
Keeping Marketisation at Bay: The Quality of Academic Worklife in Czech Universities*

KATEŘINA ZÁBRODSKÁ, JIŘÍ MUDRÁK, PETR KVĚTON, MAREK BLATNÝ,
KATEŘINA MACHOVCOVÁ and IVA ŠOLCOVÁ**
Institute of Psychology, Czech Academy of Sciences, Prague

Abstract: This study examines quality of academic worklife in Czech public universities to assess the extent to which the global drive towards marketisation in higher education has affected Czech academic staff. A total of 2229 academics (men = 57.1%) completed a survey measuring their job satisfaction, job stress, and work environment perceptions. Findings revealed high levels of overall job satisfaction (83.6% satisfied with their jobs) and relatively low levels of stress (13.7% regularly stressed). Most academics reported positive features of their work environment including autonomy and quality, role clarity, influence over academic work, and a strong social community. Negative features included dissatisfaction with pay, poor leadership, and pressure to produce. Job satisfaction was significantly associated with traditional academic values (focus on quality, involvement in decision-making, commitment to the workplace, recognition), while stress was linked to market-related aspects (pressure to produce, quantitative work demands, job insecurity). The study highlighted relatively high levels of well-being among Czech faculty, which can be attributed to the continued prevalence of a traditional, professor-oriented academic system based on autonomy and collegiality. Despite recent market-oriented changes within Czech research policy, the negative effects of marketisation are not yet pronounced in the quality of academic worklife in public universities, except for the increasing pressure for productivity.

Keywords: quality of worklife, academic staff, job satisfaction, job stress, marketisation, professor-oriented system, higher education

Sociologický časopis/Czech Sociological Review, 2016, Vol. 52, No. 3: 347–373

DOI: <http://dx.doi.org/10.13060/00380288.2016.52.3.262>

* This article was written with the support of the Czech Science Foundation research grant 'Work Environment Quality and Employee Well-being in Public Higher Education' (Grant No. GA14-02098S), with the support of RVO 68081740. The authors would like to thank the three anonymous reviewers for their helpful and constructive comments on earlier versions of this article.

** Direct all correspondence to: Kateřina Zábřorská, Institute of Psychology, Czech Academy of Sciences, Hybernská 8, 110 00 Prague 1, Czech Republic, e-mail: zabrodska@psu.cas.cz.

Introduction

Higher education has witnessed a major transformation over recent decades, from a traditional model based on autonomy and collegiality towards more market-oriented structures. Diverse labels have been used to describe this transformation, such as 'neoliberalism', 'managerialism', 'academic capitalism', or 'market-orientation' [Fredman and Doughney 2012; Linková 2014; Shin and Jung 2014]. These terms can be subsumed under the general term 'marketisation', which refers to a set of processes implemented across higher education systems in Europe and elsewhere in order to increase the competitiveness of national higher education systems and reduce state expenses related to funding. The processes defining marketisation 'range from the partial retreat of the state as financier, to the allocation of strategic authority to university management and to an increasing focus on the economic utility of teaching and research' [Dobbins, Knill and Vögtle 2011: 666]. In more specific terms, marketisation involves cuts to government funding, intensified cooperation between universities and industry, a shift towards more corporate, autocratic management, increased emphasis on performance indicators and performance-based funding, and flexibility and precarity of academic work [see, e.g., Dobbins, Knill and Vögtle 2011; Shin and Jung 2014].

Within higher education studies, a distinct body of research has developed that draws attention to significant changes in the quality of academic worklife under market-oriented reforms. The concept of this quality refers to a set of organisational factors that are vital for the well-being of academic staff, such as autonomy, role clarity, or supportive supervision [Winter, Taylor and Sarros 2000]. Although studies in higher education often measure these factors differently, there has been considerable agreement that both the quality of academic worklife and the well-being of academic staff have deteriorated under market reforms [Shin and Jung 2014]. This decline has been particularly visible in Anglophone countries that are strongly market-oriented, such as the UK and Australia, where academics report increasing exposure to work overload, job stress, and job insecurity [Gillespie et al. 2001; Tytherleigh et al. 2005; Winefield et al. 2003; Winter, Taylor and Sarros 2000]. While the shift towards marketisation is believed to be occurring to some extent globally, there are substantial national variations within systems of higher education governance and, relatedly, to the extent and speed of implemented market reforms [Dobbins, Knill and Vögtle 2011; Locke and Teichler 2007].

To add to this line of research, this study examines the quality of academic worklife within Czech public universities to assess the extent to which the global push towards marketisation affects Czech academic staff at the level of their everyday working conditions. As we document below, studies concerning the academic professions in the Czech Republic provide evidence of the continuity of traditional academic cultures based on self-governance, autonomy, and collegiality, but also of more recent market-oriented changes that disrupt these traditional values. As Linková [2014: 82] argues, the turn towards 'neo-liberal managerialist governmentality' has been particularly visible at the level of Czech research

policy. This shifting terrain and its frequently evolving plans for higher education reforms have become a frequent topic in the national debate. While some researchers point to the inefficiency and unsustainability of Czech higher education institutions and their need for market-oriented reforms [File et al. 2006; Matějů and Simonová 2005; Matějů and Fischer 2009], others are more critical of this managerial turn and highlight its detrimental effects, both on academic scholarship and academic lives [Linková 2014; Stöckelová 2014].

Drawing on this debate, the purpose of this study is to provide up-to-date empirical evidence concerning the ways in which Czech academic staff perceive those aspects of their work lives that are typically discussed as concerns in market-oriented countries, such as job insecurity and work overload. Furthermore, we aim to examine levels of well-being among Czech academics and identify factors that relate to that well-being within the specific context of public universities. Given the recent market-oriented changes at research policy levels, are Czech university academics stressed, overworked, and demoralised, reflecting the same developments as those reported in Anglophone countries? Do they experience less satisfaction and a weaker sense of collegiality? Are they exposed to job insecurity and permanent pressures to produce in an increasingly competitive academic system? By addressing these questions, the study hopes to contribute to the growing body of both international and national research that explores these complex relationships between shifts in academic systems and the well-being of academic staff. Within the national context, addressing these questions is important for an informed discussion of higher education reforms and for the practical issues of everyday academic management.

Conceptual framework: the professor- and market-oriented systems

To examine the extent of marketisation in the worklife of Czech academics, we draw conceptually on a recent comparative framework proposed by Shin and Jung [2014] that was developed based upon an international comparative survey, 'The Changing Academic Profession' (CAP). The data for the CAP survey were collected between 2007 and 2008 across 19 higher education systems,¹ but only data from the university sector was used in Shin and Jung's comparative framework. The framework explores the well-being of academic staff—defined as job satisfaction and job stress—with regard to two different university systems. The first, a *professor-oriented system*, is the more traditional academic model defined by the autonomy of academics, their participation in governance and decision-

¹ The Czech Republic was not included in the CAP project. The design and methods from the CAP study were later used in the follow-up EUROAC project which collected data concerning academic worklife in five more European countries, including Poland and Austria. However, the Czech Republic was not included in the EUROAC project either.

making, and their ability to have a significant influence on how their jobs are defined [Shin and Jung 2014]. In this system, academics are to large extent evaluated based upon internal accountability grounded in academic expertise and they enjoy relatively high social reputations within society. At academic governance levels, we understand this system as corresponding to a 'Humboldtian model of academic self-rule' that is based on 'the self-regulation of academic affairs by the academic and scientific community' [Dobbins, Knill and Vögtle 2011: 671]. In terms of the well-being of academic staff, the professor-oriented system is hypothesised to positively correlate with job satisfaction and negatively with stress, particularly owing to the high levels of autonomy and the social reputation academics are granted by this system [Shin and Jung 2014]. Of the countries involved in the CAP study, the typical proponents of the professor-oriented system were certain European and Latin American countries, such as Italy or Mexico [ibid.].

The second, a *market-oriented system*, is a contrasting model in which academic jobs become to a large extent determined by the market and external stakeholders. These then limit academics' autonomy and their involvement in decision-making and academic governance [Dobbins, Knill and Vögtle 2011; Shin and Jung 2014]. Academics' social prestige within the society is reduced, as they become subject to external accountability to external stakeholders, such as businesses, rather than to their base academic community. In our analysis, we understand the market-oriented system as corresponding to the term 'marketisation' and as including elements of both 'academic capitalism' and 'audit culture', that is, the emphasis in university steering on entrepreneurship, assessment, efficiency, and accountability [Stöckelová 2014]. In terms of working conditions, the market model reduces academic autonomy, while increasing pressures on productivity through performance-based and autocratic management [Fredman and Doughney 2012; Tytherleigh et al. 2005]. In addition, job insecurity typically increases as a result of a managerial preference for part-time and contract-based employment. As noted above, the market system is believed to have mostly detrimental effects on the well-being of academic staff. A particularly strong relationship was found between performance-based management and the extent to which academics perceive their job as a source of stress [Shin and Jung 2014]. The strongest proponents of market-oriented systems in the CAP study were the UK, Australia, and Hong Kong.

While drawing on the distinctions described between professors and these market-oriented models, we simultaneously recognised that national academic systems are not clear-cut and homogeneous. Instead, 'each national system bears its own nuances due to historical peculiarities and path dependencies, often leading to contradictory development patterns and hybrid forms of governance' [Dobbins, Knill and Vögtle 2011: 668]. To accentuate the multiplicity of academic systems, we approached the Czech university environment using the concept of hybrids [Kolsaker 2008]. In using this concept, we drew on the body of literature that accentuates the need to avoid dichotomies between the 'old/

liberal' and 'new/neoliberal' university [Kolsaker 2008; Linková 2014; Stöckelová 2014]. Instead, this research makes visible the multiplicity within each academic system and the fact that elements of previously dominant cultures survive and transform in the new environment [Kolsaker 2008]. The question this paper then seeks to address is not whether Czech universities are already 'marketised', but to what extent they express symptoms related to the professor-oriented and/or the market-oriented systems and what impact this has on the well-being of academic staff.

The Czech national context: hybrid academic governance

Since 1989 a number of studies have examined the Czech academic profession, yet their findings paint no easily coherent picture. Over the past twenty years there have been several surveys of academic staff [e.g., Paulík 1995; Tollingerová 1999; Matějů and Vitásková 2005; Matějů and Fisher 2009]. Although these surveys provide important insights into the Czech academic profession, their contribution to the analysis of the developments in academic worklife at Czech universities is limited given the considerable differences in their focus and methodology. Each of the surveys focused on different aspects of the academic profession, without much overlap, thus resulting in 'the fragmentary nature of existing research on academics' [Melichar and Pabian 2007: 41]. Moreover, the surveys did not directly relate their findings to the concept of the quality of worklife or to systems of academic governance that are the main concern of this paper and of the international debate to which this paper hopes to contribute.

One of the first post-1989 surveys [Paulík 1995] was conducted on a small sample of 158 respondents from a regional university; its generalisability is therefore much restricted. In this survey, academics reported being both stressed and satisfied: 39.9% reported extreme stress and the mean value of job satisfaction was 3.59 on a 5-point Likert scale. Although satisfaction at academic workplaces was relatively high, satisfaction with salary was low. Tollingerová [1999] used a sample of 1466 academics to compare the Czech academic profession to the larger international survey data.² Her study showed that Czech academics were mostly satisfied with their academic jobs in an overall sense, but their satisfaction concerning specific job aspects varied considerably. Academics often identified with their profession and viewed it as their life mission, yet they also perceived their jobs as demanding. In terms of university governance, academics appreciated the extent of autonomy and support for academic freedom and the considerable independence of Czech academia from political pressures. Matějů and Vi-

² The survey project titled 'The Academic Profession' was initiated by the Carnegie Foundation for the Advancement of Teaching. Together with the CAP study, these surveys are the two main international surveys of the academic profession so far.

tásková's [2005] survey, conducted on a sample of 4415 respondents, was mostly concerned with academics' attitudes towards potential reforms in higher education management and funding. At the level of institutional climate, the survey showed that most respondents (80–82%) felt their institution supported academic freedom, but were split concerning other issues, such as styles of institutional management. Like in previous surveys, most academics felt their salaries were unfairly low. Most recently, Matějů and Fischer [2009] used a large sample of 6339 academic staff. Like the previous survey, the main focus was on attitudes towards higher education management and its potential reforms. This survey suggested that more than half the respondents would support some market-oriented reforms, such as 'corporate' management or student fees. At the same time, academics appeared to be considerably split with regard to the content of such reforms.

Given the noted lack of overlap in the above surveys, a more informative analysis of academic regimes can be found in scholarship that directly discusses academic cultures and governance within Czech higher education, including public universities. Here, the analysis of university governance indicates that Czech universities represent a hybrid system that combines the Humboldtian model of academic self-rule with emerging marketisation [Dobbins and Knill 2009]. On one hand, there is strong evidence that Czech public universities have until recently resisted neoliberal trends [Dobbins 2011]. In contrast to Anglophone countries, such as the UK or Australia, which have faced marketisation (and its consequent restriction of academic autonomy) since the 1980s, Czech universities after 1989 gained 'almost unprecedented' levels of autonomy [Prudký, Pabian and Šima 2010: 78] from the state and other external actors. This autonomy developed as a response to the state control of universities during the previous communist era [Pesik and Gounko 2011]. Thus, the governance at post-1989 Czech universities has until recently been characterised by 'an uncompromisingly Humboldtian character, governed by an academic oligarchy, shielded by academic freedom and institutional autonomy' [Pabian, Šima and Kynčilová 2011: 96]. Some years ago, Melichar and Pabian [2007] observed that the global trend towards managerialism largely evaded Czech academic staff, in part because Czech academics have resisted it. More recent studies indicate that the Humboldtian model, based on academic autonomy, continues to be a strong presence in the Czech public university sector [Hyndlová, Provázková and Pabian 2010; Pabian, Šima and Kynčilová 2011]. This is also consistent with the above-mentioned national surveys that highlighted high levels of autonomy and protection of academic freedoms as key aspects of the Czech academic profession.

On the other hand, Czech academia has in recent years faced increased pressure to adopt certain aspects of market-orientation in order to strengthen their competitiveness within the global market [Dvořáčková et al. 2014; Pesik and Gounko 2011]. Stöckelová [2014: 435] observes that, at the level of research policy, 'the elements of academic capitalism and the audit culture have gradually be-

come stronger' over the past ten years. Linková [2014: 78] dates the solidification of the emphasis on market and academic metrics in Czech academia even earlier, to the beginning of the 2000s. These market-oriented changes include a reduction in governmental funding, a shift towards performance-based funding allocations, and increasing demands for efficiency and public accountability. Some faculties underwent severe cuts in state funding, leading to layoffs and causing academics to be more (or, in some cases, fully) dependent for their success upon national and international grant competitions. The university environment also shows other signs of the market turn, such as a strengthening of the external influences of private industry and of economic rhetoric primarily concerned with the applicability of university 'products' [Linková and Stöckelová 2012: 619].

Research performance among Czech academics has also come under increasing scrutiny. This is evident in the rapidly growing importance of research assessments, most notably those embodied in the 'Methodology for the Assessment of Research and Development and Its Results' (hereinafter Methodology) [Linková and Stöckelová 2012], which is now used routinely (in the Czech Republic) in both institutional and individual evaluations.³ Given these developments, some scholars have observed that Czech academics—mostly those in junior positions—are already exposed to the adverse effects of the market turn, including job insecurity, strong pressures to produce, and permanent stress [see Cidlinská and Vohlídalová 2015; Linková and Červinková 2013; Stöckelová 2014]. Considering this recent evidence, it is not unlikely then that academic worklife in Czech public universities has changed in the past few years and may be losing its Humboldtian character as identified in earlier studies.

The current study

This study examines the quality of academic worklife in Czech public universities, assessing the extent to which it displays aspects of the professor-oriented and/or market model and the impact of these aspects on the well-being of academic staff. The study represents the first stage of a larger three-year project that explores the relationship between work environments and the well-being of university academics through a mixed-method design. The purpose of the project is to provide a comprehensive analysis of a number of organisational processes within the public university sector, including academic leadership, academic cultures, and the development of academic careers.

The reason the project specifically focuses on public universities is the centrality of this sector within Czech higher education. Globally, universities rep-

³ For a discussion of the developments of the 'Methodology' and its role in moving Czech academia towards the market model and a related economist view of science, see Linková and Stöckelová [2012].

resent 'the traditional core institutions of higher education' [Locke and Teichler 2007: 7] that are key actors in the production and dissemination of knowledge. In the Czech Republic, this central position is occupied by public universities because of their size and impact on teaching and research: the majority of Czech higher education students attend public universities and public universities are also the main producers of academic research.⁴ Given the project's focus on a detailed analysis within one specific sector, the project does not include a comparison with other higher education or research institutions, such as private universities or the Czech Academy of Sciences.⁵

Research design

Data collection

The study was conducted with an electronic questionnaire in November 2014. The use of an electronic questionnaire allowed us to reach large numbers of Czech faculty members and simultaneously protect their anonymity. Prior to the data collection, we compiled a list of e-mail addresses using contact information that is publicly available on university websites. Because the study specifically focused on academic staff, non-academic employees were not included (PhD students were included only when they were simultaneously employed in an academic position). Academic staff was defined as persons employed at a teaching and/or research position at a public university. Those who had simultaneous positions at other higher education institutions or research institutions were invited only if their academic position at a public university was their main source of income.

In total, we collected approximately 20 000 e-mail addresses. According to statistics, the total number of academic staff in Czech public universities in 2013/2014 was 21 545 [Czech Statistical Office 2015], which means we contacted almost all university academics. The potential participants were then sent an e-mail that included information about the research and a direct link to our web-based questionnaire. The e-mail with the link to the questionnaire was sent in November, close to the end of the semester, in order to ensure that respondents had previously spent several months in direct contact with their academic work environments.

⁴ Koucký [cited in Stöckelová 2014] reports that, in 2011–2012, 79% of all higher education students attended public universities. Public universities also repeatedly occupy the highest ranks among the top 20 producers of academic research [Hodnocení výsledků výzkumných organizací v roce 2014]. Additionally, in the Czech Republic public universities are central with respect to academic careers: they are the only institutions that can grant academic qualification of associate professors and professors to Czech academics.

⁵ Our focus on the university sector is also consistent with Shin and Jung's [2014] comparative framework that excludes non-university institutions.

Table 1. Demographic and employment characteristics of the sample (%) (N = 2229)

Gender	Male	Female				
Age	57.1	42.9				
	≤ 29 y.	30–39 y.	40–49 y.	50–59 y.	60–69 y.	≥ 70 y.
Position	15.2	40.4	17.2	13.6	9.8	3.7
	PhD./ Postdoc	Lecturer	Researcher	Assistant professor	Associate professor	Professor
Length of employment	16.4	4.4	9.5	42.9	15.2	7.9
	< 1 year	1–5 y.	6–10 y.	11–15 y.	16–20 y.	> 20 y.
Type of employment	4.1	30.8	26.4	14.0	8.0	16.7
	Full-time contract	Part-time contract	Other			
Leadership position	68.2	21.3	10.5			
	University level	Faculty level	Department level	Research team level	None	
Discipline	1.2	5.2	11.6	15.1	67.4	
	Humanities/ social sc.	Natural sciences	Technical sciences	Other		
	42.2	33.1	22.7	4.8		

Respondents

Of those invited to participate, 4517 academics responded and completed the questionnaire (23% response rate). To avoid problems stemming from missing values in the analysis, we used a sample of 2229 academics all of whom fully completed the questionnaire.⁶ The effective sample thus included 10% of the researched population, which is comparable to other studies using online surveys among academic faculty [e.g. Kolsaker 2008].

The composition of the effective sample is described in Table 1. As can be seen, a slightly larger number of men participated in the study (57.1%). The most highly represented were younger academics aged between 30 and 39 years (40.4%), followed by the age group 40–49 (17.2%). The largest share was academics in the ranks of assistant professors (42.9%), followed by associate professors and professors (23.1%). Of all respondents, 32.6% identified themselves as occupying a leadership position at various levels of the organisational hierarchy. Most worked in the humanities and the social sciences (42.2%), followed by the natural sciences (33.1%), and the technical sciences (22.7%). The majority of respondents were employed at a public university full time (68.2%).

Comparison with national statistics suggests that our sample was fairly comparable to the researched population in most key features, except that of academic discipline. In terms of gender, national statistics [Czech Statistical Office 2015] report that women comprised 35.6% of academic staff at Czech public universities in 2013/2014, compared to 42.9% in our sample. Women were therefore overrepresented in our sample, but the difference was not dramatic (7.3%). The sample showed good representativeness regarding gender composition across academic ranks. According to the Czech Statistical Office [2015], in 2013/2014 women made up 14.5% of professors (compared to 16.4% in our sample), 24.8% of associate professors (compared to 29.0% in our sample) and 48.9% of assistant professors (which equals 48.9% in our sample). Regarding disciplines, national statistics for the year 2013/2014 [Czech Statistical Office 2015] report that, in the higher education sector, 23.8% of academics worked in technical sciences (compared to 22.7% in our sample), 40.7% in natural and medical sciences (compared to 33.1% in our sample), and 28.2% social sciences and humanities (compared to 42.2% in our sample). Therefore, academics in natural and medical sciences were underrepresented, while those in the social sciences and humanities were overrepresented in the study. Despite this bias, we were able to include into the study a substantial proportion of academics from all main disciplines.

⁶ We recognise that excluding questionnaires with incomplete items may seem unnecessarily restrictive for the purpose of descriptive statistics and correlations reported in this article. However, in our follow-up analyses related to the project we use more advanced statistical methods, such as SEM, in which such reduction is appropriate. As the aim of the project is to provide a coherent and comprehensive portrayal of Czech academics' working lives, we have decided to use the same sample and dataset across all our analyses.

Measures

We designed our questionnaire based upon previously established findings concerning the quality of academic worklife and the well-being of academic staff [e.g. Fredman and Doughney 2012; Schulz 2013; Shin and Jung 2014; Winefield et al. 2003]. As noted above, the study was part of a larger project that aims to describe the Czech university environment and to examine complex relationships between varied facets of academics' well-being and their working conditions.⁷ For this reason, we decided to include the well-established, standardised measures in our questionnaire that are necessary for such statistical analyses. These included selected measures of organisational climate [Patterson et al. 2005], psychosocial work environments, including job satisfaction and stress [Kristensen et al. 2005], and several other measures not discussed in the current article (work engagement and burnout, life satisfaction, and personality measures). The questionnaire further covered demographic and employment variables (e.g. age, gender, academic title, formal position, length of employment) and perceptions of workload and work content (weekly working hours, proportion of working time dedicated to research/ teaching/ administration). In what follows, we describe those measures relevant for the current article in more detail.

Consistent with international research, we used job satisfaction and stress as two main indicators of the well-being of academic staff. Job satisfaction was measured with the 'job satisfaction' scale from the Copenhagen Psychosocial Questionnaire II [COPSOQ II; Kristensen et al. 2005]. This scale measures overall job satisfaction ('How pleased are you with your job as a whole, everything taken into consideration?') as well as satisfaction with specific aspects of the job, such as career prospects. We also added a question addressing academic satisfaction with salary, as previous national surveys showed its relevance. The second measure of well-being was stress, measured with the 'stress' scales from the COPSOQ II. The stress scales are designed to assess the frequency with which respondents had experienced stress-related emotions during the preceding four weeks (e.g. 'How often did you feel stressed during the past 4 weeks?'). In terms of comparison potential, these measures have both strengths and limits. The measure of overall job satisfaction is well-suited for both national and international comparison because studies typically use similar questions to measure this concept.⁸ The comparison is more limited with respect to stress where measures tend to be more varied. However, consistent with the COPSOQ II, studies assessing stress in

⁷ For instance, one of the analyses uses the questionnaire data to examine both direct and indirect links between academic personality traits and life satisfaction through work engagement and job satisfaction [Blatný et al. 2016].

⁸ For instance, in the CAP study, overall job satisfaction was measured by asking 'How would you rate your overall satisfaction with your current job?' [Shin and Jung 2014]. In the Czech Republic, Tollingerová [1999: 37] asked academics 'To what extent are you generally satisfied with your professional situation, in an overall sense?'

academic staff commonly use measures that ask respondents to assess levels of strain over the past weeks [see, e.g., Winefield et al. 2003].

Regarding perceptions of academic work environments, we examined two main domains. The first was the organisational climate, measured by selected scales from the Organizational Climate Measure (OCM) [Patterson et al. 2005]. Organisational climate refers to shared employee perceptions of organisational practices and procedures [Patterson et al. 2005], that is, to how things are usually done within the organisation. We specifically focused on organisational climate at the level of academic departments in order to assess the extent to which the departmental climates involved aspects of traditional, professor-oriented climate and/or the market-oriented climates. Based on literature review, we selected five scales that directly relate to these academic models. Scales that we defined as aspects of the professor-oriented model included: Autonomy (the scope of influence academics have over their work), Quality (the degree to which the quality of academic work is emphasised) and Involvement (participation of academics in governance and decision-making). Scales that were defined as aspects of the market model were: Pressure to Produce (pressure on academics to meet targets), and Performance Feedback (emphasis on feedback, and measurement of job performance).

The second domain was the psychosocial work environment measured by selected scales from the COPSOQ II [Kristensen et al. 2005]. In contrast to the organisational climate measure, the measure of the psychosocial environment addresses individual work experiences, rather than shared organisational practices. From the COPSOQ II, we selected scales measuring variables typically discussed as key concerns of the deteriorating academic worklife in market-oriented countries. These included: Quantitative Demands, Job Insecurity, Influence, Recognition, Role Clarity, Job Insecurity and Commitment to the Workplace. We also added scales measuring levels of social community and support because these can be considered as mitigations against the detrimental effects of marketisation [Weinrib et al. 2013]. These included Social Community, Social Support from Colleagues, Social Support from Supervisors and Quality of Leadership.

All standardised measures were translated into Czech using a standard back-translation procedure. The Cronbach's coefficients alpha ranged from 0.842 to 0.751 in the case of organisational climate scales and 0.886 to 0.703 in the case of the COPSOQ II scales. Thus, the reliability of the scales used in the study ranged from satisfactory to very good with all values above the threshold 0.7.

Analysis

We used SPSS 21.0 software to analyse the questionnaire data. Basic findings (sample description, including job-related well-being and work environment aspects) were obtained using descriptive statistics (i.e. means, standard deviations, and frequencies of the responses in the particular scales). The relationship

between employee well-being and work environment variables was computed using the Spearman correlation coefficient. As we included only the complete response vectors in the analysis, there was no missing data. All reported correlations were significant at $p \leq 0.01$ level.

Findings and discussion

In reporting our findings, we first discuss levels of academics' well-being (i.e. job satisfaction and stress) and then proceed to examine the relationship between job satisfaction/stress and more specific aspects of respondents' work environments.

Czech academics: still satisfied

As Table 2 shows, the majority of respondents (83.6%) were very satisfied or satisfied with their jobs, when all job aspects were taken into consideration. Respondents also had positive views on specific aspects of their job, except for their salaries. While a majority said they were satisfied with their physical working conditions (80.8%), the ways in which their abilities were used (69.1%), and their career prospects (66.8%), more than half (54.0%) were dissatisfied or very dissatisfied with their salaries. When compared with results in the CAP survey, the level of overall job satisfaction in our sample was high. As Shin and Jung [2014] reported, the average percentage of academics satisfied with their jobs was 69.5% in countries classified as 'the high-satisfaction/low stress cluster' but fell to 55.3% in the 'low-satisfaction/high stress' cluster. When compared with previous national surveys, our findings suggest a consistency in two long-lasting trends within the Czech academic profession: high satisfaction with academic jobs in an overall sense [Paulík 1995; Tollingerová 1999] and dissatisfaction with salaries [e.g., Paulík 1995; Matějů and Vitásková 2005; Matějů and Fischer 2009;⁹ Melichar and Pabian 2007]. Thus, there appears to be continuity of these two aspects, without any visible drop in Czech academics' overall satisfaction. This is in contrast to some qualitative studies that reported a decline in joy and job satisfaction resulting from managerial practices [Linková 2014].

The second indicator of well-being measured in the study was stress. As can be seen in Table 3, the percentages of those who experienced high levels of stress were relatively low. About half of respondents (51.9%) reported no or minimal experiences of stress, while only 13.7% felt heavily stressed. Considering that more than half of respondents did not feel particularly stressed during the middle of an academic year suggests low levels of stress, particularly when compared with data from market-oriented countries. For instance, in a US study of tenure-track

⁹ In this survey, however, satisfaction with salaries increased when academics were asked about their total income (33% said they had multiple sources of income).

Table 2. Job satisfaction (mean values and standard deviation measured on a scale: (1) very dissatisfied, (2) dissatisfied, (3) satisfied, (4) very satisfied)

Satisfaction with...	M (SD)	Satisfied	Dissatisfied
Job as a whole, everything taken into consideration	3.0 (.62)	83.6%	16.4%
Physical working conditions	2.99 (.73)	80.8%	19.2%
Use of your abilities	2.74 (.74)	69.1%	30.9%
Career prospects	2.72 (.75)	66.8%	33.2%
Pay	2.33 (.90)	46.0%	54.0%

Note: The category 'satisfied' combines responses 'very satisfied' and 'satisfied'. The category 'dissatisfied' combines responses 'dissatisfied' and 'very dissatisfied'.

university teachers, two-thirds said that they were under stress at least 50% of their work-time [Blix et al. 1994]. In Australia, Winefield et al. [2003] found that 43% of academics across 17 universities could be classified as at risk of psychological illness resulting from undue stress (as compared to only 12% in the general Australian population). In a study among UK academics, Kinman [2001] found that 53% of the respondents reported borderline levels of stress (as compared to 27% in the general UK population).

These relatively low levels of stress in our sample are also consistent with respondents' estimated workloads as measured by the number of weekly working hours. Kinman [2001] observed that the threshold leading to poor psychological health (including stress) in academic staff is working over 50 hours per week. On average, Czech academics in our sample estimated working 44.76 hours per week—a number well below this threshold. In fact, according to Shin and Jung's [2014] study, working around 44 hours per week is the average workload characteristic for 'low-stress' academic systems. By comparison, academics in the 'high-stress/low satisfaction' cluster (including the UK and Australia) report working on average 47.3 hours per week [ibid.]. Similarly to the findings reported by Tollingerová [1999] almost two decades ago, Czech academics therefore appear to continue to have lower weekly workloads than academics in Anglophone countries.¹⁰

Research finds that the well-being of academic staff typically differs by gender, age, and seniority [Bentley et al. 2013]. Owing to spatial constraints, we addressed some of these demographic differences in another paper, in particular the differences related to gender [see Záborská et al. forthcoming]. In this paper, we

¹⁰ In 1999, Tollingerová reported that Czech academics in ranks of professors worked on average 40–43 hours per week (depending on the part of academic year). By comparison, professors in selected Anglophone countries reported their weekly workload to be considerably higher: 46–52 hours in the US and even 50–52 hours in Australia.

Table 3. Emotions related to stress as reported on a scale: (1) all the time, (2) a large part of the time, (3) part of the time, (4) a small part of the time, (5) not at all

	M (SD)	All the time- A large part of the time	Part of the time	A small part of the time/ not at all
Experience of emotions related to stress	3.35 (.82)	13.7%	34.4%	51.9%

observed that women faculty were less satisfied with their jobs than men faculty, and that job satisfaction steadily increased with age and academic rank, while stress decreased. In other words, younger academics in lower academic ranks were less satisfied and more stressed than older academics in senior positions (professors and associate professors). Still, despite these differences, the overall picture did not change: the majority of academics in our sample were rather satisfied with their jobs and reported relatively low levels of stress. In fact, drawing on Shin and Jung's [2014] classification, we would classify Czech university academics into the cluster of high satisfaction/low stress countries, which typically operate under professor-oriented systems. In this cluster, the average percentage of academics satisfied with their jobs was 69.5%, while 27.4% reported being under stress. Our findings thus showed even higher levels of well-being than reported for this cluster.¹¹ In sum, we would suggest that the Czech academic profession continues to represent a high satisfaction and low stress occupation, as was the case in advanced Western countries before the onset of managerialism in the 1980s.¹²

Departmental climates: autonomy and quality prevails

In order to explain the relatively high levels of well-being observed among Czech academics, we examined whether their satisfaction was related to the quality of their work environment. First, we shall look at the findings on organisational climates at the level of academic departments.

¹¹ It needs to be noted that the CAP study [as reported by Shin and Jung 2014] used a 5-point Likert scale to assess overall job satisfaction, while the COPSQ II uses a 4-point Likert scale. Therefore, the numerical comparison between the studies is only approximate.

¹² In that era, academics in countries which now are market-oriented, such as the US, reported similarly high levels of job satisfaction as in our study. For instance, in a study from the 1980s [Willie and Stecklein 1982], 80% of US academics were satisfied with their jobs. These levels have, however, seen a major drop in the past two decades, classifying current US faculties into the low satisfaction cluster [Shin and Jung 2014].

As Table 4 shows, the majority of academics in our sample perceived departmental climates as defined by two main aspects: autonomy (74.7%) and a focus on quality (70.4%). Both autonomy and quality can be considered traditional academic values related to the professor-oriented, self-governance academic system. For instance, Anderson [2008] views autonomy and internal notion quality¹³ as vital resources in resisting managerial regimes. Autonomy and quality typically decline under market reforms: autonomy gives way to more autocratic leadership and the influence of external stakeholders [Shin and Jung 2014], while the focus on quality leads to concerns with quantifiable output. By contrast, our findings suggest that the market-oriented changes in Czech research policy have not yet disrupted these traditional academic values, at least at the level of academic departments. High levels of autonomy were a dominant aspect of the Czech academic profession in previous national surveys [Tollingerová 1999; Matějů and Vitásková 2005]. Our findings thus indicate continuity of this aspect of Czech academic worklife. Interestingly, the level of perceived involvement of academics in decision-making was considerably lower (57.6%). This suggests that Czech academics enjoy high autonomy, but find their involvement less satisfactory.

The two other variables of organisational climate that were measured (Pressure to Produce, Performance Feedback) reflect the emphasis put on pressure for productivity and receiving feedback on one's performance that we hypothesised to be characteristic of the market model. These features were considerably less pronounced in academics' perceptions of their departmental climates, but were still reported by slightly more than half of respondents. Recent policies implemented within Czech higher education have clearly put stronger pressure on academic productivity (e.g. by linking faculty budgets to publication output) and measurements of academics' performance (e.g. by increasing the importance of quantitative indicators, such as the h-index, in evaluations of academic productivity) [Government of the Czech Republic 2013]. Additionally, some faculties have changed their remuneration practices in recent years from remuneration based on seniority towards a more performance-based salary, thereby adding to the pressure for academic productivity. It is thus likely that these changes are reflected in the stronger emphasis on productivity and feedback observed in our findings.

Consistent with our expectations, the results of the correlation analysis (Table 4) show that traditional academic values of quality, involvement, and autonomy are positively correlated with academic well-being, while the market-related pressure to produce has a negative effect. The findings concerning autonomy are consistent with previous analyses of the Czech academic profession. For instance, Melichar and Pabian [2007] argued that the high levels of satisfaction observed

¹³ Quality, in the sense measured in the study, corresponds with the traditional emphasis on internal quality of academic work. It reflects respondents' agreement with statements such as 'Quality is taken very seriously at this workplace'.

Table 4. Organisational climate at the level of departments as reported on a scale: (1) definitely false, (2) mostly false, (3) mostly true, (4) definitely true

Our department ...	M (SD)	Definitely / Mostly False	Mostly / Definitely true	Correlation coefficient	
				Job satisfaction	Stress
Provides autonomy to academics (Autonomy)	2.86 (.70)	25.3%	74.7%	.324**	-.195**
Emphasises the quality of work (Quality)	2.89 (.73)	29.6%	70.4%	.456**	-.214**
Pressures academics to produce (Pressure to Produce)	2.67 (.64)	41.1%	59.9%	-.124**	.281**
Involves academics in decision making (Involvement)	2.59 (.69)	42.4%	57.6%	.409**	-.225**
Provides academics with performance feedback (Performance Feedback)	2.57 (.66)	45.6%	54.4%	.399**	-.189**

** – correlation significant at $p < .001$ level.

among Czech academics across national surveys can be primarily accounted for by their high levels of autonomy. Our correlation analysis supports this argument, but also shows that the focus on quality had an even stronger effect on job satisfaction than autonomy. This is interesting given the recent emphasis on the quantity of research output in Czech research policy which many Czech academics' view as contradictory to their own passion for quality [Dvořáčková et al. 2014]. Thus, if departmental climates in the future prioritise quantity without also emphasising quality, this would likely lead to significant declines in the well-being of academic staff.

Our only unexpected correlation was observed in regard to performance feedback. While we hypothesised performance feedback to be a market-related feature with negative effects on the well-being of academic staff, we found that performance feedback showed a positive connection to job satisfaction and a negative connection to stress. Our original hypothesis was based on an assumption that performance feedback, as measured by the OCM, refers primarily to the extent to which academics' performance is formally measured and evaluated by their supervisors. However, the OCM items are rather ambiguous in this respect and open to different interpretations.¹⁴ The performance feedback items may re-

¹⁴ In the OCM, performance feedback is measured by respondents' agreement with statements such as 'People's performance is measured on a regular basis' or 'People usually

fer not only to formal evaluation from supervisors but also to supportive and informal feedback from peers, as characteristic of collegial academic environments. Consistent with our findings, such collegial feedback would likely be positively connected to the well-being of academic staff. In other words, the relationship between job satisfaction/stress and performance feedback likely depends on who is giving the feedback to whom, how, where, and when, which cannot be established based on the OCM questionnaire. Future research is thus needed to examine in more details specific forms of performance feedback received by Czech faculty and potentially varied effects that different forms of feedback have on their well-being.

Quality of psychosocial work environments

Market-related stressors

Next, we examined other work environment factors that were identified as concerns in the market model, this time with a focus on individual academics' experiences. Literature reviews show that academics in the market system experience excessively high performance expectations and workloads, high job insecurity and high role ambiguity (i.e. low role clarity) [Fredman and Doughney 2012; Gillespie et al. 2001; Schulz 2013; Tytherleigh et al. 2005; Winter, Taylor and Sarros 2000]. At the same time, academics report low influence over work, low organisational commitment (i.e. commitment to the workplace), and less recognition [e.g., Shin and Jung 2014; Winter, Taylor and Sarros 2000]. Therefore, we measured all these market-related aspects and hypothesised that they would negatively correlate with academics' well-being.

Table 5 summarises our findings. As this table shows, stressors typically identified in market-oriented countries had a relatively low prevalence in our sample. In terms of work demands, the largest group of respondents (42.9%) reported moderate quantitative work demands and one-third even reported low or very low work demands. Therefore, most respondents were able to cope with the amount and speed of their work and work overload did not appear to be a prevalent concern. Job insecurity, as another market-related stressor, was also comparatively low, with only 17.0% of respondents reporting high or very high job insecurity. On the other hand, respondents perceived a number of positive factors within their environments. The majority felt that they had high or very high role clarity (70.4%), moderate to high influence over their work (84.6%), were moderately to highly committed to their workplaces (79.2%), and felt moderate to high recognition for their work (78.7%). These findings suggest that the market-related

receive feedback on the quality of work they have done'. For the purpose of the study, we substituted 'people' with 'academics' to specifically measure working conditions of academic staff only.

Table 5. Experience of selected market-related stressors, sorted by the mean value as reported on a scale: (1) very low, (2) low, (3) moderate, (4) high, (5) very high

Perceived ...	M(SD)	Very low/low	Moderate	High/very high	Correlation coefficient	
					Job satisfaction	Stress
Role clarity	3.85 (.80)	3.6%	26.0%	70.4%	.411**	-.314**
Influence	3.43 (.78)	15.4%	42.5%	42.1%	.395**	-.267**
Commitment to the workplace	3.38 (.89)	20.4%	35.9%	43.7%	.647**	-.306**
Recognition	3.19 (.87)	21.3%	39.1%	39.6%	.735**	-.302**
Quantitative work demands	2.97 (.81)	33.5%	42.9%	23.6%	-.204**	.451**
Job insecurity	2.6 (1.13)	55.3%	27.7%	17.0%	-.197**	.227**

** – correlation significant at $p < .001$ level.

changes have not yet had a dramatic impact on worklife of academic staff in our sample. Rather, features related to the more traditional academic environment, such as job security and workplace commitment, appeared to prevail.

The results of the correlation analysis (Table 5) were consistent with our expectations. Features related to the more traditional, collegial cultures (role clarity, influence over work, commitment, and recognition) were positively correlated with academic well-being, while market-related features (job insecurity and quantitative demands) showed negative effects. Especially high recognition and commitment to the workplace represented key characteristics of those academics who were satisfied with their jobs. The lowest correlations, on the other hand, were observed between job insecurity and job satisfaction and stress, which provides further evidence that job insecurity was not a significant concern for most respondents.

This is in contrast to some studies that describe job insecurity as a growing source of distress in Czech academia [Cidlinská and Vohlídalová 2015]. However, the evidence about growing job insecurity has been observed mostly in the Czech Academy of Sciences among junior academics at the PhD and postdoc levels. By contrast, the majority of our sample consisted of more senior faculty (assistant professors and above) with full-time contracts. Consequently, it can be assumed that these academics were better established in their academic careers

and therefore enjoyed higher levels of job security than junior academics in the above study. Other factors may also explain the relatively strong job security. For instance, because of the policies of the Czech Accreditation Commission, Czech academic departments prefer personnel stability and to have stable, 'core' department members [Dvořáčková et al. 2014]. Additionally, 'academic inbreeding'¹⁵ and a lack of inter-institutional mobility have long been typical features of staffing and job-holding in Czech academic departments [Prudký, Pabian and Šima 2010]. This implies that academics who are already established in the department (such as those with full-time contracts and Ph.D. titles) have relatively good chances of keeping their jobs.

Interpersonal relationships: more community, less support

Finally, we look at findings concerning interpersonal relationships in academic departments. Traditionally, universities have been characterised by a collegial culture involving strong a social community and collegial support. This form of collegiality is yet another feature that is believed to deteriorate in the market system, particularly due to increased competitiveness and individualism of managerial academia [e.g. Winter, Taylor and Sarros 2000]. On a more positive side, collegiality can also be considered a protective factor against detrimental effects of managerial reforms [Weinrib et al. 2013]. We were therefore interested in to what extent Czech academics experienced good social community and support, both from their colleagues and direct supervisors.

As can be seen in Table 6, the majority of respondents (64%) experienced high or very high levels of social community, which indicates good social atmospheres and collaboration with peers. Respondents also agreed that they received high or very high social support from their colleagues (41.6%), while only 17.5% felt that they received low collegial support. These findings suggest that the traditional values of academic community and collegiality have largely survived in the respondents' departments. The findings were less positive with regard to support from direct supervisors and particularly the quality of their leadership. Quality of leadership was measured by questions addressing superiors' abilities to support academics' professional growth and their capacity for effective work management and conflict resolutions. More than one third (33.1%) of respondents perceived their superiors as lacking these abilities.

As expected, correlation analysis showed that all interpersonal variables were significantly linked to both job satisfaction and stress. The highest posi-

¹⁵ In the field of higher education research, the term 'academic inbreeding' refers to 'a recruitment practice where universities hire their own doctoral students after graduation, who subsequently remain at the institution to work for their entire careers' [Horta 2013: 488]. This practice is closely linked to inter-institutional immobility, and by implication, the relative stability of academic careers.

Table 6. Interpersonal relationships and leadership, sorted by the mean value as reported on a scale: (1) very low, (2) low, (3) moderate, (4) high, (5) very high

Perceived ...	M(SD)	Very low /low	Moderate	High/ very high	Correlation coefficient	
					Job satisfaction	Stress/ burnout
Social community at work	3.86 (.80)	8.4%	27.0%	64.6%	.379**	-.269**
Social support from colleagues	3.24 (.84)	17.5%	40.9%	41.6%	.305**	-.142**
Social support from supervisor	3.16 (1.01)	26.1%	31.2%	42.7%	.415**	-.212**
Quality of leadership	3.05 (1.0)	33.1%	34.6%	32.3%	.495**	-.255**

** – correlation significant at $p < .001$ level.

tive effect on job satisfaction was quality of leadership, which, however, was perceived as relatively low. Internationally, academics are often critical of the quality of academic leadership at their institutions, with some studies indicating that those in junior positions are the most critical of their academic leaders [e.g. Coates et al. 2010]. The causes of low-quality leadership presumably differ across academic systems. For instance, Dobbins, Knill and Vögtle [2011] observe that systems based on academic self-governance are particularly prone to weak leadership due to the lack of concern with management and manpower planning that is characteristic of this system. Still, some factors contributing to poor academic leadership appear to be shared more globally. These include insufficient systematic preparation and managerial training available to academic leaders or conflicting demands on academic leaders concerning their managerial responsibilities and the simultaneous expectations of uninterrupted scholarly productivity (for a review of research on academic leadership, see Machovcová and Zábrodská [2016]). Of course, the relatively low satisfaction with leadership in our sample does not necessarily mean that leadership in departments is poor. It may, for instance, reflect the unrealistically high expectations of leaders, as reflected in the term ‘leaderism’ [McFarlane 2014]. Clearly, however, the forms and quality of academic leadership in Czech departments are well suited for future and more detailed research.

Conclusion

The purpose of this study was to examine the quality of academic worklife in Czech public universities and to assess the extent to which academic staff have been exposed to market-related features in their work environments. The study highlighted relatively high levels of well-being among academics in our sample as well as a number of positive aspects in their work environments. These included autonomy and a focus on quality at the level of departmental climate, role clarity, influence, commitment to the workplace, and strong social community at the level of individual work environments. By contrast, the negative aspects that we defined as market-oriented, such as high quantitative work demands (i.e. work overload) and job insecurity, were experienced only by a minority. Returning to Shin and Jung's [2014] comparative framework, we would therefore argue that Czech faculty members work in an environment that corresponds in most features to the traditional professor-oriented system, based on autonomy and collegiality. Professor-oriented systems are associated with high job satisfaction and low stress in academic staff, combined with relatively high autonomy, influence over academic work, and the social prestige of the academic profession within society [Shin and Jung 2014]. This description fits our findings concerning Czech academic worklife.¹⁶

The relative absence of market-related stressors in our sample is interesting because it suggests that the increasing market-orientation of Czech research policy has not significantly affected the quality of academic working lives thus far. The only market-related feature with negative effects on academic well-being, reported by more than half of respondents, was pressure for productivity. This pressure, though, was reported at the level of departmental climate, not at the individual level: despite the climate of pressure, most academics said their own work demands were moderate. Therefore, it appears that while academic departments increasingly emphasise the need for higher productivity (e.g. through departmental meetings and mission statements), most individual academics are not yet negatively affected to the extent that they would feel overloaded and stressed. In other words, there may be a gap between market-orientation at the more systemic level and academics' individual working lives. It is also possible that the market-oriented changes described throughout the paper have been implemented too recently to have an immediate effect and will only manifest themselves in the (near) future. Additionally, other factors may mitigate against the effect of marketisation. For instance, some qualitative studies among Czech academics show that middle-level academic leaders (i.e. department chairs and research team leaders) may deliberately take up positions as 'buffers' against manageri-

¹⁶ While we did not address the social prestige of Czech academics in the study, public opinion surveys of prestige of occupations document that academic (or scientific) profession repeatedly ranks among the most respected occupations in the Czech society [Public Opinion Research Centre 2016].

alism to protect academics in their departments or teams from undue pressure [Machovcová, Zábrodská and Mudrák 2016; Linková 2014].

An interesting point to consider in this context is whether the high levels of well-being of academic staff observed in our sample is actually a welcome finding. In organisational theory, well-being at work—particularly job satisfaction—is usually considered to be positively associated with academic productivity, although not always in direct ways [Mamiseishvili and Rosser 2011]. It should therefore be in universities' best interests to have satisfied faculty. On the other hand, some studies found negative connections between faculty satisfaction and productivity. In an older study by Terpstra, Olson, and Lockeman [1982], for instance, the implementation of 'management by objectives' increased academics' productivity, while decreasing their satisfaction. A similar conclusion is implied by Shin and Jung's [2014] comparative study. Their analysis shows that market-oriented countries with low faculty satisfaction (UK, Australia, the US) are those with the highest levels of productivity, as measured by the number of refereed publications, and with the highest salaries. One could also add that these are the countries with the top-performing universities in the world, globally perceived as highly prestigious academic locations. It is therefore rather intriguing that academics in these countries are the least satisfied, while the most satisfied academics work in countries with comparatively low productivity and low salaries (an example of which is Mexico, where 87% report high satisfaction).

Shin and Jung [ibid.] explain these seeming contradictions by the fact that academics in the 'high satisfaction/low stress' countries have the largest degree of academic freedom, shared governance, and empowerment, as well as the lowest levels of performance-based management. Therefore, academics can be satisfied when granted these conditions, despite other negative factors. The point to be made here is that well-being of academic staff does not necessarily positively relate to other desirable outputs, such as organisational efficiency, individual productivity, or rewarding salaries. Therefore, when interpreting the findings of the current study, it must be emphasised that our focus on academics' well-being presents only a partial and potentially an unduly positive portrayal of Czech university environments. This is also because the study mostly examined the quality of individual worklife and did not address more systemic issues, such as funding mechanisms or conditions for excellent research. Earlier studies [Matějů and Fischer 2009; Melichar and Pabian 2007] showed that Czech academics can be satisfied with their own jobs, yet manifest systemic dissatisfaction and believe that significant institutional reforms are needed. Therefore, if more systemic issues such as attitudes towards funding allocation or research assessment had been addressed, the study might have revealed a less optimistic picture.

Limitations and future directions

This study has several limitations, some of which simultaneously point to directions for future research. First, the research sample was based on self-selection. Although the sample corresponded fairly well to the researched population in terms of gender, age, and academic position, the self-selection may have biased the findings. It is plausible, for instance, that academics experiencing high levels of stress and work overload were less likely to complete the questionnaire than those under less time pressure, which might then account for low levels of stress in the sample. Furthermore, academics from the humanities and social sciences were overrepresented in the study, so our findings apply more to the conditions in these disciplines than in the natural and technical sciences. The second limitation derives from the lack of consistency across studies on academic well-being that limits the possibility of comparisons between research findings and, consequently, between various national systems. This also includes the inconsistency between the methods used in ours and in other national studies so that only tentative conclusions can be made about developmental trends in Czech academic worklife. Third, given the aim of this article to provide a comprehensive description of academic worklife in Czech public universities, the article stressed the shared features of academics' working lives, while somewhat downplaying potential differences and inequalities between subgroups of academics. These will be the focus of our next paper. Fourth, questionnaire data generally provide only limited insights into the measured variables. For instance, our findings concerning relative dissatisfaction with academic leadership offer few insights into how academics actually define 'good' or 'poor' leadership or how their expectations of academic leaders intersect with their own academic identities and aspirations. To address these more interpretative questions, qualitative data will be collected in the next stage of the project. Finally, as noted above, our focus on academics' well-being presents only a partial portrayal of the work environment in Czech public universities. Ideally, future research should combine a detailed enquiry into academics individual working lives with an analysis of more systemic issues.

KATEŘINA ZÁBRODSKÁ is a researcher at the Institute of Psychology of the Czech Academy of Sciences. Her research interests lie in critical organisation research, quality of worklife issues, workplace bullying, and qualitative methodology. Her current research focuses on the quality of academic worklife and dysfunctional organisational behaviour in the higher education sector.

JIŘÍ MUDRÁK is a researcher at the Institute of Psychology of the Czech Academy of Sciences and an assistant professor at Charles University. His research interests include the development of human potential in educational and organisational contexts and methodology of psychological research.

PETR KVĚTON is a researcher at the Institute of Psychology of the Czech Academy of Sciences. He specialises in quantitative research methodology and methods of statistical analysis.

MAREK BLATNÝ is a researcher at the Institute of Psychology of the Czech Academy of Sciences and a professor at the Charles University. His research interests include psychological health and well-being and quantitative research methodology.

KATEŘINA MACHOVCOVÁ is a researcher at the Institute of Psychology of the Czech Academy of Sciences and at Charles University. Her research interests lie at the intersection of critical organisational studies, gender research, and qualitative research methodology.

IVA ŠOLCOVÁ is a researcher at the Institute of Psychology of the Czech Academy of Sciences. Her research focuses on psychological health and well-being in organisations, with a particular focus on stress, resilience, and burnout.

References

- Anderson, G. 2008. 'Mapping Academic Resistance in the Managerial University.' *Organization* 15 (2): 251–270, <http://dx.doi.org/10.1177/1350508407086583>.
- Bentley, P. J., H. Coates, I. R. Dobson, L. Goedegebuure and V. L. Meek. 2013. 'Academic Job Satisfaction from an International Comparative Perspective: Factors Associated with Satisfaction Across 12 Countries.' Pp. 239–262 in *Job Satisfaction around the Academic World*, edited by P. J. Bentley, H. Coates, I. R. Dobson, L. Goedegebuure and V. L. Meek. Berlin: Springer, <http://dx.doi.org/10.1007/978-94-007-5434-8>.
- Blatný, M., I. Šolcová, P. Květon, M. Jelínek, K. Zábrowská, J. Mudrák and K. Machovcová. 2016. 'The Influence of Personality Traits on Life Satisfaction via Work Engagement and Job Satisfaction'. Paper presented at the 2nd World Conference on Personality, Búzios, Brazil.
- Blix, A. G., R. J. Cruise, B. M. Mitchell and G. G. Blix. 1994. 'Occupational Stress among University Teachers.' *Educational Research* 36 (2): 157–169, <http://dx.doi.org/10.1080/0013188940360205>.
- Cidlinská, K. and M. Vohlídalová. 2015. 'Zůstat, nebo odejít? O deziluzi (začínajících) akademických a vědeckých pracovníků a pracovnic.' (Stay or go? On the disillusion of young academics and researchers) *AULA* 1: 3–35.
- Coates, H., I. R. Dobson, L. Goedegebuure and L. Meek. 2010. 'Across the Great Divide: What do Australian Academics Think of University Leadership? Advice from the CAP Survey.' *Journal of Higher Education Policy and Management* 32: 379–387, <http://dx.doi.org/10.1080/1360080X.2010.491111>.
- Dobbins, M. and C. Knill. 2009. 'Higher Education Policies in Central and Eastern Europe: Convergence toward a Common Model?' *Governance* 22 (3): 397–430, <http://dx.doi.org/10.1111/j.1468-0491.2009.01445.x>.
- Dobbins, M., C. Knill and E. M. Vögtle. 2011. 'An Analytical Framework for the Cross-country Comparison of Higher Education Governance.' *Higher Education* 62 (5): 665–683, <http://dx.doi.org/10.1007/s10734-011-9412-4>.

- Dvořáčková, J., P. Pabian, S. Smith, T. Stöckelová, K. Šíma and T. Virtová. 2014. *Politika a každodennost na českých vysokých školách*. (Politics and the every day at Czech higher education institutions) Prague: Sociologické nakladatelství (SLON).
- File, J., T. Weko, A. Hauptman, B. Kristensen and S. Herlitschka. 2006. *Czech Republic Country Note: OECD Thematic Review of Tertiary Education*. Prague: Centre for Higher Education Studies.
- Fredman, N. and J. Doughney. 2012. 'Academic Dissatisfaction, Managerial Change and Neo-liberalism.' *Higher Education* 64 (1): 41–58, <http://dx.doi.org/10.1007/s10734-011-9479-y>.
- Gillespie, N. A., M. Walsh, A. H. Winefield, J. Dua and C. Stough. 2001. 'Occupational Stress in Universities: Staff Perceptions of the Causes, Consequences and Moderators of Stress.' *Work and Stress* 15 (1): 53–72, <http://dx.doi.org/10.1080/02678370110062449>.
- Government of the Czech Republic. 2013. *Metodika hodnocení výsledku výzkumných organizací*. (Guide to the evaluation of the results of research organisations) Retrieved 24 September 2015 (<http://www.vyzkum.cz/FrontClanek.aspx?idsekcce=685899>).
- Hodnocení výsledků výzkumných organizací v roce 2014. (Evaluation of the results of research organizations in 2014). Retrieved 15 May 2016 (<https://www.isvav.cz/h14/listResearchOrganisations.do>).
- Horta, H. 2013. 'Deepening Our Understanding of Academic Inbreeding Effects on Research Information Exchange and Scientific Output: New Insights for Academic Based Research.' *Higher Education* 65 (4): 487–510, <http://dx.doi.org/10.1007/s10734-012-9559-7>.
- Hyndlová, L., K. Provázková and P. Pabian. 2010. 'Kdo vládne českým vysokým školám? Kvalitativní studie rozhodovacích mechanismů na dvou fakultách a jejich katedrách.' (Who's in control of Czech higher education institutions? A qualitative study of decision-making mechanisms at two faculties and their departments) *Aula: revue pro vysokoškolskou a vědní politiku* 18 (4): 2–16.
- Linková, M. 2014. 'Unable to Resist: Researchers' Responses to Research Assessment in the Czech Republic.' *Human Affairs* 24 (1): 78–88, <http://dx.doi.org/10.2478/s13374-014-0207-z>.
- Linková, M. and A. Červinková. 2013. 'Vlastní laboratoř: Akademické trajektorie a gender v současných biovědách.' (A laboratory in itself: academic trajectories and gender in contemporary bioscience) *Gender, rovné příležitosti, výzkum* 1: 15–26.
- Linková, M. and T. Stöckelová. 2012. 'Public Accountability and the Politicization of Science: The Peculiar Journey of Czech Research Assessment.' *Science and Public Policy* 39 (5): 618–629, <http://dx.doi.org/10.1093/scipol/scs039>.
- Locke, W. and U. Teichler. 2007. 'Introduction.' Pp. 7–14 in *The Changing Conditions for Academic Work and Careers in Select European Countries*, edited by W. Locke and U. Teichler. Kassel: International Centre for Higher Education Research Kassel.
- Kinman, G. 2001. 'Pressure Points: A Review of Research on Stressors and Strains in UK Academics.' *Educational Psychology* 21 (4): 473–492, <http://dx.doi.org/10.1080/01443410120090849>.
- Kristensen, T. S., H. Hannerz, A. Høgh and V. Borg. 2005. 'The Copenhagen Psychosocial Questionnaire – A Tool for the Assessment and Improvement of the Psychosocial Work Environment.' *Scandinavian Journal of Work, Environment & Health* 31 (6): 438–449, <http://dx.doi.org/10.5271/sjweh.948>.
- Machovcová, K. and K. Zábrodská. 2016. 'Vedení akademických pracovníků: teoretické přístupy a aktuální problémy.' (The management of academic staff: theoretical and real problems) *Československá psychologie* 60 (2): 137–152.

- Machovcová, K., K. Zábředská and J. Mudrák. 2016. 'Pressured to Lead? How Scientists Become Academic Leaders.' Paper presented at the European Conference on Educational Research. Dublin, Ireland.
- Mamiseishvili, K. and V. J. Rosser. 2011. 'Examining the Relationship between Faculty Productivity and Job Satisfaction.' *Journal of the Professoriate* 5 (2): 100–132.
- Matějů, P. and A. Vitásková. 2005. 'Vybrané výsledky výzkumu akademických pracovníků veřejných vysokých škol'. (Selected results of research of academic staff at public universities) Pp. 163–187 in *České vysoké školství na křižovatce. Investiční přístup k financování studie na vysoké škole v sociologické reflexi*, edited by N. Simonová. Prague: Sociologický ústav AV ČR.
- Matějů, P. and J. Fischer. 2009. *Výzkum akademických pracovníků vysokých škol*. (A study of academic staff at universities) Prague: MŠMT.
- McFarlane, B. 2014. 'Challenging Leaderism.' *Higher Education Research & Development* 33 (1): 1–4, <http://dx.doi.org/10.1080/07294360.2014.864590>.
- Melichar, M. and P. Pabian. 2007. 'Czech Republic—Shifting Peripheries: A State of the Art Report on the Czech Academic Profession.' Pp. 39–56 in *The Changing Conditions for Academic Work and Careers in Select European Countries*, edited by W. Locke and U. Teichler. Kassel: International Centre for Higher Education Research Kassel.
- Pabian, P., K. Šima and L. Kynčilová. 2011. 'Humboldt Goes to the Labour Market: How Academic Higher Education Fuels Labour Market Success in the Czech Republic.' *Journal of Education and Work* 24 (1–2): 95–118, <http://dx.doi.org/10.1080/13639080.2010.534443>.
- Patterson, M. G., M. A. West, V. J. Shackleton, J. F. Dawson, R. Lawthom, S. Maitlis and A. M. Wallace. 2005. 'Validating the Organizational Climate Measure: Links to Managerial Practices, Productivity and Innovation.' *Journal of Organizational Behavior* 26 (4): 379–408, <http://dx.doi.org/10.1002/job.312>.
- Paulík, K. 1995. *Pracovní zátěž vysokoškolských učitelů*. (The workload of post-secondary teaching staff) Ostrava: Ostravská univerzita.
- Pesik, R. and T. Gounko. 2011. 'Higher Education in the Czech Republic: The Pathway to Change.' *Compare: A Journal of Comparative and International Education* 41 (6): 735–750.
- Prudký, L. P. Pabian and K. Šima, K. 2010. *České vysoké školství. Na cestě od elitního k univerzálnímu vzdělávání 1989–2009*. (Czech higher education: moving from elite to universal education) Prague: Grada.
- Public Opinion Research Centre. 2016. 'Prestige of Occupations.' Retrieved 15 May 2016 (<http://cvvm.soc.cas.cz/en/work-income-living-level/prestige-of-occupations-february-2016>).
- Schaufeli, W. and A. Bakker. 2004. *UWES-Utrecht Work Engagement Scale: Preliminary Manual (Version 1.1)*. Utrecht: Utrecht University.
- Schulz, J. 2013. 'The Impact of Role Conflict, Role Ambiguity and Organizational Climate on the Job Satisfaction of Academic Staff in Research-Intensive Universities in the UK.' *Higher Education Research & Development* 32 (3): 464–478, <http://dx.doi.org/10.1080/07294360.2012.680209>.
- Shin, J. C. and J. Jung. 2014. 'Academics Job Satisfaction and Job Stress Across Countries in the Changing Academic Environments.' *Higher Education* 67 (5): 603–620, <http://dx.doi.org/10.1007/s10734-013-9668-y>.
- Simonová, N. 2005. (ed.). *České vysoké školství na křižovatce. Investiční přístup k financování studie na vysoké škole v sociologické reflexi*. (Czech higher education at the crossroads: a sociological take on the investment approach to funding higher education research) Prague: Sociologický ústav AV ČR.
- Stöckelová, T. 2014. 'Power at the Interfaces: The Contested Orderings of Academic

- Presents and Futures in a Social Science Department.' *Higher Education Policy* 27 (4): 435–451, <http://dx.doi.org/doi:10.1057/hep.2014.20>.
- Terpstra, D. E., P. D. Olson and B. Lockeman. 1982. 'The Effects of MBO on Levels of Performance and Satisfaction among University Faculty.' *Group and Organizational Studies* 7 (3): 353–366, <http://dx.doi.org/10.1177/105960118200700307>.
- Tollingerová, D. 1999. *Povolání vysokoškolského učitele v mezinárodním srovnání: Česká republika*. (The profession of higher-education teacher in an international comparison) Prague: Centrum pro studium vysokého školství.
- Tytherleigh, M., C. Webb, C. Cooper and C. Ricketts. 2005. 'Occupational Stress in UK Higher Education Institutions: A Comparative Study of All Staff Categories.' *Higher Education Research & Development* 24 (1): 41–61, <http://dx.doi.org/10.1080/0729436052000318569>.
- Weinrib, J., G. A. Jones, A. S. Metcalfe, D. Fisher, Y. Gingras and K. Rubenson et al. 2013. 'Canadian University Academic's Perceptions of Job Satisfaction: "The Future Is Not What It Used to Be".' Pp. 83–102 in *Job Satisfaction around the Academic World*, edited by P. J. Bentley, H. Coates, I. R. Dobson, L. Goedegebuure and V. L. Meek. Berlin: Springer, <http://dx.doi.org/10.1007/978-94-007-5434-8>.
- Willie, R. and J. E. Stecklein. 1982. 'A Three-Decade Comparison of College Faculty Characteristics, Satisfactions, Activities, and Attitudes.' *Research in Higher Education* 16 (1): 81–93, <http://dx.doi.org/10.1007/BF00992051>.
- Winefield, A. H. and R. Jarrett. 2001. 'Occupational Stress in University Staff.' *International Journal of Stress Management* 8 (4): 285–298, <http://dx.doi.org/10.1023/A:1017513615819>.
- Winefield, A. H., N. Gillespie, C. Stough, J. Dua, J. Hapuarachchi and C. Boyd. 2003. 'Occupational Stress in Australian University Staff: Results from a National Survey.' *International Journal of Stress Management* 10 (1): 51–63.
- Winter, R., T. Taylor and J. Sarros. 2000. 'Trouble at Mill: Quality of Academic Worklife Issues within a Comprehensive Australian University.' *Studies in Higher Education* 25 (3): 279–294, <http://dx.doi.org/10.1080/713696158>.
- Zábrodská, K., J. Mudrák, P. Květon, K. Machovcová, M. Blatný and I. Šolcová. 2016. 'Satisfied But Not Equal: Working Conditions of Women and Men Faculty in Czech Universities.' Forthcoming in *Gender and Neoliberalism in Czech Academia*, edited by M. Vohlídalová and M. Linková. Prague: Sociologické nakladatelství (SLON).