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THE RELATION BETWEEN ORGANIZATIONAL & PROFESSIONAL COMMITMENT IN CASE OF PROJECT WORKERS: IMPLICATIONS FOR THE PROJECT MANAGEMENT PROFESSION

Dr Ravikiran DWIVEDULA. PhD, MBA
SKEMA Business School, LSMRC & IBS Hyderabad

Prof Christophe N BREDILLET. PhD, D.Sc
Univ. Lille Nord de France & SKEMA Business School, LSMRC

Abstract

The purpose of this paper is to investigate the relationship between organizational and professional commitment of project workers. We first present (i) role—conflict theory, and exchange theory to establish the multiple dimensions of commitment—*affective, continuance, and normative*; and (ii). Social—Identity theory to support our argument for different foci of commitment—*organization and profession*. Building on these theoretical lenses, we present the literature review that compares organizational and professional commitment of project workers with respect to the 3 dimensions of commitment. Adopting a positivist approach and a sample of 141 project workers, we use Pearson's correlation to identify the relationship between *affective organizational* and *affective professional, continuance organizational* and *continuance professional, and normative organizational* and *normative professional commitment*. We report significant correlation between affective organizational commitment and affective professional commitment of project workers. The correlations between continuance organizational commitment, and continuance professional commitment; and normative organizational commitment, and normative professional commitment are moderate. We then discuss the implications of these findings for project management profession

Key Words: Organizational Commitment, Professional Commitment, Role—Conflict theory, Exchange theory, Social—Identity theory

Introduction

A significant amount of literature in organizational behavior has investigated what commits an employee to the organization and a vast majority of extant literature focuses on the antecedents and outcomes of employee commitment (Meyer & Allen, 1997). However, little attention is given to how engaged are the employees to their professions vis-à-vis the organization. This topic warrants an investigation especially

in the context of project management, given the popularity of organizations adopting project-based structure, and also the growing interest in the project management profession in terms of research and practice. Thus, for this paper, we set forth the objective of investigating the relationship between a project worker's commitment towards the organization and profession.

The organization of the paper is as follows. First, we present the theoretical perspectives on commitment. Through the role—conflict and exchange theory, we argue in favor of multiple dimensions of commitment— affective, continuance, and normative commitment. We then use social—identity approach to argue that one can have different foci of commitment towards their organization and profession. This is followed by a literature review that compares the different dimensions of organizational and professional commitment. We then present the methodology, where we discuss the epistemological and ontological foundations of our research, and the research design. We then present the findings of the Pearson's correlation analysis between our two variables of interest—organizational commitment and professional commitment along the three dimensions of affective, continuance, and normative types. A discussion of the results, followed by the managerial implications of the findings, and conclusion will follow

Theoretical Lenses: Commitment

Multi—Dimensional Nature of Commitment

Locke et al (1981) imply that commitment is a determination to try for a goal or to keep trying for a goal irrespective of whether a goal is assigned, anticipative, or set by a participant. Preceding this understanding of commitment are the two theoretical perspectives of commitment presented by Kim and Rowley (2005). They are (i) Exchange theory, and (ii). Role—Conflict theory. The Exchange theory presents commitment as an outcome of the transactions between the organization and its member. However, the member's perception of the favorableness or unfavorableness of the outcome is dependent on how much the organization meets the expectations of its member. The opposing premise of the exchange theory is presented through Becker's (1960) side—bet theory wherein he argues that the an individual accrues side—bets or gains when he takes membership in an organization. These extrinsic gains would be lost once the individual's membership in the organization is terminated. Thus, individuals invest in organizations by staking side—bets or gains that are important to them. The greater is the stake, the more is the individual's commitment to the organization.

The second theoretical perspective is the role—conflict theory where the members assume multiple roles within an organization. When the roles have very different characteristics, it leads to role—conflict. The lesser the conflict (and therefore the congruence between the roles), the greater is the individual's commitment to the organization.

Thus, these theoretical perspectives suggest that commitment may have multiple dimensions, which not only are expressed in terms of the individual's identification towards the organization, but also in terms of satisfaction of the member's expectations by the organization. In this direction, various studies supporting the multi—dimensional nature of commitment have been reported (c.f. Allen & Meyer, 1990; Meyer, Allen, & Gellatly, 1990; Dunham, Grube, & Castaneda, 1994).

Taking this argument forward, Meyer and Allen (1997) explain that though commitment has traditionally been understood as a uni-dimensional concept (Mowday, 1982) which is the belief that commitment binds the individual to the organization and therefore it reduces the likelihood of employee turnover, people themselves may be committed to the organization for a different reason (Meyer, Becker, Vandenberg, 2004). Therefore, Meyer and Allen (1997) suggested three basis for commitment—Affective commitment

(identifying completely with the organization and thus being committed), Normative commitment (obligation to remain with the organization), and Continuance commitment (perceived cost of leaving the organization). For our purposes, we will use this three component model of commitment to operationalize organizational and professional commitment

Foci of Commitment: Organization & Profession

On the other hand, the notion of an individual identifying with units other than the organization is given by the Social—Identity theory which maintains that individuals classify themselves into various social groups which may include both organizational and professional memberships (Tajfel, 1982; Dutton et al, 1994). Support for this argument comes from various studies (c.f. Becker & Billings, 1993; Jaros, Jermier, Koehler, & Sinich, 1993; Meyer & Allen, 1991; O’Rielly & Chatman, 1986) who suggest that commitment take different forms, and it may also be directed towards different foci such as organization, occupation or profession, team, and union (c.f. Becker et al, 1996; Cohen, 2003; Reichers, 1985). Thus, for the purpose of this study, we will study organizational and professional commitment.

Operational Definitions: Organizational & Professional Commitment

Based on the above discussion and for the purposes of our study, we will consider two foci of commitment among project workers—organizational commitment, and professional commitment. We will also use the framework suggested by Meyer et al (1993) for organizational and professional commitment in terms of three different forms of commitment—affective, continuance, and normative.

Affective organizational commitment (OAC) refers to the employees identification with, involvement in, and emotional attachment to the organization out of their volition (Allen & Meyer, 1997). Thus, project workers are characterized by a desire to follow a particular course of action (Meyer & Herscovitch, 2001).

Continuance Organizational Commitment (OCC) refers to the employee’s awareness of costs associated with leaving the organization (Allen & Meyer, 1997). This is to say that project workers can become committed to a course of action because of perceived cost of failing to do so (Meyer & Herscovitch, 2001).

Normative Organizational Commitment (ONC) refers to the employee’s feeling of obligation to remain with the organization; individuals believe they ought to remain(in the organization).Thus, project workers are driven by a sense of perceived obligation to stay in the organization (Meyer & Herscovitch, 2001).

Affective Professional Commitment (PAC) is defined as the identification with, involvement in and emotional attachment to the profession. Thus, project workers demonstrating strong affective commitment remain members of project management community because they chose to do so (Meyer et al, 1993).

Continuance Professional Commitment (PCC) is defined as commitment based on the employee’s recognition of the costs associated with leaving the profession. Thus, project workers with strong continuance commitment perceive that they have much to lose if they leave this profession (Meyer et al, 1993).

Normative Professional Commitment (PNC) refers to commitment based on a feeling of obligation towards the profession. The project workers feel that they ought to remain in the project management profession (Meyer et al, 1993).

It may be noted for the purpose of our study , we connote to Kerr, von Glinow, and Schriesheim (1977) distinction of professional and non—professional workers. Professional workers are those who demonstrate (i). Expertise, (ii).maintain autonomy, (iii). Adhere to professional standards, (iv).

Demonstrate utmost commitment towards the job, (v). identify with profession and fellow professionals, and (vi). Demonstrate a felt obligation to render service to the client without being emotionally attached

The above discussion the theoretical underpinnings of commitment, leading to our operational standpoint on organizational and professional commitment for the purpose of this paper is summarized in figure 1 below

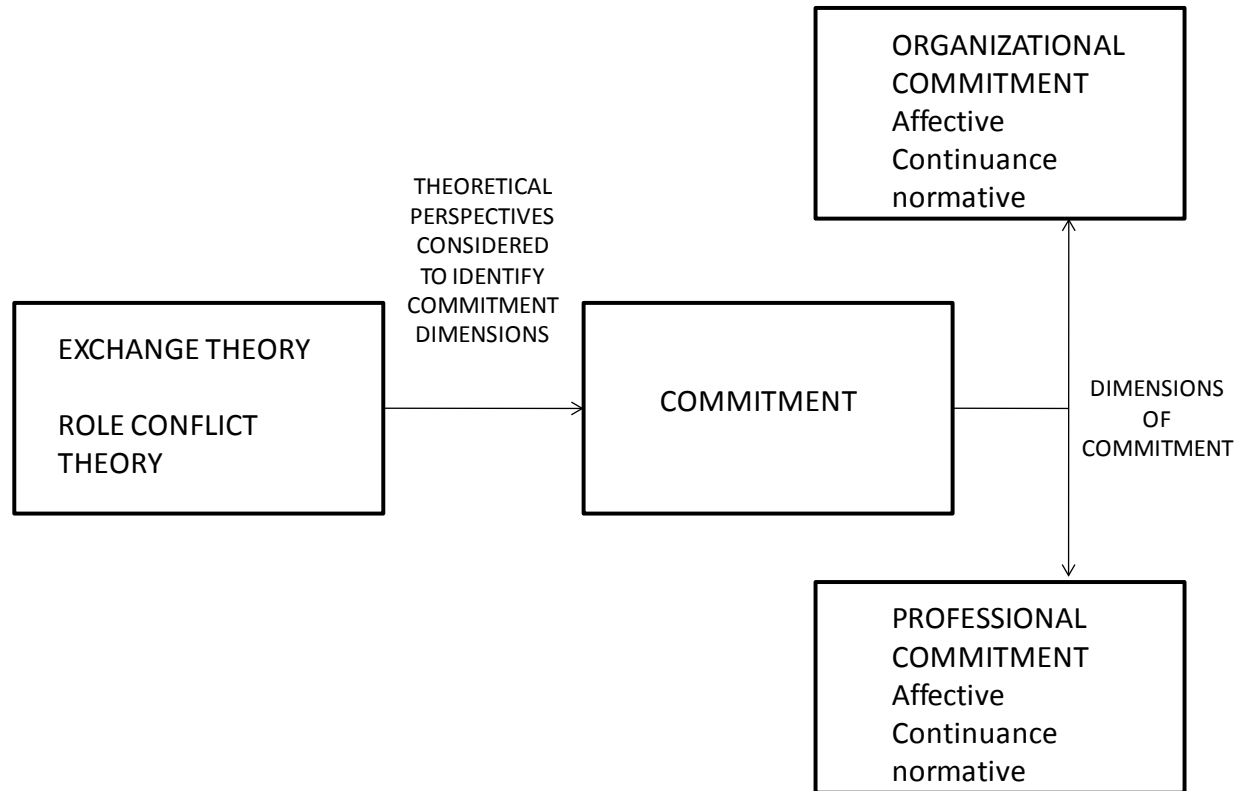


Figure 1. Theoretical Perspectives leading to Dimensions of Commitment

Literature Review

Dual commitments among individuals towards their profession and organization were first studied by Gouldner (1957). He identified two classes of workers—cosmopolitans who are committed to maintaining the skills and values of their profession and locals, who are committed to the organization for which they work. Gouldner went further to state that these two states of commitment are conflicting with each other. These views are supported by Kabanoff (1980) who suggested that the relation between organizational and professional commitment is dynamic and conflicting in nature. For example, dissatisfaction with the organization may be compensated by commitment towards one’s profession.

On the other hand, Wallace (1995) found moderate to strong correlation between organizational and professional commitment. Other studies supporting this standpoint were presented by Baugh & Roberts (1994), and Wang & Armstrong (2004). These arguments were held by earlier studies in this direction by Aranya & Jacobson (1975) who found strong correlation between organizational and professional commitment among 276 system analysts belonging to Israeli Association of System Analysts. Similar results supporting strong correlations between organizational and professional commitments are given by Boshnoff & Mels (2000) in their study of 382 teachers and chartered accountants.

Irrespective of the relationship or the lack of it between organizational and professional commitment, previous research posits that these two forms of commitment are distinct and therefore may not be influenced by each other (Brierley, 1996; Leong et al, 2003). The distinction has largely been explained through organizational and professional commitments having a different set of predictors (c.f. Somech & Bogler, 2002; Mathieu & Zajac, 1990; Lee, Carswell, & Allen, 2000).

In case of project workers who have specific knowledge and skills, a distinction between their commitment towards the organization and profession is given by Alvesson (2000), and earlier by Kanter (1993) and Zuboff (1988). They base their arguments on Reed's Marketization Strategy of Knowledge Workers (1996). He argued that knowledge workers adopt a 'marketization power' strategy to strengthen and maintain their expertise status. Unlike the conventional workers who rely on occupational and organizational credential systems to maintain their 'bargaining power', knowledge workers rely on their knowledge itself to create market niches for themselves (May, Korczynski, and Frenkel, 2002). These arguments are held by Cappelli (1999) who posits that organizations adopt a market model to organize the employment relations of the knowledge workers. As such, knowledge workers are oriented towards external labor markets. They are likely to show waning commitment towards the organization and their satisfaction is contingent upon the options that are available to them in the external labor market.

Thus, a review of the literature suggests a debate that does not seem to conclusively present the relation between an individual's organizational and professional commitment, much less in the context of project management.

Method

Ontology & Epistemology

Our research has been designed to be deductive in nature and reflect objective inquiry. In this paper, we seek to present an acceptable notion of the relation between organizational commitment and professional commitment as perceived by the project workers. Thus, our research is grounded in 'Parmenidean ontology'. We study 'being' rather than 'becoming' (exploring the relation between organizational commitment, and professional commitment empirically at a particular instance rather than extrapolating the relationship). Thus, epistemologically, we have taken a positivist stance that strongly advocates empiricism and logical reasoning (*vis-à-vis* intuition) to explain the phenomenon. Reflective of our research philosophy is our methodology which is quantitative in nature.

Sample

The sample comprised of 141 respondents who work in project—based environments. All the participants were either attending an executive training program or were pursuing part—time MBA program with the authors' university. All the projects were based out of India. On an average, the respondents have spent about 6.7 years with their current organization (s.d. 7.47). Their average professional experience was 8.47 years (s.d.6.91). The average project budget was USD 348,523. The industry—wise distribution of the sample is given in figure 2 below.

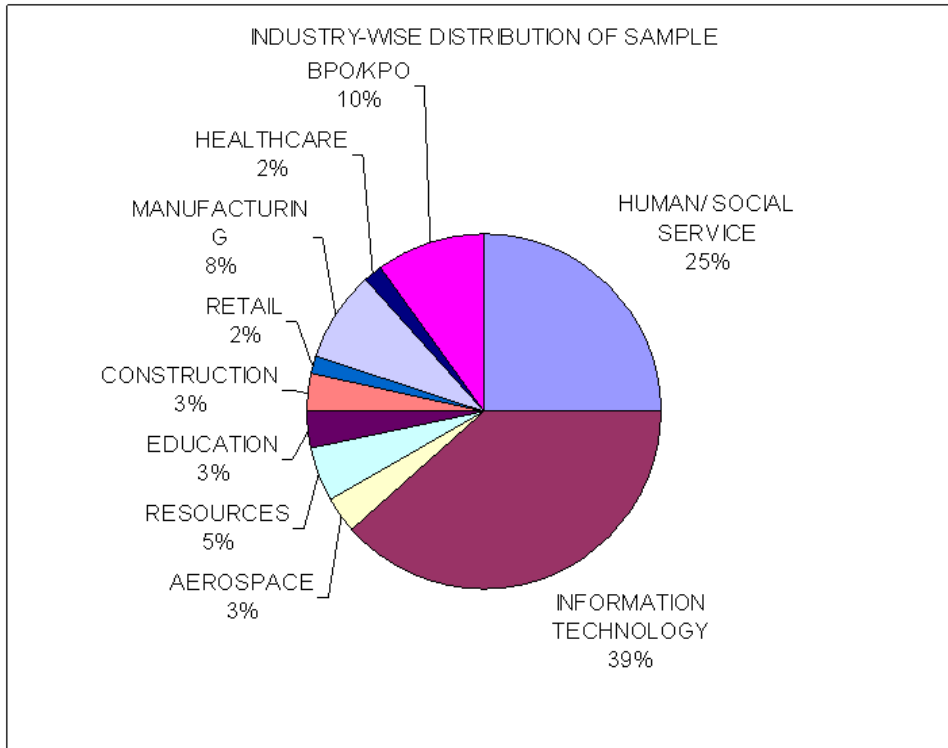


Figure 2. Industry—wise profile of the respondents in percentage

Measure

To measure organizational commitment, we used the organizational commitment scale developed by Meyer et al(1993) which includes the constructs of affective, normative, and continuance professional commitment. There are 6 items each to measure affective, continuance, and normative organizational commitment. In a study conducted on one hundred and thirty two Canadian civil servants, the cronbach alphas for affective, continuance, and normative organizational commitments were found to be 0.77, 0.60, and 0.77 respectively.

To measure professional commitment, we used the same scale as that for organizational commitment developed by Meyer et al (1993) and interchanged the word ‘organization’ with ‘profession’. As in the case of organizational commitment, six items each were used to measure the constructs of affective, normative, and continuance professional commitment. Checking for the reliability of the items, Irving et al (1997) found the cronbach alphas for the three dimensions (affective, continuance, and normative professional commitment) to be .79, .83, and .83 respectively.

Some of the questions to measure organizational commitment included:

Being in this organization is important to my self—image

I have put too much into this organization to consider changing now

I am in this organization because of a sense of loyalty to the organization

Some of the questions to measure professional commitment included:

I am enthusiastic about being in this profession

It would be costly for me to change my profession now

I feel a responsibility to this profession to continue in it

All the questions were rated on a scale of 1—to—7, with 1 referring to a strong disagreement and 7 meaning a strong agreement with the statement.

Procedure

All the potential participants identified were contacted in person by the authors. Only those who were working in project—based organizations or environments were considered. An explanatory note that detailed the purpose of the research study and the expected outcomes accompanied the survey. We handed in 300 responses in total and obtained 141 valid responses giving us a healthy response rate of 47%.

Observations

The results of the Pearson's correlation analysis reveal significant correlations between Affective Organizational Commitment and Affective Professional Commitment ($r = .43, p < .01$), and moderate correlations between Continuance Organizational Commitment and Continuance Professional Commitment ($r = .38, p < .01$). In case of normative commitment, we report moderate correlations between the organizational and professional foci of the project workers ($r = .27, p < .01$). Of significant interest is the negative correlation we observed between Affective Professional Commitment and Continuance Professional Commitment ($r = -.34, p < .01$). It may be noted here that a discussion on the relation between the affective, continuance, and normative organizational commitment; and affective, continuance, and normative professional commitments is beyond the scope of this paper. Table 1 (see below) summarizes the Pearson's correlation results between the constructs of Organizational Commitment and Professional Commitment.

Table 1. Results of Pearson's Correlation Analysis: Organizational Commitment & Professional Commitment

Correlations							
		OAC	PAC	OCC	PCC	ONC	PNC
OAC	Pearson Correlation	1	.433**	-.184*	.063	.318**	.327**
	Sig. (2-tailed)		.000	.029	.459	.000	.000
	N	141	141	141	141	141	141
PAC	Pearson Correlation	.433**	1	-.130	-.340**	.122	.354**
	Sig. (2-tailed)	.000		.125	.000	.150	.000
	N	141	141	141	141	141	141
OCC	Pearson Correlation	-.184*	-.130	1	.382**	.314**	-.181*
	Sig. (2-tailed)	.029	.125		.000	.000	.031
	N	141	141	141	141	141	141
PCC	Pearson Correlation	.063	-.340**	.382**	1	.166*	.085
	Sig. (2-tailed)	.459	.000	.000		.048	.314
	N	141	141	141	141	141	141
ONC	Pearson Correlation	.318**	.122	.314**	.166*	1	.270**
	Sig. (2-tailed)	.000	.150	.000	.048		.001
	N	141	141	141	141	141	141
PNC	Pearson Correlation	.327**	.354**	-.181*	.085	.270**	1
	Sig. (2-tailed)	.000	.000	.031	.314	.001	
	N	141	141	141	141	141	141

** . Correlation is significant at the 0.01 level (2-tailed).
 * . Correlation is significant at the 0.05 level (2-tailed).

Discussion

Overall relation between Organizational & Professional Commitment in case of Project workers

The results show that in case of project workers, there may not be a conflict between their proclivities for organization and profession. These findings confirm previous studies which suggest that organizational and professional commitments may not necessarily be opposing in nature (Wang & Armstrong, 2004; Baugh & Roberts, 1994).

Relation between Affective Organizational Commitment & Affective Professional Commitment

Project workers seem to identify equally well with their organizations and professions. This is evident from the high correlations we observed between affective organizational commitment and affective professional commitment. A possible explanation is given through Wang and Armstrong's observation of highly qualified R&D professionals who maintain a psychological attachment with both their organization and profession (read affective commitment) because of the significant investments they have made on their training (normative commitment). On the other hand, we also find that one's continuance commitment towards the organization and profession may also be moderately related.

Meyer et al (1993) posit that affective professional commitment of an individual hinges upon his or her identification with the goals of the professions and a volition to assist the profession in achieving those

goals. This type of commitment is developed when an individual develops positive professional experiences and the development of professional skills. It is here that the role of an organization that can create a work environment which supports the professional aspirations of an individual becomes important. One way in which organizations can support the career expectations of their employees is by providing well defined career paths. In a study of nursing professionals, Buchanan & Thomson (1997) and later Krugman et al (2000) found that providing a career path facilitated professional development of the nurses, while strengthening their organizational commitment. From these observations, they infer a positive relationship between organizational and professional commitment, and organizational commitment may be used to increase professional commitment or vice—versa.

Similar results are reported by Marks & Scholarios (2007). In a study of 268 Scottish software professionals from 5 companies, high levels of identification with the organization and therefore the profession itself were reported. However, this relationship was controlled by their tenure in the organization where higher correlations between organizational and professional commitment were observed among senior professionals. Organizational processes such as grading the employees based on their qualifications so that they are grouped into a 'community' within the organization, and providing training in specific skills lead to the individuals identifying themselves with the organization. This lent a degree of professionalism to their job, which subsequently transpired to be professional commitment.

Relation between Normative Organizational Commitment & Normative Professional Commitment

To explain the complementary nature of normative organizational and professional commitment of project workers, we connote to the works of Gibson et al (1994) who have used knowledge creation, and application in organizations to explain the dependence between the project workers and their organizations. They note that, knowledge is created in the context of application which is specific to the organizations. Thus, theoretical knowledge of the project workers is combined with the non—generic contextual knowledge through progressive diagnosis, inference, and application. This integration of theoretical and contextual knowledge is important to provide customized advice and service to the clients. Thus, this leads to the argument that places equal importance for the generic theoretical knowledge possessed by the project professional and the organization specific contextual knowledge. Building on this understanding, Alvesson et al (2001) underscores the professionals dependence on their organizations. Thus, the corporation will want to leverage the project professional's dependence on its resources (such as expensive software). On the other hand, it will also try to meet the expectations of the professionals as it is dependent on the professionals' abilities to integrate their theoretical knowledge with the organization—specific contextual knowledge, which can the be used for the organization's benefit. Thus, this may be a case of uneasy equilibrium where the organizations and the project workers are in a contract that hinges on a rational evaluation of alternatives rather than emotional attachment—a characteristic of normative commitment.

Relation between Continuance Organizational Commitment & Continuance Professional Commitment

Project workers have reported higher levels of continuance professional commitment as compared to continuance organizational commitment. Carson et al (1995) suggest that most visible emotional costs involved when changing the profession is disrupted interpersonal relationship which would also include perceived loss of social recognition for professionally qualified people. Carson, Carson, Philips, and Roe (1996) and later Carson and Carson (1997) explain that when a professional makes an initial investment into an occupation, it leads to psychological costs. This further transpires into a situation where the professional is constantly engaged in the process of investing and re-investing into one's profession in

order to minimize the dissonance between one's career choice and the expected outcomes. This eventually leads to a tunnel vision where one is not able to identify professional alternatives. Eventually, it leads to a diminishing of viable professional choices.

Negative relation between Affective Professional Commitment & Continuance Professional Commitment

An interesting observation is the moderate negative correlation between affective professional commitment and continuance professional commitment. Individuals who are affectively committed to their profession seek to be more involved with the profession by keeping up with the information on the profession, and would perceive it as the main focus in their lives. Therefore, employees who are affectively committed to their profession would experience less of negative consequences such as financial loss or loss of accumulated investments as a result of continuing in the profession (Nogueras, 2006). Thus, one's affective commitment towards the profession is inversely related to continuance professional commitment.

Managerial Implications

The findings of our study have a two-fold implication for organizations and the project-management profession. First, from the organization's perspective, it is seen that one's initial experiences on the job and in the organization play an important role in affirming that the employee has made the right professional decision (Greenhaus & Callanan, 1994). Factors such as job satisfaction, job involvement and perceived organizational support strongly influence the continuance professional commitment of an employee as there is higher perceived accumulated costs associated with the profession. Therefore, organizations have to design jobs such that they offer organizational growth and professional development.

On the other hand, it is also important that project workers perceive an element of professionalism in their occupations. Explaining the high correlations between an individual's commitment to the organization and the profession, Wallace (1995) observed that a degree of occupational professionalization moderates the strength of relationship between organizational and professional commitment. This then underscores the role of project management professional associations such as PMI® which advance the discipline by collaborating with the industry and academia through various initiatives such as development of project management standards, professional certifications, and research. Such initiatives help project workers perceive themselves as being a part of a professional community. Further, for the project workers, attaining professional project management qualifications may not only add value in terms of credentials, but will also help them better manage the projects. For the organizations, there is a value addition in terms of increased revenues, cost savings, better management of resources, and increased reputation.

Limitations & Future Research

As is the case with any research, we have identified two limitations in our study. The first pertains to the influence of control variables such as tenure in the , level of education (Mathieu & Zajac, 1990), and age (Meyer & Smith, 2000). Also, we have not accounted for the controlling effects of project type and the nature of industry. The other limitation is with respect to our methodology. We have predominantly collected our responses at a single point of time from one university. Hence, there may be issues of common source bias. However, given that our sample is heterogeneous, we believe the interpretation to be fairly objective.

In spite of these limitations, we believe we have added to the literature by showcasing the relationship between an individual's two foci of commitment, specifically in the context of project management. For the practitioners, we have highlighted the implications for the individuals and the organizations in terms of individual professional development, value addition to the organization, and therefore to the profession at large.

For our future research, we intend to observe the role of organizational and professional commitment in mediating the relationship between task characteristics and the project outcomes. While there is strong evidence pointing towards a favorable work environment leading to affective organizational commitment (c.f. Dixon, Turner, Cunnigham, & Kent, 2005), and affective professional commitment (c.f. Harpaz & Meshoulam, 2004), little is known about the relationship with the other dimensions of commitment. On the other hand, while there is partial evidence to suggest the positive relationship between affective organizational commitment and project outcomes in terms of achieving customer satisfaction (c.f. Farris & Cordero, 2002; Somech & Bogler, 2002), the predictive nature of other dimensions of commitment on project performance remains to be investigated.

Conclusion

Through this exploratory research study, we have investigated the relationship between the organizational and professional commitment in case of project workers. We have first offered theoretical perspectives that clarify our stand on Commitment—the three dimensions (affective, continuance, and normative), and the foci (organizational, and professional). Our results show a significant correlation between the affective organizational and professional commitment variables. On the other two dimensions, we observe moderate correlations. The theoretical and managerial implications of these findings are discussed

References

- Allen, N.J., Meyer, J.P.(1990). The measurement and antecedents of affective, continuance, and normative commitment to the organization, *Journal of Occupational Psychology*, 63: 1-18
- Alvesson, M. (2000). Social identity and the problem of loyalty in knowledge-intensive companies, *Journal of Management Studies*, 37(8): 1101-1123
- Alvesson, M., Robertson, M., Swan, M. (2001). The best and the brightest: The role of elite identity in knowledge intensive companies. *Paper presented at the Critical Management Studies Conference*, July 11-12
- Aranya, N., & Jacobson, D. (1975). An empirical study of theories of organizational and occupational commitment, *Journal of Social Psychology*, 97: 15-22

- Baugh, S.G., & Roberts, R.M. (1994). Professional and organizational commitment among engineers: conflicting or complementing? *IEEE Transactions on Engineering Management*, 41(2): 108-114
- Becker, H. (1960). Notes on the concept of commitment, *American Journal of Sociology*, 66: 32-44
- Becker, T., & Billings, R. (1993). Profiles of commitment: An empirical test, *Journal of Organizational Behavior*, 14, 177-90
- Boshnoff, C., & Mels, G. (2000). The impact of multiple commitments on intentions to resign: An empirical assessment, *British Journal of Management*, 11(3): 255-272
- Brierley, J.A. (1996). The measurement of organizational commitment and professional commitment. The *Journal of Organizational Psychology*, 136(2): 265-267
- Buchanan, J. & Thomson, N. (1997). *Recruiting, retaining, and motivating nursing staff: The use of clinical ladders*, Brighton, UK: Institute of Employment Studies
- Cappelli, P. (1999). *The New Deal at Work: Managing the Market-Driven Workforce*, MA: Harvard Business School Press
- Carson, K., & Carson, P. (1997). Career entrenchment: A quiet march toward occupational death? *Academy of Management Executive*, 11, 62-75
- Carson, K., Carson, P., & Bedeian, A. (1995). Development and construct validation of a career entrenchment measure, *Journal of Occupational and Organizational Psychology*, 68: 301-320
- Carson, K., Carson, P., Phillips, J. & Roe, C. (1996). A career entrenchment model: Theoretical development and empirical outcomes, *Journal of Career development*, 22, 273-286
- Cohen, A. (2003) Multiple Commitments in the Workplace: An Integrative Approach, *Journal of Professional Nursing*, 8(3): 155-160
- Dixon, M.A., Cunningham, G.B., Turner, B.A., Sagas, M., & Kent, A. (2005). Challenge is key: An investigation of organizational commitment in undergraduate interns, *Journal of Education for Business*, 80, 172-180
- Dunham, R.B., Grube, J.A., & Castaneda, M.B. (1994). Organizational commitment: The utility of an integrative definition, *Journal of Applied Psychology*, 79 (3): 370-380
- Dutton, J.E., Dukerich, J.M., & Harquail, C.V. (1994). Organizational images and member identification, *Administrative Science Quarterly*, 39(2): 239-63

- Farris, G.F., & Cordero, R. (2002). Leading your scientists and engineers, *Research in Technology and Engineering Management*, 45(6): 13-25
- Gouldner, A.W.1957. Cosmopolitans and locals: towards an analysis of latent social roles-I. *Administrative Science Quarterly*, 1: 281-306
- Greenhaus, J., & Callanan, G. (1994). Career management. Fort Worth: Dryden
- Harpaz, I., & Meshoulam, I. (2004). Differences in the meaning of work in Israel: Workers in high-tech versus traditional work industries, *Journal of High Technology Management Research*, 15, 163-182
- Irving, P.G., Coleman, D.F., & Cooper, C.L. (1997). Further assessments of a three-component model of occupational commitment: Generalizability and differences across occupations, *Journal of Applied Psychology*, 82 (3): 444-452
- Kabanoff, B. (1980). Work and nonwork: A review of models, methods, and findings, *Psychological Bulletin*, 88, 60-77
- Kanter, R.M. (1993). *Men and Women of the Corporation*, NY: Basic Books
- Krugman, M., Smith, K., & Goode, C. (2000). A clinical advancement program: evaluating 10 years of progressive change, *Journal of Nursing Administration*, 30(5): 215-225
- Lee, K.J., Carswell, J., & Allen, N.J.(2000). A meta-analytic review of occupational commitment: Relations with person-and work-related variables, *Journal of Applied Psychology*, 85(5): 799-811
- Leong, L., Huang, S-Y., & Hsu, J. (2003). An empirical study on professional commitment, organizational commitment and job involvement in Canadian accounting firms. *Journal of American Academy of Business*, 2(2): 360-370
- Locke, E.A., Shaw, K.N., Saari, L.M., & Latham, G.P. (1981). Goal Setting and task performance: 1969-1980, *Psychological Bulletin*, 90: 125-52
- Marks, A., Scholarios, D. 2007. Revisiting technical workers: Professional and organizational identities in the software industry. *New Technology Work and Employment*, 22(2):98-117
- Mathieu, J.E., & Zajac. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organisational commitment. *Psychological Bulletin*, 108: 171-194

- May, T., Korczynski, M., & Frenkel, S. (2002). Organizational and occupational commitment: knowledge workers in large corporations, *Journal of Management Studies*, 39(6): 775-801
- Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research, and application*, Thousand Oaks, CA: Sage
- Meyer, J., Allen, N. & Gellatly, I. (1990). Affective and continuance commitment to the organization: Evaluation of measures and analysis of concurrent and time-lagged relations, *Journal of Applied Psychology*, 74: 152-56
- Meyer, J., Becker, T., & Vandenberghe, C. (2004). Employee commitment and motivation: a conceptual analysis and integrative model, *Journal of Applied Psychology*, 89(6): 991-1007
- Meyer, J.P. & Smith, C.A. (2000). HRM practices and organizational commitment: Test of a mediation model. *Canadian Journal of Administrative Sciences*
- Meyer, J.P., Allen, N.J., Smith, C.A. (1993). Commitment to organizations and occupations: extensions and test of a three-component conceptualization, *Journal of Applied Psychology*, 78 (4): 538-55
- Meyer, J.P., Herscovitch, L. (2001). Commitment in the workplace: Toward a general model, *Human Resource Management Review*, 11, 299-326
- Mowday, R.T. (1982). Psychology for Management, *Administrative Science Quarterly*, 27(2): 332-335
- Nogueras, D.J. (2006). Occupational commitment, education, and experience as a predictor of intent to leave the nursing profession, *Nursing Economics*, 24(2): 86-93
- Reed, L. (1996). *Private Cures for Public Ills: The Promise of Privatization*, Irvington-on-Hudson, NY: Foundation for Economic Education
- Reichers, A.E. (1985). A review and reconceptualization of organizational commitment, *Academy of Management Review*, 10(3): 465-476
- Smith, T.M., & Rowley, K.J. (2005). Enhancing commitment or tightening control: The function of teacher professional development in an era of accountability, *Educational Policy*, 19: 126
- Somech, A., & Bogler, R. (2002). Antecedents and consequences of teacher organizational and professional commitment, *Educational Administration Quarterly*, 38(4): 555-577
- Tajfel, H. (1982). Social psychology of intergroup relations. *Annual Review of Psychology*, 33: 1-39

Wallace, J.E. (1995). Organizational and Professional Commitment in Professional and Nonprofessional Organizations. *Administrative Science Quarterly*, 40(2): 228-255

Wang,X., & Armstrong, A. (2003). An empirical study of PM professionals' commitment to their profession and employing organizations, *International Journal of Project Management*, 22(5): 377-386

Zuboff, S. (1988). *In the Age of the Smart Machine*, NY:Basic Books Inc