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ABSTRACT

This paper examines the effect of faculty rank, satisfaction with salary, working conditions, institutional reputation, perceived influence on institutional policies, participation in meetings, and perceived governance on organizational commitment (at both the departmental and institutional level) using a representative sample of 4,925 faculty. Study results revealed that although satisfaction with salary and working conditions was not significant in predicting commitment to the department it was significant in predicting commitment to the university. Full professors were found to be significantly more committed to the institution than lower ranked professors. Regression analysis revealed the importance and the power of faculty members' perceived influence on policy and participation in meetings were powerful predictors of organizational commitment. This finding suggests that, to increase faculty members' commitment to both the department and the institution, it is important for campus leaders to strive for participatory policy decision making. Findings also suggest that faculty exhibit more commitment to the department than to the institution across all ranks, with full professors exhibiting the highest commitment scores. (Contains 20 references.) (GLR)

Factors Predicting Faculty Commitment to the University

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Abstract: The effect of faculty rank, satisfaction with salary, working conditions, institutional reputation, perceived influence on institutional policies, participation in meetings, and perceived governance on organizational commitment (at both the department and institutional level) was examined using a nationally representative sample of faculty (N=4925). The findings indicated that the set of independent variables were significantly related to organizational commitment at both the department and institutional level. Perceived influence and participation in meetings were powerful predictors of organizational commitment indicating the desirability of participatory decision making. The findings suggested faculty exhibited more commitment to the department than to the institution across all ranks, with full professors exhibiting the highest commitment scores.

Introduction

Organizational commitment has been found to be an important factor in understanding the work behavior of employees and positively related to factors such as job satisfaction, employee retention and job performance (Steers, 1977; Sheldon, 1971). Because of this relationship, organizational commitment has potentially significant consequences for organizational effectiveness (Angel and Perry, 1981). Moreover, it has also been found to be positively related to outcomes such as enhanced feelings of belonging, efficacy and positive self-image (Mowday, Porter, and Steers, 1982). Neumann and Finaly-Neumann (1990) argue that organizational commitment is essential to understanding faculty attitudes, behavior and effectiveness. Given current predictions that faculty morale is expected to decrease (Williams, Olswang, and Hargett, 1986), it is particularly important to understand what factors positively affect organizational commitment and how those factors can be altered or developed by campus leaders.

Mowday, Porter and Steers (1982) define organizational commitment as "...an individual's identification with and involvement in a particular organization" (p.27). Organizational commitment, in other words, is a sense of belonging that an individual faculty member has for his or her institution. It has been found to be distinctly different and separate from professional or career commitment (Blau, 1985). Career commitment has been defined as one's attitude toward one's

profession or vocation (Blau, 1985). Organizational commitment differs in that it links the individual to the goals and values of the organization, not the profession. Organizational commitment differs from job satisfaction as well. It is more global and it encompasses attitudes toward the organization as a whole, attitudes that have developed slowly over time. Job satisfaction, on the other hand, has been known to fluctuate over time and incorporates both intrinsic and extrinsic factors. Single events may cause one's job satisfaction to vary, but will not affect one's overall commitment to the organization (Porter, Steers, Mowday, and Boulian, 1974). Organizational commitment is a unique construct. It links the individual to the organization in a global, long lasting manner. The existence of one kind of commitment does not preclude the existence of other commitments. For example, a faculty member may be highly committed to both the institution and the profession, or he or she may be less committed to his or her educational institution and highly committed to the profession.

More recently, faculty commitment to the institution is of particular interest in higher education because of the relationship between problems associated with undergraduate education and the lack of faculty commitment to the organization (Association of American Colleges, 1985; Boyer, 1987). It has been suggested that faculty more oriented toward the university as opposed to the department or discipline, are more instrumental in implementing the teaching and service responsibilities of the

department (Dressel, Johnson, and Marcus, 1970). While there is little empirical evidence to support this relationship, faculty organizational commitment is a concern to observers of higher education. Beyond speculation of cause and effect, it is apparent that universities need dedicated faculty to carry out their missions of quality research, hign academic standards and innovative programs.

Clearly faculty commitment to the organization is an area of interest for higher education. Enhanced levels of organizational commitment may benefit the individual, the institution, and possibly the quality of undergraduate education. This study will examine the relationship between faculty organizational commitment and a set of variables (rank, satisfaction with salary, working conditions, reputation of the institution, perceived administrative style of both the department and the institution, participation in meetings, and perceived influence on both department policy and institution policy) that are expected to be positively related to faculty's organizational commitment. Of particular interest in this study are those factors that can be influenced or changed by campus leaders, such as participation in meetings. In addition, differences in organizational commitment by rank will be examined.

Literature Review and Conceptual Framework

Several models have been proposed that attempt to explain or predict organizational commitment (Morris and Sherman, 1981; Steers, 1977; Buchanan, 1974; Mowday, Porter, and Steers, 1982).

Stevens, Beyer, and Trice (1978) have suggested that the various conceptual models of organizational commitment can be categorized in two distinctly different outlooks: the exchange approach and the psychological approach. The exchange approach sees commitment as a result of inducement transactions between the organization and the member. Hence, the greater the favorability of the exchange from the member's perspective, the greater his or her commitment to the organization. Contrary to the exchange perspective, the psychological approach describes commitment as a more active and positive orientation toward the organization. This study draws its conceptual framework from the commitment model proposed by Mowday, Porter, and Steers (1982), which incorporates the psychological approach. They suggest that there are three factors that characterize organizational commitment: 1) a strong belief in and acceptance of the organization's goals and values, 2) a willingness to exert considerable effort on behalf of the organization, and 3) a strong desire to maintain membership in the organization. It is not only an attitudinal construct, but a behavioral phenomena as well. Mowday et.al suggest that institutional commitment is affected by four factors: personal characteristics, role-related characteristics, structural characteristics and work experience. Personal characteristics, such as age and tenure, have been found to be positively related to organizational commitment (Angle and Perry, 1981; Morris and Sherman, 1981). Role-related or job-related characteristics included such factors as job scope and role

conflict. Role conflict can be thought of as stressful situations when expectations are not clear or demands are conflicting. Role conflict has been found to be negatively related to commitment (Morris and Sherman, 1981). In addition, structural characteristics, such as centralization of authority, affect organizational commitment. Decentralization was found to be positively related to commitment (Morris and Steers, 1980). Lastly, work experience, a major socializing force, affects commitment through enhanced feelings of personal importance to the organization (Buchanan, 1974; Steers, 1977). When employees feel like they are needed or important to the organization's mission, commitment levels increase.

For the most part, these models have been tested on populations from the business, health care, and government sectors. There has been little empirical testing of organizational commitment models on faculty in higher education. Two studies have been found that examine faculty organizational commitment in institutions of higher education (Harshbarger, 1989; Neumann & Finaly-Neumann, 1990). Harshbarger found that of all the personal characteristics included in his model, only rank was significantly related to organizational commitment. Associate professors exhibited the lowest organizational commitment while assistant and full professors exhibited equal and higher levels of commitment. No differences were found between disciplines. Highly committed faculty were also more likely to cite shared governance, institutional reputation, and

leadership at both the department and institutional level as a source of commitment than less committed faculty.

Neumann and Finaly-Neumann (1990) examined the effects of rewards and support on faculty commitment to the organization across disciplines and career stages. The authors found that factors related to the reward structure and social support were significant in explaining variance in organizational commitment, but were distinctly different for the hard and soft sciences. Contrary to Harshbarger (1989), Neumann and Finaly-Neumann (1990) found that discipline did make a difference in organizational commitment. Applied fields demonstrated a stronger commitment to the university than pure fields. Moreover, senior faculty were more committed than either early career or mid-career stage faculty.

Research Procedures

Sample

The total population consisted of 5450 faculty who responded to the 1989 Carnegie Faculty survey. For purposes of this study, only respondents with the rank of lecturer/instructor, assistant professor, associate professor, or professor and who responded to all of the items were selected. The total number in this sample was 4925. The respondents were equally representative of the five Carnegie types with the exception of two-year colleges. Only 8 percent of the respondents were from the two-year sector. Ninety-four percent of the respondents had full time appointments, 71 percent of the respondents were male and 93.6

percent of the respondents were white. Any conclusions from this analysis are clearly limited to white, male, full-time faculty. The paucity of women and minorities in this sample prohibit any generalizations to other populations. There is a need for further examination of organizational commitment in other diverse populations.

Variable Selection and Measures

Mowday, Porter, and Steers (1982) have proposed that antecedents of organization commitment could be cast into four different categories: personal characteristics, role-related characteristics, work experience, and structural characteristics. Variables were selected to represent each of these categories. In selecting the variables three criteria were used. Variables were selected that were appropriate or unique to faculty and their environment, such as faculty rank and institutional reputation. Practical as well as statistical significance was sought, so rather than attempting to be inclusive, variables were selected based on extant evidence that was specifically related to faculty and their environment, such as shared governance. In addition, with practical implications in mind, behavioral characteristics or factors were included, such as participation in meetings.

Rank was used to represent the category personal characteristics. Rank has previously been found to be significantly related to organizational commitment (Harshbarger, 1989, Neumann and Finaly-Neumann, 1990). The sample was relatively homogenous, so only rank was used to represent

personal characteristics. Rank was coded 1=lecturer/instructor, 2=assistant professor, 3=associate professor, and 4=professor.

Two variables were included to represent job-related or role-related characteristics; satisfaction with salary and working conditions. Although salary has not been found to be significantly related to faculty commitment in a previous study (Harshbarger, 1989), it was included in this analysis for two reasons. First, it represents the faculty member's satisfaction with the inducement or exchange between the institution and the individual. In addition, higher levels of compensation appear to increase retention rates for assistant and associate professors (Ehrenberg, Kasper and Rees, 1991). Salary was measured by the item "How do you rank your own salary?" Responses were coded 1=poor, 2=fair, 3=good, and 4=excellent. The variable working conditions represented role conflict, which has been found to be negatively associated with organizational commitment (Morris and Sherman, 1980). Role conflict was expected to be particularly salient for faculty, as faculty balance multiple roles and responsibilities that are all equally demanding. Multiple role expectations represent everyday faculty working conditions, that may be measured by stress. Faculty job stress has been defined as coming from one of two sources: career or structural stress, and organizational stress. Organizational stress stems from excessive and incongruent demands on faculty (Finkelstein, 1984). Therefore, working conditions was measured by three items (coefficient alpha=0.68), that examine job stress. The three

items were: 1) My job is the source of considerable personal strain, 2) I tend to subordinate all aspects of my life to my work, and 3) I hardly ever get time to give a piece of work the attention it deserves. Respondents were asked to indicate their level of agreement with the statements.

The construct work experience was represented by two sets of variables; participation in meetings, and perceived influence on policy. Mowday, Porter, and Steers (1982) include both attitudinal and behavioral variables in the construct working conditions. For example, feelings of personal importance to the organization, an attitudinal variable, increased commitment to the organization (Buchanan, 1974; Steers, 1977). Behavioral variables, such as social involvement, have also been linked to heightened levels of commitment to the organization (Buchanan, 1974). These experiences together can be viewed as important socializing forces (Steers, 1977). Participation in meetings, a behavioral variable, measured the faculty member's participation in department meetings, faculty senate or comparable group meetings, campus-wide faculty committee meetings, administrative advisory committee meetings, and academic budget committee meetings. Responses were coded as 1=never, 2=rarely, 3=sometimes, and 4=often. Perceived influence on policy, an attitudinal variable, was measured at both the department and institutional level and was coded 1=none, 2=some, 3=quite a bit, and 4=a great deal. Perceived influence in both institutional and departmental policy has been reported to be an important

factor for highly satisfied and committed faculty (Change, March/April 1986; Harshbarger, 1989).

Two variables were selected to represent structural characteristics; reputation and administrative style. Reputation of the institution or status has been found to be related to highly committed faculty (Harshbarger, 1989). Reputation was measured by a scale comprised of two items with an alpha coefficient of 0.779. The two items were: 1) How do you rate the academic reputation of your department outside your institution, and 2) How do you rate the academic reputation of your institution within your discipline. The responses were coded 1=poor, 2=fair, 3=good, and 4=excellent. Since decentralization has been found to be positively related to commitment (Morris and Sherman, 1980), perceived administrative style or governance was included in the model. Faculty member's perception of administrative style was measured at both the department level and the institution level and was coded 1=very autocratic, 2=somewhat autocratic, 3=somewhat democratic and 4=very democratic.

The dependent variable, organizational commitment, examined the faculty member's commitment to his or her department and to the institution and each was measured by a single item. Respondents were asked "How important is my department to me" and "How important is my institution to me" The responses were coded 1=not at all important, 2=fairly unimportant, 3=fairly important, and 1=very important.

Data Analysis

Multiple regression was employed to examine the predictive validity of rank, satisfaction with salary, working conditions, reputation, perceived administrative style, participation in meetings, and perceived influence on policy on commitment to the department and commitment to the institution. All independent variables were entered into the equation simultaneously, as dictated by the theoretical framework. One way analysis of variance (ANOVA) was used to examine group differences in commitment by rank. Significance was established a priori at .01. The Scheffe' multiple comparison test was applied to examine how the groups differed.

Results

Descriptive statistics and correlations of all the variables are listed in Table 1. The set of independent variables was significant in predicting organizational commitment at the department level and at the institution level (R^2=.193; F=90.33; DF=13,4911; p=.000 and R^2=.197; F=92.64; DF=13,4911; p=.000 respectively). The results of the multiple regressions are displayed in Tables 2 and 3. The analysis of faculty commitment to the department indicated that three of the four categories were significant in predicting commitment. The variables satisfaction with salary and working conditions, which represented the category role-related factors, were not significant in predicting commitment to the department. The most powerful indicator of commitment to the department was perceived

influence on department policy (Beta=.231), followed by reputation of the institution (Beta=.187), participation in department meetings (Beta=.120), and perceived administrative style of the department (Beta=.100).

The analysis of faculty commitment to the institution indicated that three of the four categories were significant in predicting commitment to the university. In this analysis, rank, representing personal characteristics, was not significant. Reputation was the most powerful predictor of commitment to the university (Beta=.169), followed by perceived influence on institutional policy (Beta=.133), and perceived administriavtive style of the institution (Beta=.127). Although participation in four of the five categories of meetings (department, senate, campus-wide, advisory), was statistically significant, perceived influence on institutional policy was approximately twice as powerful as meeting participation in predicting faculty member's commitment to the institution.

The ANOVA revealed that professors were significantly more committed than instructors/lecturers at the department level. Professors, associate professors and assistant professors displayed no significant differences in their level of commitment to the department. At the institution level, professors were significantly more committed to the institution than all three other ranks. No differences were found in commitment to the institution between assistant and associate professors and instructors/lecturers. The group means indicated that all ranks

indicated higher commitment to the department than to the institution. Results of the ANOVA and group means are found in table 4.

Conclusions

This study attempted to examine the predictive validity of a model of faculty organizational commitment that was grounded in the theoretical framework provided by Mowday, Porter, and Steers (1982). The selection of the predictor variables was based on the framework as specified by the four categories developed by Mowday, Porter, and Steers, and specifically focused on factors unique or appropriate to faculty. Practical implications was an important consideration, so variables were selected that had potential for change, such as participation in meetings.

This study used an already existing data base. Selection of variables was limited to items included in the survey. Single items were used to measure organizational commitment to the department and to the institution. Previous research employed a multi-item instrument to examine commitment (Angle and Perry, 1981, Porter et al., 1974). The item selected to measure commitment may not be fully capturing the complexity of organizational commitment.

Both regression analysis revealed the importance and the power of faculty member's perceived influence on policy in predicting commitment to the department and the institution. This suggests that to increase faculty member's commitment to both the department and the institution, it is important for campus

leaders to strive for participatory policy decision making. Feelings of personal importance to the organization and of having real influence are vital links to commitment. Perceived influence on policy characterized, in part, the construct work experience as developed by Mowday, Porter, and Steers (1982). The attitudinal component of work experiences (perceived influence) was more influential than the behavioral component of work experiences (participation in meetings). This suggests that faculty participation in meetings and committees that are not perceived to exert any real influence on either department or campus policy may be in part, an empty exercise. In order to develop committed faculty, campus leaders must have mechanisms in place for participatory decision making, such as committees with real authority. In addition, faculty need to be provided with the means to see how their actions and recommendations impact the larger organization. Recognizing individual effort or group effort that positively enhances the organization may also be beneficial in enhancing feelings of importance to or influence on the organization.

The factors that significantly predicted commitment to the department differed in some respect to the significant predictors of institutional commitment. For example, satisfaction with salary and working conditions that were not significant predictors of department commitment were significant predictors of university commitment, albeit not very powerful. Universities have been described as having multiple environments. The results

of this study suggest that there are indeed multiple environments in which a faculty operates, and factors that are important in one environment may not be equally as important in another environment.

Universities are dependent on the vitality and commitment of their faculty for program review, maintaining high standards for scholarship and teaching, and for governance. It is important to identify faculty members that may have lower commitments and for deans, department heads and directors to develop techniques that enhance those commitments. Contrary to the results of the Harshbarger (1989) study, but similar to the findings of Neumann and Finaly-Neumann (1990), the results of the ANOVA indicated that full professors were significantly more committed to the institution than either instructor/lecturers, assistant professors or associate professors. The only significant difference found in commitment to the department was between professors and lecturers/instructors. As suggested by Neumann and Finaly-Neumann (1990), these findings may coincide with the likelihood of job change. Full professors are not in a transition period in their careers. Faculty with lower levels of commitment appear to be at transitional stages in their careers and may need special attention. It is important to improve the quality of the early job experience for faculty. O'Briant (1991) suggests ways of building loyalty in junior faculty, such as a progression of teaching responsibilities that build competence and confidence and multi-year commitments for travel funding.

While the findings indicated that the set of predictor variables were significant in predicting both levels of organizational commitment, only a small percentage of the variance in organizational commitment was explained. While there is some utility in the theoretical framework employed in this study, relying on models derived and tested in the business sector may prove to be limiting in explaining the phenomena of faculty commitment to their college or university. More work on developing and testing models of faculty commitment to the organization is necessary.

References

Angle, Harold L. and Perry, James L. (1981). "An empirical assessment of organizational commitment and organizational effectiveness." Administrative Science Quarterly, 26 1-14.

Association of American Colleges: "Integrity in the College Curriculum: A Report to the Academic Community." Chronicle of Higher Education, 29 (13 February 1985): 12-30.

Blau, G.(1985). "The measurement and prediction of career commitment." Journal of Occupational Psychology, 58, 277-287.

Boyer, Ernest L. (1987). The Undergraduate Experience in America. New York: Harper and Row.

Buchanan, Bruce, II (1974). "Building organizational commitment: The socialization of managers in work organizations." Administrative Science Quarterly, 19, 533-546.

Change 18 (March/April 1986): 32-34.

Dressel, Paul L., Johnson, F. Craig, and Marcus, Philip M. (1970). The Confidence Crisis. San Francisco: Jossey-Bass Inc.

Ehrenberg, Ronald, Kasper, Hirschel, and Rees, Daniel (1991). "Faculty turnover at American colleges and universities: Analyses of AAUP data." Economics of Education Review, 10 99-110.

Finkelstein, Martin J. (1984). The American Academic Profession. Columbus, Ohio: Ohio State University Press.

Harshbarger, Bruce, (1989). "Faculty commitment to the university:influences and issues." Review of Higher Education, 13, 29-45.

Morris, James H., and Sherman. J. Daniel (1981). "Generalizability of an organizational commitment model." Academy of Management Journal, 24, 512-526.

Morris, James H. and Steers, R.M. (1980). "Structural influences on organizational commitment." Journal of Vocational Behavior, 17, 50-57.

Mowday, Richard T., Porter, Lyman W., and Steers, Richard M. (1982). Employee-Organization Linkages. New York: Academic Press.

Neumann, Yoram and Finaly-Neumann, Edith (1990). "The reward-support framework and faculty commitment to their university." Research in Higher Education, 31, 75-97.

O'Briant, Walter H. (1991). "Professional loyalty and the scholarly community: Reflections toward a philosophy for fostering faculty." Review of Higher Education, 14, 251-262.

Porter, L. W., Steers, R.M. Mowday, R.T. and Boulian, P.V. (1974). "Organizational commitment, job satisfaction and turnover among psychiatric technicians." Journal of Applied Psychology, 59 603-609.

Sheldon, Mary E., (1971). "Investments and involvements as mechanisms producing commitment to the organization." Administrative Science Quarterly, 16, 142-150.

Steers, Richard M. (1977). "Antecedents and outcomes of organizational commitment." Administrative Science Quarterly, 22, 46-56.

Stevens J.M. Beyer, J.M. and Trice, H.M. (1978). "Assessing personal, role and organizational predictors of managerial commitment." Academy of Management Journal, 21, 380-396.

Williams, Don, Olswang, Steven G., and Hargett Gary (1986). "A matter of degree: Faculty morale as a function of involvement in institutional decisions during times of financial distress." Review of Higher Education, 9, 287-301.

ble 1. Descriptive Statistics and Correlation Matrix for Study Variables

	Mean	S.D.	Correlation													
Organizational commitment																
Department	3.386	.715	1.000													
Institution	3.208	.764	.557	1.000												
Participation in Meetings																
Departmental	3.788	.597	.220	.125	1.000											
Senate	2.418	1.200	.148	.230	.186	1.000										
Campus-wide	2.825	1.114	.175	.261	.250	.563	1.00									
Advisory	2.264	1.170	.167	.220	.139	.317	.441	1.000								
Budget	1.607	.969	.113	.177	.042	.276	.299	.506	1.000							
Rank	2.982	1.007	.069	.085	.182	.112	.196	.216	.164	1.000						
Working conditions	3 044	1.026	.063	.109	-.059	005	.006	.022	.023	.055	1.000					
Reputation	2.588	869	.262	260	.076	.064	.095	.112	.092	.043	.103	1.000				
Salary	2 170	.910	.089	.161	.048	-.010	.036	.084	.098	.224	.168	.186	1.000			
Perceived influence																
Department	3 136	933	.357	.245	303	.276	.311	.298	.227	.248	.082	.196	.173	1.000		
Institution	1 986	849	.197	.336	.128	.387	.425	.425	.371	.227	.080	.188	.197	.496	1.000	
Administrative style																
Institution	2 116	901	.104	.269	.002	.140	.130	.156	.156	.064	.146	.182	.166	.174	.403	1.000
Department	3.091	.852	.269	.144	.131	.136	.156	.123	.107	.096	.137	.163	.097	.474	.260	.283	1.000

Table 2. Results of Multiple Regression for Commitment to the Department

Variable	B	Beta
Rank	-.037*	-.053*
Salary	.006	.008
Working Conditions	.015	.021
Reputation	.154*	.187*
Administrative Style		
Department	.75*	.100*
Institution	-.003	-.004
Participation in Meetings		
Department	.143*	.120*
Senate	.013	.022
Campus-wide	.019	.029
Advisory	.020	.032
Budget	.009	.012
Perceived Influence		
Department	.177*	.231*
Institution	-.019	-.023

*.001

$R^2 = .193$ $F = 90.33$ $Df = 13,4911$

Table 3. Results of Multiple Regression for Commitment to the Institution

Variable	B	Beta
Rank	-.023	-.03
Salary	.045*	.054*
Working Conditions	.041*	.055*
Reputation	.149*	.169*
Administrative Style		
Department	.017	-.021
Institution	.107*	.127*
Participation in Meetings		
Department	.063*	.049*
Senate	.046*	.073*
Campus-wide	.053*	.077*
Advisory	.027*	.041*
Budget	.012	.015
Perceived Influence		
Department	.042*	.052*
Institution	.119*	.133*

*.001

$R^2 = .197$ F = 92.64 Df = 13,4911 P = .000

Table 4. Results of Anova and Scheffé Test - Commitment to Department and Institution by Rank

Rank	Department Mean	Group 1	2	3	4
1. Instructor/lecturer	3.295				
2. Assistant Professor	3.354				
3. Associate Professor	3.381				
4. Professor	3.429	*			

F = 5.780, Df = 3.4921, * = .01

Rank	Institution Mean	Group 1	2	3	4
1. Instructor/lecturer	3.170				
2. Assistant Professor	3.105				
3. Associate Professor	3.170				
4. Professor	3.300	*	*	*	

F = 17.177, Df = 3.4921, * = .01