

Antecedents of organizational commitment among faculty: an exploratory study

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Faculty are the main asset of a university and determine its success. The attitudes of faculty toward their institution play an especially important role in the academic profession. This study examines the specific antecedents of affective, normative and continuance commitment of faculty to their university. This study is an online survey of 317 faculty of Russian higher education institutions. The results of the regression analysis showed that being an undergraduate inbred (i.e. working at the university from which one graduated) predicted affective and normative commitment toward the university, while having a post at another higher education institution predicted only affective commitment. Faculty who work at several universities have lower levels of emotional attachment to the primary university.

Keywords: organizational commitment; academic inbreeding; faculty; academic profession; universities

Introduction

Faculty are the main asset of a university and determine its success. The work of faculty is diverse and uncertain, and it is hard to fully describe and formally regulate (for characterization of the academic profession see Shattock, 2014). Therefore their performance is largely determined by their job involvement and willingness to do more than is formally described in their contracts and job responsibilities (working on weekends, helping colleagues to perform a variety of extracurricular activities, etc.). Neumann and Finaly-Neumann (1990, p. 77) note that:

Universities need dedicated faculty members who not only join their university but continue to remain actively involved in innovative research activities; prepare new materials and approaches for teaching; build, assess, and reform academic programs; maintain high levels of academic standards; participate in academic decision making; and work closely and actively with their students.

But why do some faculty get more involved in the affairs of the university, personally experiencing its failures and enjoying its successes, than others? Numerous studies show that faculty attitudes about their institution play an especially important role in this case (Chughtai & Zafar, 2006; Daly & Dee, 2006; Eisinga, Teelken, & Doorewaard, 2010; Jing & Zhang, 2014). There is a special psychological bond between employees and the

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organization, which determines their work and organizational behaviour. This psychological bond may be expressed by the commitment the employee feels toward the organization (Abrams, Ando, & Hinkle, 1998; Allen & Meyer, 1990; O'Reilly & Chatman, 1986). Research suggests that organizational commitment is one of the main predictors of such extra-role behaviour. Workers who have strong commitment to the organization see their job more positively, want to stay in the organization, and are more satisfied and involved with their job (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). In other words, a worker with high commitment is a 'good soldier' for the organization.

Most research on organizational commitment has been carried out in business organizations, but different types of organizations, such as universities, have specific features that distinguish them from others. As in the case of other non-profit organizations, faculty values and attitudes are particularly important for the functioning of the university. Baldrige (1983) identified specific features, such as goal ambiguity, highly contested goals, client-serving institutions, problematic technologies, high professionalism, fragmented professional staff and environmental vulnerability. A university's levels of fragmentation (Baldrige, 1983) and complexity (Duderstadt, 2001) are the key characteristics for faculty commitment because the university as a focus for commitment may be quite difficult. This study explores three specific antecedents of faculty commitment to their university (chosen by the author as subjects of particular research interest): academic inbreeding, simultaneous work in several higher education institutions, and combining teaching and administrative positions.

The concept of the organizational commitment

The concept of 'organizational commitment' is widespread in the organizational behaviour and management literature. In general, commitment to the organization is a psychological attitude referring to an employee's desire to stay in the organization, to be a good worker, and to make maximum efforts in the interests of the organization (Mowday, Porter, & Steers, 1982). However, commitment may have different bases. Allen and Meyer (1990) propose a three-component model of organizational commitment: (1) affective commitment, which refers to the employee's emotional attachment to, identification with and involvement in the organization; (2) continuance commitment, which refers to an awareness of the costs associated with leaving the organization; and (3) normative commitment, which refers to a feeling of obligation to continue employment in the same organization. In other words, an employee with a strong affective commitment wants to stay in the organization, an employee with a strong continuance commitment needs to stay in the organization, and an employee with a strong normative commitment feels he or she ought to stay in the organization. This model has received empirical support in higher education settings (Eisinga et al., 2010; Gutierrez, Candela, & Carver, 2012).

A high level (primarily affective commitment) is associated with a number of favourable consequences for both the organization and the worker. Meta-analyses indicate that affective and normative commitment are positively related to job satisfaction, job involvement, organizational citizenship behaviour and performance, and negatively related to intention to leave and voluntary absenteeism (Cooper-Hakim & Viswesvaran, 2005; Mathieu & Zajac, 1990; Meyer et al., 2002). Affective commitment is also related to the employee's physical and psychological well-being (Meyer & Maltin, 2010). Research in higher education settings shows that affective commitment is an important element in retaining a high-performance academic workforce (Eisinga et al., 2010).

Antecedents of organizational commitment among university faculty

A number of studies conducted in academia show that the organizational commitment of teaching staff has similar antecedents to that of employees in business (organizational justice, job insecurity, trust in the university's management, perceived organizational support, perceived organizational prestige) (Adkins, Werbel, & Farh, 2001; Ambrose & Cropanzano, 2003; Fuller, Hester, Barnett, & Relyea, 2006; Li, 2014). Tahir, Abdullah, Ali, and Daud (2014) found heads of departments' transformational leadership behaviours have an impact on the organizational commitment of academic staff. However, teaching staff have specific antecedents of organizational commitment. Neumann and Finaly-Neumann (1990) found that the commitment of faculty to their university is stronger in fields where several career alternatives – for example, an academic career or a job in business – exist (e.g. 'applied fields' such as education and electrical engineering), and considerably weaker in fields where career alternatives are restricted (e.g. 'pure fields' such as physics and sociology). Graduates from pure fields have fewer alternatives, so they are more frequently forced to choose an academic career. Affective commitment is also stronger when teaching staff have plenty of time to learn new tasks and are encouraged to express their ideas and opinions openly (Southcombe, Fulop, Carter, & Cavanagh, 2015). Antecedents of normative commitment include academic tenure (Adkins et al., 2001); antecedents of continuance commitment include academic rank, organizational tenure and employment status (full-time or part-time) (Marchiori & Henkin, 2004). However, the academic profession and universities as organizations have more specific features that distinguish them from other types of organizations (Musselin, 2013). The current study focused on three of them: academic inbreeding, academic experience in another university, and combining teaching and administrative positions.

Academic inbreeding

Universities have the opportunity to hire their own graduates. In the literature this phenomenon is called 'academic inbreeding' (Gorelova & Yudkevich, 2015). According to this criterion, faculty can be divided into two groups: inbreds who work at the same university from which they graduated, and non-inbreds who are not graduates of the university where they work.

Inbreds often have no experience at another university and have a longer history with their university that is more emotive and positive. This should all contribute to inbreds' strong emotional ties with the university and dedication to it. In universities where academic inbreeding is common practice, social ties between a graduate and the professor/supervisor or department head play a decisive role in the process of hiring (Horta, Sato, & Yonezawa, 2011). This means that, in the case of the inbreds, the hiring process may be based on social ties with their supervisor and the university administration rather than on a standardized evaluation of their academic performance. Eisenberg and Wells (2000) mention that professors may hire their own graduates because they have performed well and are interested in their area, participated in their projects, and have views close to those of the professor. As result, inbreds concentrate their communication most within their universities (Horta, 2013).

The practice of hiring inbreds is widespread in Russia. Formally, the hiring process is open and competitive. Universities should make information about a new position known both publicly and nationally, and they mostly do so. However, usually only internal candidates participate in the hiring process. External candidates usually do not

even apply, because they have very little chance of being hired (Sivak & Yudkevich, 2015). Some universities have begun using genuinely open and competitive hiring only relatively recently. According to the data from the ‘Changing Academic Profession’ survey (CAP), 64% of all academics in Russia work in the same institution at which they studied for at least at one of the educational levels (Yudkevich, Kozmina, Sivak, Bain, & Davydova, 2013). Usually, Russian postgraduate students who graduated from the same higher education institution at which they study simultaneously conduct their research toward their dissertation and carry out teaching (having a teaching position and assisting their mentor who, usually, invites them to apply to the graduate school and offers them a position) (Sivak & Yudkevich, 2015).

Sivak and Yudkevich also report on an additional aspect of Russian academia – so-called ‘scientific schools’. A scientific school is basically a chair system. This is a group of researchers united around one or more famous (mostly nationally but possibly just within the institution) professors who work within the same topic or theoretical framework. This group exists for a long time and attracts students and alumni as young researchers and faculty. Very often, such a scientific school is the only way for young researchers to get into academia and achieve promotion within it. Moreover, members of such scientific schools identify themselves very strongly with the school. Such scientific schools are often affiliated with a university or research institution; consequently, belonging to such a school means belonging to the institution as well, and may also contribute to commitment toward this institution.

Based on the analysis of interview with rectors, vice-rectors, deans and department chairs of several Russian universities, Horta and Yudkevich (2015) concluded that having good relationships with seniors is a essential condition of younger academics’ career progression. Therefore this hiring system selects candidates who initially may be more devoted and loyal to the university, integrated with it in social networks, and identity with it (Horta & Yudkevich, 2015; Vázquez-Cupeiro & Elston, 2006). Inbreds may feel indebted to professors and feel affective and normative commitment to their department and to the university as whole.

One other feature of the Russian academic labour market which affects academic inbreeding practice is the low level of academic mobility. It is rather difficult for young faculty to move to another city because of low starting salaries and poor social infrastructure (Sivak & Yudkevich, 2015). This situation forces them to stay in their home city or the city where they graduated, and try to get a position at that location. After obtaining a position, they remain working at that institution for a long time, especially in small towns due to the lack of other higher education institutions. According to the CAP survey, only 26% of Russian faculty said that they have been employed in two or more institutions since their first degree (Yudkevich et al., 2013). Therefore, inbreds may feel difficulties associated with leaving their university and have a continuance commitment to it.

Hypothesis 1: Being an inbred is a positive predictor of the level of affective commitment to the higher education institution.

Hypothesis 2: Being an inbred is a positive predictor of the level of continuance commitment to the higher education institution.

Hypothesis 3: Being an inbred is a positive predictor of the level of normative commitment to the higher education institution.

Academic experience in another university

In academia, faculty are able to work in several higher education institutions. This is common practice for Russian faculty because of low wages (Yudkevich, 2014). According to an international comparative study, the salaries of Russian faculty are among the lowest (Altbach, Reisberg, Yudkevich, Androushchak, & Pacheco, 2012). The most common way to compensate for low wages is by teaching at another institution (in addition to a full-time position at the main institution) (Roschina & Filippova, 2006), possibly resulting in a 'conflict of commitment' (Euben, 2004). Working in several institutions simultaneously gives someone the opportunity to get different experiences and compare conditions, and provides multiple group memberships. From a psychological point of view, membership of several groups leads to an awareness of belonging to each of them. The characteristics of each of these organizations define the employee's identity (Ashforth & Johnson, 2003; Becker, 1992). This situation creates a potential identity conflict, which is more likely if there is an inconsistency between the contents of these identities (a mismatch or even a clash of values, goals or norms).

The experience of identity conflict may ultimately impair identification with one or more organizations (Ashforth, Harrison, & Corley, 2008). Whereas identification with an organization overlaps with affective organizational commitment (Riketta, 2005), it is expected that there is a relationship between simultaneous work in several higher education institutions and the affective commitment to the primary university (the university in which a respondent spends the most time). Simultaneous work in several institutions may also decrease the perceived transition costs from one employer to another. Sinclair, Martin, and Michel (1999) found that moonlighters (employees who were employed part-time in a second job) tended to be less committed, less dependent on the employment relationship and perceived better employment alternatives than the full-timers. It is expected that there is a relationship between working simultaneously in several higher education institutions and the continuance commitment to the university.

Hypothesis 4: Simultaneous work in several higher education institutions is a negative predictor of the level of affective commitment.

Hypothesis 5: Simultaneous work in several higher education institutions is a negative predictor of the level of continuance commitment.

Combining several positions

Faculty have the opportunity to combine several professional roles (teaching, administrative, research), which are often distributed among different employees in other types of organizations. In the USSR, research was carried out mainly in scientific institutions, which were parts of the Academies of Science. Universities were called upon to prepare their staff for scientific and professional activity. Nowadays, this situation is changing and universities have also started carrying out research (Yudkevich, 2014), but a large section of the faculty are still not interested in research. According to the CAP survey, only 37% of faculty are interested primarily in research activities (Kozmina, 2014). This means that combining teaching and research positions is not necessarily common. For this reason, teaching and administrative positions were studied.

Faculty who have a second administrative position devote a portion of their career in service to the department and the faculty, are more involved in the university's life, and spend more time at work (Gmelch & Burns, 1994; Hancock, 2007). This leads to

their greater job involvement. Previous research shows that job involvement is positively associated with affective commitment (Meyer et al., 2002). In the role of the administrator, they act on behalf of the university and implement its goals and objectives. Acceptance of this role is an additional reason to identify themselves with the university, which in turn is the basis for affective commitment (Edwards, 2005). Nevertheless, there may be a reciprocal relationship between combining teaching and administrative positions and affective commitment. A high level of affective commitment may be the reason for management to appoint faculty to an administrative position. Also, combining teaching and administrative positions may lead to higher affective commitment. However, in the literature, a job's characteristics are considered as predictors, and commitment is considered as a reaction to these characteristics (Meyer et al., 2002). Regardless of the causal direction, we can expect a positive relationship between combining teaching and administrative posts and the affective commitment of faculty.

Hypothesis 6: Combining teaching and administrative positions is associated with affective commitment to the higher education institution.

Method

Participants and procedure

The data were collected via an online questionnaire. Invitations to participate in the survey were distributed to subscribers of several Russian journals and to groups in social networks devoted to education and academia, and through personal networks of the author and colleagues. Before the survey began, the respondents were informed about the purpose and procedure, and their right to withdraw from the study at any time. The survey was anonymous and the respondents were informed that their answers would be kept confidential and used only for research purposes. The survey involved 317 Russian faculty (109 men, 208 women). The mean age was 41.6 years ($SD = 11.2$ years); one participant did not specify their age. The mean length of teaching experience in academia was 20.5 years ($SD = 11.3$ years), and the average job tenure in the current higher education institution was 11.7 years ($SD = 8.0$ years). The sample included 17% professors, 56% associate professors, 15% senior lecturer, 5% lecturer and 7% assistants. The sample represented faculty from different disciplines: economics 34%, other social sciences 44%, natural sciences 5%, engineering 9%, humanities 16%, mathematics and cybernetics 13%, other 4% (the sum is more than 100% because some of the participants teach in disciplines from several groups). Participants represented 119 institutions, but 67.5% of them are from 30 institutions.

Limitations

This study is not without limitations. The first limitation is the small and non-random sample. The approach to invitation could lead to selection bias. Among the participants of the survey there could be significantly more faculty with a higher level of job involvement and professional commitment because they are more involved in activities related to the academic profession. For this reason, the current study should be regarded as exploratory and non-generalizable to all Russian faculty. It is intended to delve more deeply into the experiences of faculty lives and provide meaning to those experiences.

A second limitation is that the sample includes faculty of different disciplines, but the number of faculty from each discipline is insufficient for a comparison between

them. Such analysis would be useful, because Neumann and Finaly-Neumann (1990) showed that teachers of different disciplines may differ in their level of the commitment to their university. Thirdly, participants are from different cities where the academic labour market can be different. The labour supply may be severely restricted in some of them because of the small number of higher education institutions. It is rather difficult for faculty (and not only for faculty) to move to another city. Such limitations may affect the continuance commitment to a university and create an additional variation. To overcome this, higher education institutions' locations were controlled by separating Moscow and St. Petersburg (Russia's two largest cities and those with the greatest number of higher education institutions) from the rest. However, such differentiation can be crude.

Dependent variables

Three components of the organizational commitment were dependent variables. Affective, continuance and normative commitment were measured by nine items (three items for each scales) from the Organizational Commitment Scale (OCS) (Allen & Meyer, 1990). All items employed a 7-point Likert-scale. The items were translated from English into Russian by the author. Translation of all measures was discussed with a bilingual person, who was unaware of the subject of the study. Differences in translations were discussed until agreement was reached. Confirmatory factor analysis (maximum likelihood parameter estimates with standard errors and chi-square test statistic) was conducted to test the factor structure reproducibility of the Russian translation. The three-factor theoretical model (three items on each latent variable) fitted well to the empirical data: $\chi^2 = 25.42$ ($p = .33$), $df = 23$, the comparative fit index = .99, Tucker Lewis Index = .99, the root mean square error of approximation = .02, [95% CI: .00–.05], the standardized root mean square residual = .03. The short Russian version of the OCS has a similar 3-factor structure: three components of the commitment to higher education institution can be considered as independent scales (Cronbach's alpha range from .66 to .80).

Independent variables

Academic inbreeding

There are several methods for the operationalization of academic inbreeding, of which two were used. Faculty were considered as inbreds: (1) if they were working in the higher education institution where they received their bachelor's degree or diploma (undergraduate inbred), and (2) if they were working in the higher education institution where they received a Candidate of Sciences degree, which is the Russian equivalent of the PhD degree (postgraduate inbred). Berelson (1960) argued that it is necessary to separate the faculty working in the same university where they graduated and who were hired immediately following graduation (pure inbreds), from faculty working in the same university where they graduated, but who had taken positions elsewhere after graduating (silver-corded). Recent research shows the differences between pure inbreds and silver-corded faculty (Horta, 2013; Morichika & Shibayama, 2015). Inbreds and silver-corded faculty were divided using information about the early years of their work in academia and in their current university (in which a respondent spends the most time). If these years were the same, the faculty was regarded as an inbred; if not, as

silver-corded. According to these criteria, the sample contained 128 (40.4%) undergraduate inbreds and 23 (7.3%) undergraduate silver-corded faculty, 98 (30.9%) postgraduate inbreds and 10 (3.2%) postgraduate silver-corded faculty.

Academic experience in another university was measured by the question: Have you worked at another higher education institution in the current year additionally? According to the answers to this question, 129 (40.7%) participants were classified as working at several institutions.

Combining teaching and administrative positions was measured by the question: What positions do you have in the university? If a participant had one teaching position (professor, assistant professor, senior lecturer, lecturer, assistant) and at least one administrative position (rector, vice-rector, dean, deputy dean, head of department, head of laboratory, manager or coordinator), he or she was considered to be combining the positions. There were 81 (25.6%) participants in the sample who combined teaching and administrative positions.

Statistical analysis

Hypotheses were tested using an ordinary least-squares regression in R (R Core Team, 2015). For each of the three types of organizational commitment, regression models were built in which the dependent variable was one of the types of commitment. Several control variables were used. Demographic variables (gender, age) were controlled. Academic seniority (dummies for professors and associate professors) was also controlled, because it is likely that the more senior one's rank in a university, the more one is engaged in an administrative position. The location of institutions was an additional control variable, because commitment (especially continuance commitment) can be affected by characteristics of the academic labour market which are different in big and small cities; Moscow and St. Petersburg were therefore separated from other cities. The quality of the university may also affect the attachment of faculty. For this reason, university quality was controlled by two variables: (1) a dummy, which differentiated universities with special statuses ('national research university' and 'federal universities') from all other universities, because these statuses reflect the effectiveness of the educational process and its integration with scientific research; (2) mean scores of the Unified State Examination of students who were enrolled in full-time bachelor and diploma programs (data from monitoring the effectiveness of institutions of higher education, which was conducted by the Russian Ministry of Education and Science in 2014: <http://mic.edu.ru/monitoring/2014/>).

Teaching and administrative positions are different, require different competencies and can even compete with each other. This may lead someone to feel role conflict. Role conflict refers to the incongruence or incompatibility of the requirements of one role or between different roles (Rizzo, House, & Lirtzman, 1970). Previous research shows that role conflict is a significant antecedent of low affective commitment (Meyer et al., 2002). Emotional attachment as a basis for affective commitment may be challenged by this factor. Research in higher education area also shows a negative relationship between role conflict and affective commitment (Gormley & Kennerly, 2010; Schulz, 2013; Wolverson, Wolverson, & Gmelch, 1999). Role conflict measured by a scale from the General Nordic Questionnaire for Psychological and Social Factors at Work (Dallner et al., 2000) was entered in all models as a control variable. The role conflict scale consists of three items (e.g. 'Do you have to do things that you feel should be done differently?') and employed a 5-point Likert-scale, ranging from 1

(*very seldom or never*) to 5 (*very often or always*). Job satisfaction, measured by the Brief Index of Affective Job Satisfaction (BIAJS) (Thompson & Phua, 2012), was also included in all models because of the strong association between commitment and job satisfaction (Meyer et al., 2002). BIAJS consists of four items (e.g. ‘I like my job better than the average person’) with three distracter items (e.g. ‘My job is unusual’) not used in analyses. All items employed a 5-point Likert-scale, ranging from 1 (*totally disagree*) to 5 (*totally agree*).

Hierarchical regression analysis was conducted. Control variables were entered at the first step of the regression equation as covariates. Dummies for two types of academic inbreeding, working at several higher education institutions, and combining teaching and administrative positions were entered separately at the second step. At the third step, all independent variables were entered. Table 1 shows the descriptive statistics and Cronbach’s alphas (when possible). Table 2 shows correlations between used variables.

Results

As shown in Tables 3–5, undergraduate inbreeding significantly predicted affective (model 2: $B = .305$, $p = .041$) and normative (model 14: $B = .402$, $p = .021$) commitment. But the effect of undergraduate inbreeding on affective commitment was not robust and disappeared after including dummies for working at several higher education institutions and combining teaching and administrative positions (model 6: $B = .241$, $p = .105$), whereas the effect on normative commitment continued to be significant (model 18: $B = .376$, $p = .036$). There were no differences between undergraduate inbreds and non-inbreds on the level of continuance commitment (model 8: $B = .067$, $p = .704$; model 7 vs. model 8 LRT $\chi^2 = .76$, $p = .685$). Postgraduate inbreeding did not

Table 1. Descriptive statistics of variables.

	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	Cronbach’s alphas
1. Affective commitment	5.01	1.29	1	7	.70
2. Continuance commitment	3.39	1.42	1	7	.66
3. Normative commitment	3.52	1.45	1	7	.80
4. Undergraduate inbred (1 – yes)	.40	–	0	1	–
5. Undergraduate silver-corded (1 – yes)	.07	–	0	1	–
6. Postgraduate inbred (1 – yes)	.31	–	0	1	–
7. Postgraduate silver-corded (1 – yes)	.03	–	0	1	–
8. Working at several HEIs (1 – yes)	.41	–	0	1	–
9. Combining teaching and administrative positions (1 – yes)	.26	–	0	1	–
10. Gender (1 – male)	.34	–	0	1	–
11. Age	41.57	11.24	23	78	–
12. Professor (1 – yes)	.17	–	0	1	–
13. Associate professor (1 – yes)	.58	–	0	1	–
14. Job satisfaction	3.40	.71	1	5	.82
15. Role conflict	3.12	.93	1	5	.81
16. University status (1 – federal/national research)	.38	–	0	1	–
17. University location (1 – Moscow or St. Petersburg)	.35	–	0	1	–
18. Mean USE	75.97	11.99	0	100	–

Table 2. Correlation matrix.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Affective commitment																	
2. Continuance commitment	-.37**																
3. Normative commitment	.32**	-.13*															
4. Gender (1 – male)	.03	-.09	-.01														
5. Age	.01	.03	.01	.07													
6. Professor (1 – yes)	.10	-.03	.06	.16**	.42**												
7. Associate professor (1 – yes)	-.09	.04	-.09	-.11*	.11*	-.46**											
8. Job satisfaction	.44**	-.30**	.29**	-.05	.01	.01	.05										
9. Role conflict	-.30**	.18**	-.15**	-.08	-.06	-.01	.04	-.26**									
10. University status (1 – federal/national research)	.10	-.00	-.06	.10	.03	.03	-.08	-.02	-.09								
11. University location (1 – Moscow or St. Petersburg)	-.04	.06	-.07	.14*	.05	.17**	-.19**	-.02	-.14*	.10							
12. Mean USE	.01	.04	.02	.17**	.02	.15**	-.13*	.06	-.15**	.37**	.54**						
13. Undergraduate inbred (1 – yes)	.06	.00	.11	-.04	-.29**	-.16**	-.10	-.04	.13*	-.08	-.17**	-.18**					
14. Undergraduate silver-corded (1 – yes)	.10	.03	-.02	.03	.07	.04	.02	-.07	-.06	.05	-.10	.01	-.23**				
15. Postgraduate inbred (1 – yes)	-.06	-.02	.03	-.10	-.38**	-.23**	.03	.01	.12*	-.05	-.11	-.11	.52**	-.19**			
16. Postgraduate silver-corded (1 – yes)	.05	.08	.03	.06	-.06	-.03	.04	-.11	-.09	.01	-.06	.02	-.15**	.44**	-.12*		
17. Working at several HEIs (1 – yes)	-.11*	-.05	-.06	.09	.25**	.11*	.13*	-.02	-.02	-.09	.07	-.05	-.17**	.12*	-.18**	.07	
18. Combining teaching and administrative positions (1 – yes)	.15**	-.06	.09	-.03	.01	.09	.00	.15**	.17**	-.11	-.07	-.12*	.14*	-.05	.02	-.02	-.06

Note: The table shows the Spearman's correlation coefficients.

* $p < .05$; ** $p < .01$.

Table 3. Predictors of the affective commitment.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Gender (1 – male)	.067 (.138)	.053 (.135)	.049 (.137)	.093 (.138)	.060 (.136)	.072 (.133)
Age	-.002 (.007)	-.001 (.007)	-.002 (.007)	-.000 (.007)	-.002 (.007)	.002 (.007)
Professor (1 – yes)	.298 (.234)	.329 (.243)	.275 (.234)	.334 (.237)	.232 (.238)	.291 (.253)
Associate professor (1 – yes)	-.157 (.157)	-.138 (.165)	-.200 (.157)	-.126 (.160)	-.201 (.157)	-.110 (.168)
Job satisfaction	.698*** (.094)	.727*** (.090)	.719*** (.093)	.693*** (.094)	.661*** (.094)	.692*** (.090)
Role conflict	-.295*** (.072)	-.287*** (.072)	-.280*** (.074)	-.294*** (.072)	-.332*** (.073)	-.316*** (.070)
University status (1 – federal/national research)	.137 (.141)	.141 (.141)	.135 (.141)	.114 (.140)	.151 (.141)	.127 (.140)
University location (1 – Moscow or St. Petersburg)	-.174 (.137)	-.076 (.143)	-.161 (.138)	-.145 (.140)	-.176 (.135)	-.055 (.146)
Mean USE	-.004 (.006)	-.004 (.006)	-.004 (.006)	-.004 (.006)	-.002 (.006)	-.003 (.006)
Undergraduate inbred (1 – yes)		.305* (.149)				.241 (.148)
Undergraduate silver-corded (1 – yes)		.675** (.231)				.732** (.243)
Postgraduate inbred (1 – yes)			-.065 (.155)			
Postgraduate silver-corded (1 – yes)			.586 (.411)			
Working at several HEIs (1 – yes)				-.303* (.143)		-.289* (.142)

(Continued)

Table 3. (Continued).

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Combining teaching and administrative positions (1 – yes)						
Intercept	3.971*** (.649)	3.548*** (.622)	3.876*** (.654)	4.033*** (.677)	.396* (.155)	.353* (.154)
R ²	.245	.267	.251	.257	3.989*** (.638)	3.668*** (.642)
F	10.817	9.887	9.102	10.342	.261	.293
p	<.001	<.001	<.001	<.001	10.575	9.424
AIC	972.420	967.099	973.750	969.458	<.001	<.001
VIF ranged	1.06–1.75	1.06–1.77	1.07–1.76	1.07–1.76	967.668	960.171
N	310	310	310	310	1.06–1.77	1.07–1.81
					310	310

Notes: The table shows the unstandardized coefficients. Robust standard errors in parentheses. VIF – variance inflation factor.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 4. Predictors of the continuance commitment.

	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Gender (1 – male)	-.263 (.160)	-.267 (.162)	-.277 (.160)	-.243 (.160)	-.260 (.160)	-.243 (.162)
Age	.010 (.008)	.010 (.008)	.011 (.009)	.012 (.008)	.010 (.008)	.012 (.008)
Professor (1 – yes)	-.257 (.258)	-.254 (.259)	-.270 (.262)	-.229 (.257)	-.231 (.263)	-.196 (.265)
Associate professor (1 – yes)	.133 (.201)	.141 (.202)	.119 (.201)	.177 (.204)	.139 (.202)	.197 (.207)
Job satisfaction	-.571*** (.116)	-.560*** (.118)	-.554*** (.117)	-.575*** (.115)	-.557*** (.118)	-.546*** (.118)
Role conflict	.203* (.087)	.208* (.088)	.212* (.088)	.204* (.086)	.217* (.089)	.227* (.089)
University status (1 – federal/national research)	-.049 (.178)	-.050 (.179)	-.049 (.178)	-.066 (.180)	-.054 (.180)	-.077 (.182)
University location (1 – Moscow or St. Petersburg)	.222 (.175)	.252 (.179)	.237 (.175)	.244 (.174)	.223 (.175)	.279 (.178)
Mean USE	.005 (.007)	.005 (.007)	.005 (.007)	.005 (.007)	.005 (.007)	.004 (.007)
Undergraduate inbred (1 – yes)		.067 (.175)				.064 (.178)
Undergraduate silver-corded (1 – yes)		.261 (.380)				.294 (.376)
Postgraduate inbred (1 – yes)			.025 (.198)			
Postgraduate silver-corded (1 – yes)			.527 (.492)			
Working at several HEIs (1 – yes)				-.231 (.176)		-.256 (.177)

(Continued)

Table 4. (Continued).

	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Combining teaching and administrative positions (1 – yes)						
Intercept	3.873*** (.780)	3.756*** (.804)	3.729*** (.789)	3.921*** (.769)	–.152 (.177)	–.179 (.178)
R^2	.133	.135	.136	.139	3.866*** (.778)	3.795*** (.789)
F	5.105	4.225	4.279	4.809	.135	.144
p	<.001	<.001	<.001	<.001	4.657	3.825
AIC	1,075.772	1,079.014	1,078.478	1,075.709	<.001	<.001
VIF ranged	1.06–1.75	1.06–1.77	1.07–1.76	1.07–1.76	1,077.069	1,079.801
N	310	310	310	310	1.06–1.77	1.07–1.81
					310	310

Notes: The table shows the unstandardized coefficients. Robust standard errors in parentheses. VIF – variance inflation factor.
 * $p < .05$; *** $p < .001$.

Table 5. Predictors of the normative commitment.

	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18
Gender (1 – male)	-.035 (.166)	-.042 (.164)	-.040 (.165)	-.022 (.168)	-.039 (.165)	-.036 (.166)
Age	.009 (.009)	.012 (.009)	.011 (.009)	.010 (.009)	.010 (.009)	.013 (.009)
Professor (1 – yes)	.005 (.286)	.080 (.289)	.010 (.287)	.023 (.287)	-.031 (.290)	.061 (.293)
Associate professor (1 – yes)	-.385* (.171)	-.313 (.174)	-.392* (.171)	-.356* (.181)	-.395* (.172)	-.305 (.183)
Job satisfaction	.448*** (.125)	.448*** (.123)	.454*** (.128)	.445*** (.125)	.428*** (.128)	.433*** (.125)
Role conflict	-.146 (.091)	-.163 (.089)	-.147 (.092)	-.145 (.091)	-.166 (.092)	-.175 (.090)
University status (1 – federal/national research)	-.308 (.179)	-.282 (.177)	-.307 (.178)	-.319 (.178)	-.300 (.180)	-.286 (.177)
University location (1 – Moscow or St. Petersburg)	-.448* (.191)	-.390* (.194)	-.436* (.190)	-.433* (.196)	-.448* (.192)	-.383 (.198)
Mean USE	.017* (.007)	.017** (.007)	.017* (.007)	.016* (.007)	.017* (.007)	.017* (.007)
Undergraduate inbred (1 – yes)		.402* (.173)				.376* (.179)
Undergraduate silver-corded (1 – yes)		-.023 (.344)				-.002 (.353)
Postgraduate inbred (1 – yes)			.134 (.179)			
Postgraduate silver-corded (1 – yes)			.287 (.544)			
Working at several HEIs (1 – yes)				-.151 (.186)		-.100 (.189)

(Continued)

Table 5. (Continued).

	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18
Combining teaching and administrative positions (1 – yes)						
Intercept	1.326 (.790)	.969 (.788)	1.162 (.821)	1.358 (.798)	.214 (.177)	.150 (.181)
R^2	.108	.125	.111	.111	.112	.128
F	4.050	3.879	3.370	3.725	3.778	3.354
p	<.001	<.001	<.001	<.001	<.001	<.001
AIC	1,088.799	1,086.866	1,091.999	1,089.953	1,089.458	1,089.752
VIF ranged	1.06–1.75	1.06–1.77	1.07–1.76	1.07–1.76	1.06–1.77	1.07–1.81
N	310	310	310	310	310	310

Notes: The table shows the unstandardized coefficients. Robust standard errors in parentheses. VIF – variance inflation factor. * $p < .05$; ** $p < .01$; *** $p < .001$.

predict any of the three components of commitment (see models 3, 9, 15). Belonging to undergraduate silver-corded faculty also significantly predicted affective commitment (model 2: $B = .675$, $p = .004$). This effect was robust and continued to be significant after the inclusion of dummies for working at several higher education institutions and combining teaching and administrative positions (model 6: $B = .732$, $p = .003$). Thus, undergraduate inbreds had a higher level of normative organizational commitment compared to undergraduate non-inbreds, whereas undergraduate silver-corded faculty had a higher level of affective organizational commitment. Hypotheses 1 and 3 were partly supported, whereas hypothesis 2 was not.

Contrary to expectations, having an additional job at another higher education institution significantly predicted only affective commitment (model 4: $B = -.303$, $p = .035$), and this effect was robust (model 6: $B = -.289$, $p = .043$). But the link between having an additional job at another institution and continuance commitment was not statistically significant (model 10: $B = -.231$, $p = .191$). Thus, faculty working at several higher education institutions showed lower-level affective commitment toward their primary institution. Hypothesis 4 was supported, but hypothesis 5 was not.

According to the results, the dummy for combining teaching and administrative positions was a significant predictor of affective commitment (model 5: $B = -.396$, $p = .011$). This effect was significant even in the case of controlling for perceived role conflict and after including dummies for undergraduate inbreeding, silver-corded faculty, and working at several higher education institutions (model 6: $B = .353$, $p = .022$). Faculty who combined teaching and administrative positions had a higher level of affective commitment compared to the rest of the faculty. Hypothesis 6 was supported. Additional mediation analysis (Sobel test) showed that role conflict is a mediator for the relationship between combining teaching and administrative positions and affective commitment to the university. The total direct effect of combining teaching and administrative positions on affective commitment was $.39$ ($p = .017$), and direct effect removing role conflict was $.57$ ($p < .001$). Therefore, indirect effect combining teaching and administrative positions on affective commitment through role conflict was $-.17$ (95% CI = $-.31 \dots -.06$).

Discussion and conclusion

The main goal of this study was the exploration of specific antecedents of the commitment of faculty to their university, such as academic inbreeding, working at several higher education institutions, and combining teaching and administrative positions. Several conclusions can be made based on the results of this study. Firstly, being an undergraduate silver-corded faculty, working at the same university from which one graduated, predicts affective commitment, whereas being an undergraduate inbred predicts normative commitment to this university. Undergraduate silver-corded faculty feel a stronger emotional attachment, but undergraduate inbreds feel moral obligations to their institution more so than non-inbreds. However, being an undergraduate inbred does not predict continuance commitment. They do not perceive their costs associated with leaving the organization as greater than those of non-inbreds. This means that neither inbreds nor silver-corded faculty perceive themselves as less competitive compared to non-inbreds. These results are indirect proof of the influence of a specific hiring process on inbreds' perception of the relationships with their higher education institution. It seems that they really feel obligations toward the university for the opportunity to start an academic career.

Secondly, there is only an effect for undergraduate inbreeding, not for postgraduate inbreeding. A potential reason for this could be specific aspects of postgraduate schools in Russia. Doctoral students are often not fully included in academia and do not go through real professional socialization in their institution. There are several reasons for this (Enikeeva, 2010). The great majority of doctoral students do not have regular and systematic classes. Due to an extremely low level of scholarships, most doctoral student need to have a job, which often is not related to their research. Thus, the inbreds' basis for their commitment to the university probably forms during the studying process, when they learned and began to share the values, standards and goals of the university and the local academic community. Time spent in doctoral school probably does not have such an influence on faculty commitment toward their university. Therefore, undergraduate inbreds can be predisposed to being affectively committed to their university whereas postgraduate inbreds are not.

On the one hand, the current results showing a positive (although not robust) relationship between academic inbreeding and affective commitment can be interpreted as a positive characteristic of the academic inbreeding practice, as more-committed employees are more involved in their job, more frequently perform organizational citizenship behaviour, have stronger intentions to stay and greater well-being (Cooper-Hakim & Viswesvaran, 2005; Mathieu & Zajac, 1990; Meyer & Maltin, 2010; Meyer et al., 2002). On the other hand, these results do not compensate for a potential negative consequences of academic inbreeding, such as focusing on the intra-university academic community, lower mobility and collaboration with academics from outside one's own university (Horta, Veloso, & Grediaga, 2010; Sivak & Yudkevich, 2015).

Thirdly, the results show that having a post at another higher education institution predicts affective commitment. This difference can be explained in at least two ways. On the one hand, working in several higher education institutions is common practice in Russia because of low wages; a low salary level may be the cause for both working in several institutions and for a low affective commitment. Pay satisfaction is considered as one of the facets of job satisfaction (Spector, 1997), and job and pay satisfaction are stronger correlates of affective commitment (Meyer et al., 2002). It is worth noting that meta-analysis (Judge, Piccolo, Podsakoff, Shaw, & Rich, 2010) has shown that pay level is weakly related to overall job satisfaction. However, faculty in Russia have the lowest salaries (Altbach et al., 2012), and this may be the cause for a stronger relationship between pay satisfaction and overall job satisfaction. Thus, low income and the need to have additional work are obviously systemic barriers for the development of a psychological attachment to a university. On the other hand, the higher education institutions in which faculty work may be quite different. Differences can occur in goals, values, priorities, visions about the future, etc. Membership of a professional organization affects its own individual identity (Ashforth & Johnson, 2003; Becker, 1992), and challenges emotional attachment to each of them, because it is based largely on the perception of similarity with the group, sharing its goals and values (Edwards, 2005). It is difficult to identify with two organizations if they have different or even contradictory values, goals or norms.

Fourthly, results of the current research show that faculty who combine teaching and administrative positions at the same university are more affectively committed. Results also show that this relationship is mediated by role conflict. Combining several positions leads to higher affective commitment, and, at the same time, to perceived role conflict. Therefore, perceived role conflict challenges the affective commitment of faculty. However, the direct positive effect of combining teaching and administrative positions

on affective commitment was stronger than the indirect negative effect. There are several explanations as to why role conflict can be a threat to affective commitment. The role of an administrator does not match and can even contradict the role of a lecturer. Perhaps this leads to the university starting to be perceived as more diverse and heterogeneous. It is difficult to identify with a less homogeneous group (Riketta & Van Dick, 2005; Van Knippenberg & Van Schie, 2000) and remain committed to the university as whole. Cooper, Dewe, and O'Driscoll (2001) suggest that role conflict leads to psychological strain; such psychological strain may decrease employees' affective organizational commitment.

This psychological strain's mediation effect should be tested in future research. It suggests that universities' management should create an environment that will reduce the likelihood of role conflict. Universities should not appoint administrators based only on scholarly performance, and should provide workshops, seminars and courses that help faculty obtain the knowledge and skills required for administrative work. Time-management is especially important in this case. Universities should help faculty to realize that to be effective administrators they must sacrifice teaching and research time. Also, management must take into account combining different roles in the process of performance evaluation. This may be achieved by an effective contract, which divides teaching and administrating more formally (by time and load). Finally, it seems that universities should provide assistants for high-level administrators who combine teaching, administration and research.

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