns for professorships vary according to the type of institution. The dominant entrance qualification for university professors as well as for directors at research institutes is the ‘habilitation’ (a postdoctoral academic degree), whereas the 5 years of postdoctoral professional experience required for a professorial position at a university of applied sciences would usually comprise several years of professional experience outside academia (i.e. in professional areas in which their students are likely to be employed after graduation).

The proportion of women among senior academics is relatively low in international comparison: one-fifth or even less in the three institutional types. Among junior academics, more than one-third at universities are women, but only about one-fifth at each of universities of applied sciences and research institutes. This reflects the high proportion of science and engineering academics in the latter two institutional types. There are lively discussions in Germany about the extent to which the relatively low percentage of women among academics can be attributed to a ‘glass ceiling’ effect, that is, a relatively stable barrier for women as far as success in academic careers is concerned, or to a cohort effect according to which gender inequalities tend to be eroded gradually over time (Table 7.2).

7.3 Satisfaction in Comparative Perspective

In response to a five-point scale from 1 = very high to 5 = very low, German university professors expressed an average satisfaction of 2.24 (standard deviation 0.94), which exactly corresponds the average of 18 countries and regions addressed in the

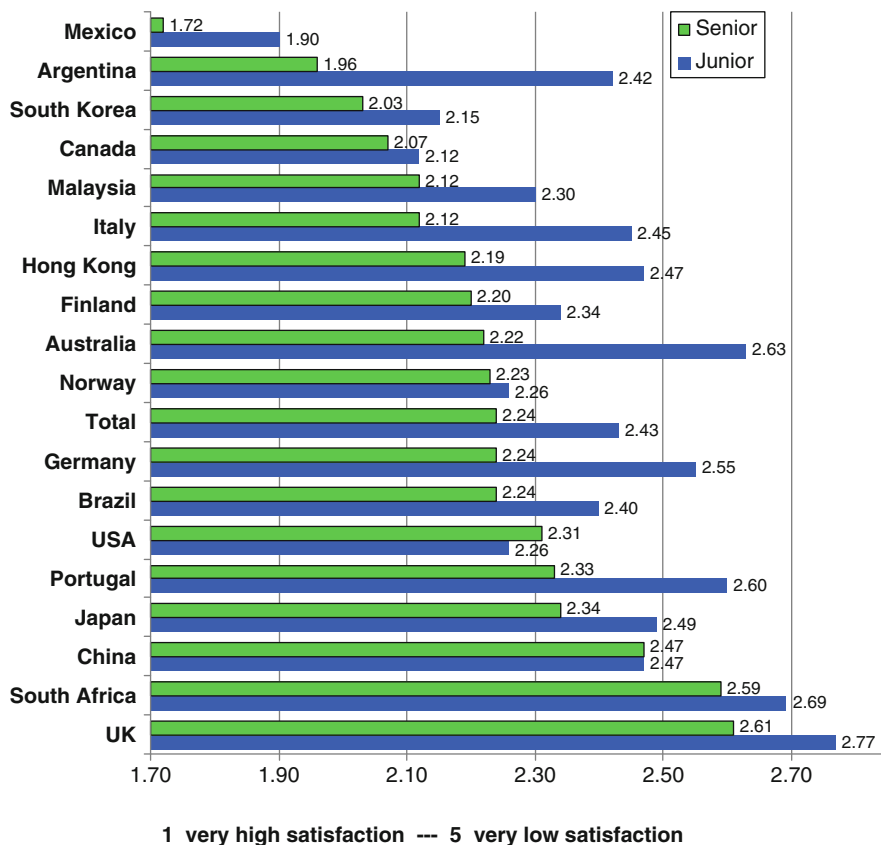


Fig. 7.1 Satisfaction of junior and senior academics at universities – international comparison (arithmetic mean). B6: How would you rate your overall satisfaction with your current job? Scale of answers: 1 = very high to 5 = very low (Source: CAP data set (May 2010))

CAP survey. Figure 7.1 shows a substantial variation by country. Senior academics from Mexico (1.72) and Argentina (1.96) are most highly satisfied on average, while senior academics in China (2.47), South Africa (2.59) and the United Kingdom (2.61) are the least satisfied. Russo (2010) notes in his study that Asian academics are relatively dissatisfied compared to European and North-American academics; according to this study, this holds true for senior academics in China and Japan, but not for those in Korea, Malaysia and Hong Kong.

In all countries except for China and the USA, junior academics at universities are somewhat less satisfied than their senior colleagues. The pattern by country is similar to that among senior academics. In Mexico, junior academics are the most satisfied (1.90) and the juniors in South Africa (2.69) and the United Kingdom (2.77) are least satisfied. German junior academics at universities rate 2.55 on average, that is, they are slightly less satisfied than the mean of all academics surveyed (2.43).

Actually, 55% of the junior academics as compared to 70% of senior academics at German universities expressed a very high or a rather high degree of satisfaction (cf. the analysis of the changes of junior academics' satisfaction over time in Germany in Jacob and Teichler 2009; cf. also Enders and Teichler 1995a, b; Grünh et al. 2009).

The differences of ratings between the senior and the junior academics, however, vary substantially by country: junior academics from Argentina and Australia are clearly less satisfied on average than senior academics from the universities of these two countries.

A high degree of academics' overall satisfaction with one's job does not come as a surprise. Similar results can be found in surveys in most countries across most occupational groups (see Parent-Thirion et al. 2007; Cabrita and Perista 2007a). This is often explained as a normal psychological effect: individuals have to identify themselves at least in part with their organisation in order to be able to undertake their work. Being 'inside' the system would put individuals into an inner conflict if they allowed themselves to be dissatisfied. Allowing oneself to accept dissatisfaction comes close to an inner termination and suggests looking for other job opportunities. Similarly, job satisfaction can be viewed as the normal result of a self-selecting effect: employees being extremely dissatisfied will try to change the character of their workplace or will seek another position (see Bruggemann et al. 1975).

In the framework of this study, we cannot interpret the differences between the countries simply as an indication of differences in conducive working conditions. Rather, satisfaction must be seen in a cultural context. In so-called 'high-context' cultures, disagreement is expressed with great caution. Therefore, a statement of dissatisfaction by staff from such cultures, for example, China and Japan, can be interpreted as being based on an even more highly dissatisfied feeling (see Hoecklin 1995). Such a concept, however, does not explain why academics in Mexico express such a higher level of satisfaction than those in Finland and Germany, for example. Further analysis would be needed to disentangle cultural effects from actual responses to the employment and work conditions.

The CAP questionnaire comprised several questions which are closely linked to that of the overall satisfaction:

- Have you considered a major change in your job? And did you take concrete actions to make such a change? – to work outside higher education?/research institutes?
- This is a poor time for any young person to begin an academic career in my field.
- If I had it to do over again, I would not become an academic.
- My job is a source of considerable personal strain.
- Working conditions in higher education: improved/deteriorated.

Obviously, the variables differ in the extent to which they can be considered as being conceptually close to overall satisfaction. Again, the meaning of the questions might differ culturally; for example, the meaning of 'strain' might vary by society,

for example, if the society is rather hedonistic or rather follows a ‘no pain, no gain’ or ‘no sweet without sweat’ attitude.

An analysis of the links between these variables for both senior and junior academics at universities shows that all of them correlate significantly (Pearson’s r is two-tailed significant at the .01 level) with overall satisfaction. Thereby, the variable ‘If I had it to do over again, I would not become an academic’ correlated most highly with overall satisfaction. However, such positive correlations cannot be observed consistently across all countries. There is no significant correlation for Mexican senior and junior academics and senior academics in China, Portugal and Finland as regards the variable ‘This is a poor time for any young person to begin an academic career in my field’. This suggests that academics of these categories in these countries might be satisfied even if they believe that now would be a bad time to embark on an academic career.

As these variables address very different thematic areas and they have no further explanatory value for the overall level of professional satisfaction, they will not be considered in the subsequent analyses.

7.4 Socio-biographic and Institutional Factors

7.4.1 *Institutional Type*

Table 7.3 demonstrates the differences in overall satisfaction according to the institutional type in Germany. Both senior and junior staff at public research institutes are clearly more often highly satisfied than those at higher education institutions. For example, a very high degree of satisfaction is expressed by 44% of the directors at research institutes in contrast to 20% among university professors and 19% of the professors at universities of applied sciences. The means presented in Table 7.3, however, indicate that the overall professional satisfaction is slightly higher at universities than at universities of applied sciences in Germany.

7.4.2 *Gender*

All female academics, both senior and junior, at German universities are slightly less satisfied on average than their male peers. As Table 7.4 shows, a similar difference can be observed for senior academics in all countries addressed in the CAP study except for Finland and the USA. In contrast, female junior academics at universities are equally satisfied as men or more highly satisfied in a substantial number of countries. Again, it would be interesting to see whether there are relatively stable conditions that are conducive to higher satisfaction levels among professors or

Table 7.3 Satisfaction of academics in different institutions and ranks in Germany (arithmetic mean)

	Universities	Universities of applied sciences	Research institutes
Senior position	2.19	2.33	1.67
Junior position	2.53	2.72	2.10
Total	2.48	2.45	1.97

Source: CAP data set (May 2010)

Question B6: How would you rate your overall satisfaction with your current job? Scale of answers: 1 = very high to 5 = very low ($N=1,499$)

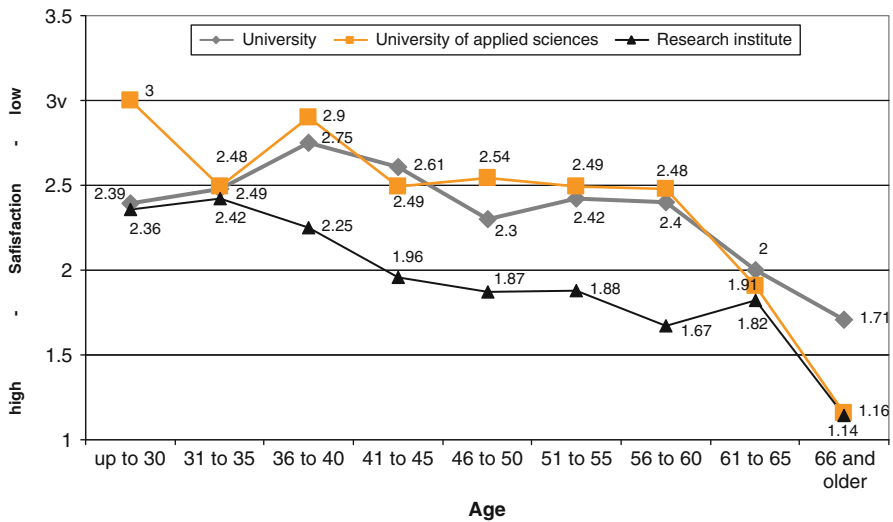


Fig. 7.2 Job satisfaction of academics according to age and institutional type in Germany (arithmetic mean). Question B6: How would you rate your overall satisfaction with your current job? Scale of answers: 1 = very high to 5 = very low. $N=1,428$ (Source: CAP data set (May 2010))

whether the data indicate that women eventually catch up with men in having conducive conditions for a highly professional profession.

7.4.3 Age

Figure 7.2 shows the variation of professional satisfaction according to respondents' age. Accordingly, satisfaction remains relatively constant at universities and universities of applied sciences in Germany among those aged between 30 and 60 years. In contrast, satisfaction grows with age at research institutes in Germany. At all

Table 7.4 Job satisfaction of women and men at universities – international comparison (arithmetic mean)

	Mexico	Argentina	Canada	South Korea	Italy	Malaysia	Hong Kong	Brazil	Australia	Germany	Norway	Finland	Portugal	Japan	USA	China	South Africa	United Kingdom
<i>Senior</i>																		
Male	1.68	1.92	2.00	2.02	2.06	2.08	2.16	2.17	2.20	2.20	2.20	2.21	2.24	2.29	2.33	2.44	2.55	2.59
Female	1.79	2.00	2.28	2.11	2.27	2.19	2.33	2.32	2.32	2.42	2.32	2.21	2.37	2.60	2.29	2.53	2.60	2.69
<i>Junior</i>																		
Male	1.91	2.33	2.04	2.13	2.46	2.17	2.42	2.31	2.71	2.47	2.23	2.36	2.60	2.50	2.10	2.45	2.84	3.02
Female	1.88	2.49	2.22	2.22	2.43	2.43	2.54	2.49	2.56	2.64	2.27	2.33	2.67	2.47	2.42	2.49	2.50	2.60

Source: CAP data set (May 2010)

Question B6: How would you rate your overall satisfaction with your current job?

Scale of answers: 1 = very high to 5 = very low

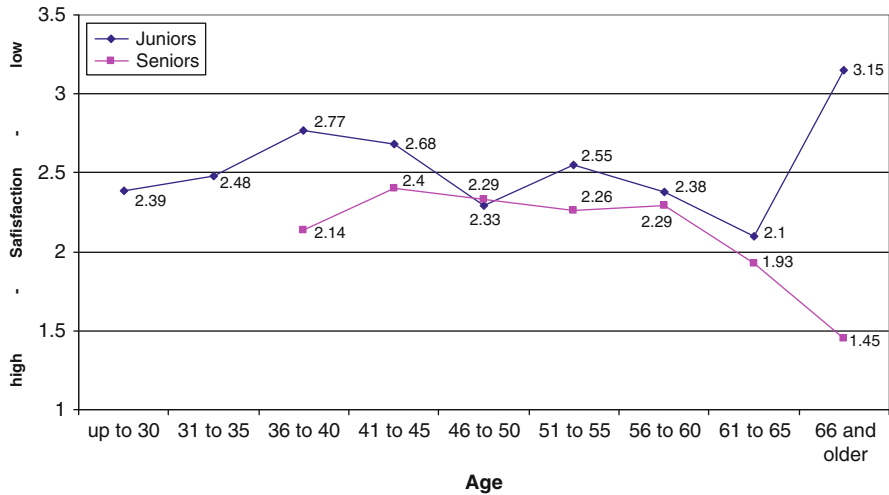


Fig. 7.3 Job satisfaction of academics according to age in senior and junior positions at universities in Germany (arithmetic mean). Question B6: How would you rate your overall satisfaction with your current job? Scale of answers: 1=very high to 5=very low. N=914 (Source: CAP data set (May 2010))

three institutional types, those older than 60 are happier than the younger ones. It cannot be established here how far this effect can be interpreted as an age effect or a cohort effect or has to do with the conditions of the academic workplace of this age cohort.

Figure 7.3 shows that the satisfaction of academics in junior ranks varies more strongly according to age than the satisfaction of university professors. The level of satisfaction is relatively low among those in their late 30s and early 40s, that is, among those who become aware of the fact that their chance of becoming a professor is fading but who remain in academia. Those who are older and remain working in universities are more satisfied with their overall professional situation, except for the few respondents who remained in academia beyond their mid-60s, that is, above the typical retirement age. In contrast, satisfaction among university professors is relatively high among the youngest, that is, those already appointed in their 30s and among those older than 60.

A further category that has an impact on the overall satisfaction is the choice of disciplines. The satisfaction means range from 1.82 (senior academics in business and administration, economics) down to 2.93 (junior academics in teacher training and education science). We can observe that the larger proportions of university staff (with 14% of the respondents) in engineering, manufacturing and construction and architecture and from physical sciences, mathematics and computer sciences (that make up 18%) are relatively content with their job. The least-satisfied disciplinary group is made up by junior academics in teacher training and education

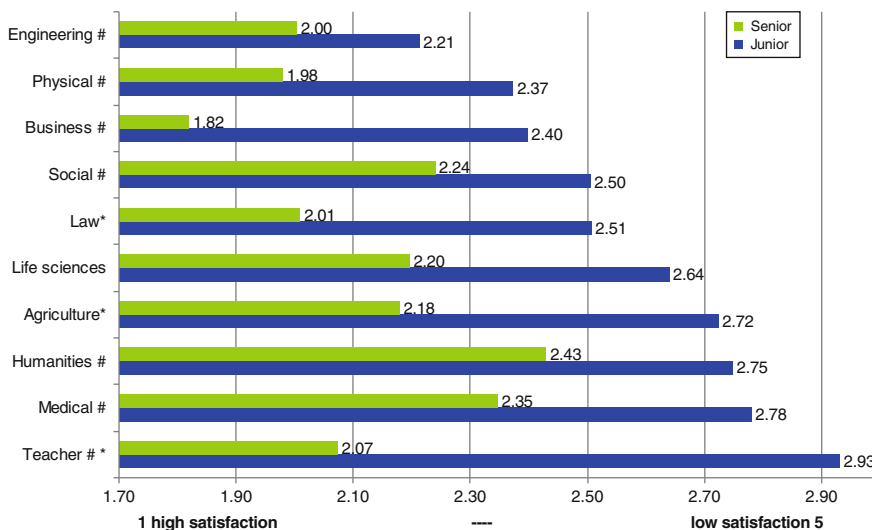


Fig. 7.4 Job satisfaction of senior and junior academics at German universities according to discipline (means). Question A2: Please identify the academic discipline of your current academic unit Abbreviation of disciplines: *Engineering #* Engineering, manufacturing and construction, architecture; *Physical #* Physical sciences, mathematics, computer sciences; *Business #* Business and administration, economics; *Social #* Social and behavioural sciences; *Humanities #* Humanities and arts; *Humanities #* Medical sciences, health-related sciences, social services; *Teacher #* Teacher training and education science*. N (senior)= 131; N (junior)= 772; juniors as reference category because the sample size is more reliable. * $n \leq 5$ senior respondents (Source: CAP data set (May 2010))

science. The largest disciplinary group, however – medical sciences, health-related sciences and social services – makes up a quarter of the university staff, but is also not highly satisfied. Humanities and arts with 11% of the sample is the third least-satisfied group. The differences in satisfaction between junior and senior academics vary strongly among the disciplines. Figure 7.4 also shows that job satisfaction does not vary consistently across major disciplinary groups, for example, between humanities and natural sciences. Rather, there are differences according to individual disciplines.

7.5 The Role Played by Employment Conditions and the Work Situation

In contrast with professors, most of whom are full-time and permanent employees, the employment conditions of junior staff at higher education institutions and research institutes vary substantially in Germany, and issues of employment conditions in the early stages of academic careers have been a major issue of debate in Germany (see Teichler 2008; Jacob and Teichler 2011; Burkhardt 2008; BMBF 2008).

Table 7.5 Job satisfaction of junior academics at various institutional types in Germany according to employment contract (arithmetic mean)

	Universities	Universities of applied sciences	Research institutes
Permanently employed (tenured)	2.17	(1.52)	(1.25)
Continuously employed (no preset term, but no guarantee of permanence)	2.43	2.82	1.92
Fixed-term employment with permanent/continuous employment prospects (tenure track)	2.49	(2.00)	1.95
Fixed-term employment without permanent/continuous employment prospects	2.58	3.11	2.44
Other	2.44		(2.00)

Source: CAP data set (May 2010)

Question A11: What is the duration of your current employment contract at your higher education institution or research institute? In brackets: $n \leq 8$

7.5.1 Duration of Contract

Table 7.5 shows that junior staff with clear lifetime employment are the most satisfied. Those continuously employed, whose contract could only be terminated following a period of notice, however, are only moderately more highly satisfied than those with a fixed-term contract, on average. Moreover, there are reasons to cast doubt whether job security as such is an important factor for satisfaction, because contract duration, as a rule, goes along with certain qualities of the work tasks, the range of responsibility and influence within the organisation. Differences in satisfaction according to duration of contract may be explained partly by the quality of the work situation.

7.5.2 Full-Time and Part-Time Employment

Similarly, we note that junior academics in Germany employed full-time are more highly satisfied than those employed part-time. This holds true both at universities (2.47 as compared to 2.69) and for research institutes (2.04 as compared to 2.43). In contrast, part-time junior academic staff at universities of applied sciences are more highly satisfied than those employed full-time (2.41 as compared 2.76). One has to bear in mind, though, that the number of junior staff at universities of applied sciences is extremely low; unique conditions which led to this surprising result might have come into play.

Table 7.6 Job satisfaction of senior and junior academics at various institutional types in Germany according to material and staff support (arithmetic mean)

		Universities		Universities of applied sciences		Research institutes	
		Senior	Junior	Senior	Junior	Senior	Junior
Material support	+	1.84	2.17	1.82	2.33	1.65	1.95
	~	2.30	2.70	2.57	3.38	2.00	2.35
	-	(3.43)	3.59	(2.9)	(3.48)	(4.00)	(4.00)
Total		2.27	2.61	2.44	2.83	1.73	2.06
Staff support	+	1.79	2.32	(1.69)	2.53	1.48	1.94
	~	2.26	2.48	1.96	2.97	2.21	2.17
	-	(2.68)	(3.08)	(2.57)	(2.53)	(2.00)	(2.47)
Total		2.21	2.59	2.34	2.72	1.70	2.07

Source: CAP data set (May 2010)

Question B3: At this institution, how would you evaluate each of the following facilities, resources or personnel you need to support your work? 1=excellent through 5=poor. In brackets $n \leq 8$

7.5.3 Resources for Academic Work

In the CAP questionnaire, respondents have been asked to assess the material conditions of their work according to nine areas (quality of classrooms, office space, equipment of laboratories, computer facilities, library, research funding, etc.) as well as their staff support in three areas (secretarial support, academic staff support for teaching and for research). In Table 7.6, the ratings are aggregated for material support and for staff support, even though the ratings for individual areas might vary. For example, computer facilities are more positively rated than research funding, and secretarial support is more favourably assessed than academic staff support for teaching.

Table 7.6 shows that material conditions and staff support are crucial factors for overall professional conditions of academics. It is interesting to note that material conditions are more important for the satisfaction of junior academics than for the satisfaction of senior academics. In contrast, the quality of staff support is more important for the overall satisfaction of senior academics than for the satisfaction of junior academics. The latter finding is not surprising because junior staff can count on staff support for their academic work to a much lesser extent than professors and directors at research institutes.

7.5.4 Preferences and Time Budget for Teaching and Research

The time budget can be viewed as a response to the working environment; however, academics obviously have ample room as regards how much time they reserve for teaching and for research, and this is strongly influenced by their academic

Table 7.7 Time spent on teaching and research and job satisfaction of senior and junior academics at German universities according to preferences for teaching and research (arithmetic mean)

	Focus of interests	Teaching (%)	Research (%)	Overall satisfaction	N
Seniors	Primarily in teaching	51.0	24.3	2.75	8
	In both, but leaning towards teaching	35.8	33.6	2.53	30
	In both, but leaning towards research	26.2	37.4	2.12	93
	Primarily in research	20.4	54.9	2.12	18
Total		28.9	37.7	2.23	148
Juniors	Primarily in teaching	42.1	26.6	2.78	59
	In both, but leaning towards teaching	32.0	34.3	2.73	181
	In both, but leaning towards research	20.8	54.4	2.47	315
	Primarily in research	12.7	70.3	2.47	272
Total		22.3	52.8	2.55	826

Source: CAP data set (May 2010)

Question B1: Percentage of time spent for teaching/research in relation to overall time spent

self-understanding. Table 7.7 shows that German university professors who have a clear preference for teaching spend about two and a half times as much of their working time on teaching than those having a clear preference for research. We note similar differences among junior academics at German universities.

However, those academics at German universities who put emphasis on teaching are less satisfied with their job than those giving a preference for research. It is interesting to note, though, that those interested in both teaching and research with a stronger emphasis on research are equally satisfied on average as those who point out a clear preference for research.

7.6 The Impact of the Managerial Environment

Finally, we examine the extent to which the academics' overall job satisfaction is linked to their perceived managerial environment. In a previous publication, it was shown that the CAP questionnaire aimed to explore the extent to which academics consider the managerial style at their university to correspond the following four types:

- *The academic university* – ‘conceived here as an institution of higher education in which individual academics have a strong personal influence on decision-making’
- *The managerial university* – characterised by strong management, defined structures that are hierarchic in their character
- *The collegial university* – emphasised by, ‘i.e. the collegiality of the various actors within higher education institutions’
- *The supportive university* – emphasised by administrative structures that support teaching and research (Teichler 2010)

Table 7.8 Job satisfaction of senior and junior academics at various institutional types in Germany according to perceived managerial styles (arithmetic mean)

		Universities		Universities of applied sciences		Research institutes	
		Senior	Junior	Senior	Junior	Senior	Junior
Academic	+	2.01	2.27	2.01	2.41	1.70	1.76
	~	2.39	2.62	2.50	2.21	1.67	2.00
	-	3.00	2.54	2.60	3.23	(2.00)	2.54
		**			*		**
Managerial	+	1.94	2.30	2.14	(2.37)	1.40	1.82
	~	2.24	2.53	2.19	2.78	1.90	2.19
	-	2.56	2.85	3.13	(2.00)		2.47
		*	**	*		**	**
Collegial	+	1.77	2.09	1.93	2.02	1.29	1.93
	~	2.20	2.49	2.36	2.75	1.80	2.11
	-	2.76	3.27	3.13	3.44	(1.67)	2.68
		**	**	**	**	*	**
Supportive	+	1.62	1.90	1.92	1.49	1.33	1.73
	~	2.00	2.44	2.17	2.34	1.78	2.04
	-	2.67	2.82	2.68	3.42	2.00	2.36
		**	**	*	**	**	**
Total (n)		140–129	632–698	70–80	23–35	78–103	163–245

Source: CAP data set (May 2010)

* significant correlation on a .05 level; ** significant correlation on a .01 level

Question B6: satisfaction 1 = very satisfied through 5 = very dissatisfied. In brackets: $N < 15$

(The indexes were built from the following items: ‘The “*academic university*”: the questions about personal influence at the levels of department, faculty and institution. The “*managerial university*”: “A strong performance orientation”, “a strong emphasis on the institution’s mission”, “a top-down management style”. The “*collegial university*”: “Students should have a stronger say in determining policy that affects them” (in reverse scale order), “I am kept informed about what is going on at this institution”, “collegiality in decision-making processes”, “good communication between management and academics”, “lack of faculty involvement is a real problem” (in reverse scale order). The “*supportive university*”: “The administration supports academic freedom”, “a supportive attitude of administrative staff towards teaching activities”, “a supportive attitude of administrative staff towards research activities”, “professional development for administrative/management duties for individual faculty”, “a cumbersome administrative process” (in reverse scale order)’ (Teichler 2010)).

The previous publication showed that university professors in Germany, in comparison with their peers in the other countries addressed in the CAP study, perceive their universities as resembling a high extent of the type ‘academic university’ and less than in most other countries type of a ‘managerial university’.

Table 7.8 presents surprising findings. First, it shows that any strong type of managerial style is closely linked to high satisfaction, no matter whether academics consider their university to be strongly collegial, strongly managerial, etc., they are more highly satisfied than those who consider their institution to be weakly collegial, weakly managerial, etc. Second, those considering the managerial style as ‘collegial’ and ‘supportive’ are on average more highly satisfied with their job than those considering the managerial style as ‘academic’ and ‘managerial’. Both findings hold true for academics in Germany irrespective of institutional type and the academics’ rank.

7.7 The Relative Weight of Various Factors

A multivariate analysis has been undertaken here in order to show the relative weight of the factors discussed above as well as some additional factors: what contributes to a relatively high level of overall job satisfaction of academics in Germany. As Tables 7.9 and 7.10 show, the analysis focuses on senior and junior academics at universities in Germany. The tables show that two factors play a strong role in the job satisfaction of both professors and junior academic staff at German universities: resources for academic work and management styles.

7.7.1 Resources

It is interesting to note that different aspects of resources are crucial for senior and for junior academics. Research funding and secretarial support are the most important issues for university professors in Germany. One should bear in mind that secretarial support is viewed as being a key element at German universities and professors at German universities rate secretarial support more positively than professors from other countries. Similarly, financial support for research, although certainly salient everywhere, has a high symbolic relevance: the acquisition of external research grants (usually called ‘third-party’ research funding in Germany) is often taken as the single most important measure for research quality (see Gross et al. 2008). In contrast, the item ‘research equipment and instruments’ has the strongest effect on the overall job satisfaction. In addition, office space and telecommunications are resources that have a significant effect on their satisfaction. We can argue that resources linked to research management are crucial for the satisfaction of university professors, while resources directly related to the research process are of utmost importance for the job satisfaction of junior staff.

7.7.2 Managerial Styles

As already shown above, the multivariate analysis confirms that each of the four managerial styles addressed in the CAP survey reinforces overall professional satisfaction both of senior and juniors academics in Germany. However, individual elements of these four managerial styles have a varying weight.

Senior academics at German universities are more highly satisfied if the following conditions apply:

- ‘Good communication between management and academics’
- ‘A supportive attitude of administrative staff towards teaching activities’
- Academics’ ‘Influence at the level of the department or similar unit’

Table 7.9 Factors relevant for overall job satisfaction of senior academics at German universities (multivariate analysis)

		Regression coefficient B	Stand. beta	Sig.
	(Constant)	0.826		0.005
1	Good communication between management and academics (managerial style: collegial)	0.164	0.185	0.001
2	Research funding (resources)	0.182	0.236	0.000
3	A supportive attitude of administrative staff towards teaching activities (managerial style: supportive)	0.196	0.203	0.000
4	Influence at the level of the department or similar unit (managerial style: academic)	0.111	0.111	0.022
5	Focus of interests: teaching vs. research	-0.187	-0.158	0.001
6	Percentage of time for teaching	-0.006	-0.116	0.017
7	Gender	0.250	0.106	0.019
8	Secretarial support (resources)	0.073	0.102	0.042

Source: CAP data set (May 2010)

$N=335$; $R^2=0.386$; R^2 adj. = 0.371

Regression model, method: stepwise

Dependent variable: How would you rate your overall satisfaction with your current job?

The following items were statistically excluded from the senior model: income (A12_1), disciplines (A2), age (F2), resources (B3_1-7; B3_9-11), weekly hours spent for research (B1), contract duration (A11), influence (E2_2-3), full-/part-time employment (A7) and management (E4_1, E4_3-6, E4_8-9; E5)

Table 7.10 Factors relevant for overall job satisfaction of junior academics at German universities (multivariate analysis)

		Regression coefficient B	Stand. beta	Sig.
	(Constant)	0.569		0.098
1	Research equipment and instruments (resources)	0.213	0.246	0.000
2	Collegiality in decision-making processes (managerial style: collegial)	0.143	0.165	0.001
3	Your office space (resources)	0.092	0.110	0.016
4	The administration supports academic freedom (managerial style: supportive)	0.104	0.108	0.025
5	Contract duration	0.223	0.133	0.002
6	Telecommunications (internet, networks and telephones) (resources)	0.120	0.106	0.020
7	Top-level administrators are providing competent leadership (managerial style)	0.108	0.113	0.012
8	Influence at the institutional level (managerial style: academic)	-0.186	-0.106	0.013

Source: CAP data set (May 2010)

$N=545-881$; $R^2=0.304$; R^2 adj. = 0.290

Regression model, method: stepwise

Dependent variable: How would you rate your overall satisfaction with your current job?

The following items were statistically excluded from the junior model: weekly hours spent on teaching (B1), weekly hours spent on research (B1), focus of interests (B2), management (E4_1-3, E4_5-9, E5_2-4), resources (B3_1-3, B3_5-6, B3_8, B3_10-12), full-/part-time employment (A7), income (A12_1), gender (F1), age (F2), influence (E2_1-2) and disciplines (B3_2)

Other factors come into play in contributing strongly to junior academics' job satisfaction:

- 'Collegiality in decision-making processes'.
- 'The administration supports academic freedom'.
- 'Top-level administrators are providing competent leadership'.

Other factors have a lesser weight for overall job satisfaction but still are worth mentioning. As already pointed out, junior academics at German universities are less satisfied if their employment contract is fixed-term. In contrast, such a difference cannot be established among senior academics almost by definition, because almost all university professors in Germany have a permanent employment contract. It is interesting to note in this context that full-term vs. part-time employment explains few differences in job satisfaction.

Among university professors, women express a lesser degree of satisfaction than men. This difference is independent of discipline. In contrast, job satisfaction of junior academics in Germany does not vary by gender. It cannot be established here whether the conditions vary between career stages and age or whether the new generation of academics differs from the previous ones in this respect.

The multivariate analysis reinforces the finding of the bivariate analysis that university professors in Germany putting emphasis on research are more highly satisfied than those putting emphasis on teaching. Surprisingly, though, a similar difference among junior academics according to the bivariate analysis is not confirmed in the multivariate analysis.

It is finally worth reporting that two variables, which seemed salient according to bivariate analysis, do not play any role according to the multivariate analysis: age and discipline. Obviously, these differences initially visible in the bivariate are explained by other factors.

7.8 Conclusions

German academics are not among the most highly satisfied academics in comparative perspective. However, a comparison between the Carnegie study undertaken in the early 1990s and the CAP study about the academic profession at the end of the first decade of the twenty-first century discussed here suggests that the satisfaction of the German academic profession has increased over time (see Enders and Teichler 1995a; Altbach 1996). Notably, junior academic staff who tended to have a relatively low level of satisfaction previously seemed to have become more satisfied over time.

The German academic profession certainly cannot be viewed as a relatively homogeneous profession. Senior academics are clearly more satisfied than junior academics. A further distinction is striking: academics at German public research institutions are by far more highly satisfied than academics at universities, and the latter are somewhat more highly satisfied than academics at universities of applied sciences, that is, the higher education institutions with a dominant teaching function.

As academia is generally characterised as a profession strongly shaped by intrinsic motives, it does not come as a surprise to note that employment conditions do not have a very strong influence on the overall satisfaction, even if the duration of the contract is by no means trivial for junior staff at German universities. But the working conditions are clearly more important in this respect than the employment conditions.

Among the working conditions, material and staff resources as well as the prevailing managerial styles at their institutions are obviously factors which play an important role for the overall satisfaction. This holds true both for senior academics and junior academics even though different aspects of resources and managerial styles are salient for professors on the one hand and junior academic staff on the other hand. The most surprising finding in the context is the fact that any strong managerial style reinforces job satisfaction, while any weak managerial style is associated to a relatively lower degree of job satisfaction.

Finally, we observe among German academics that the various functions of higher education are not equally appreciated. Those having a preference for research and spending a relatively high proportion of their time on research are more highly satisfied than those putting emphasis on teaching.

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