

THE DIMENSIONALITY OF PROFESSIONAL COMMITMENT

JEFFREY J BAGRAIM
School of Management Studies
University of Cape Town
E-mail: jbagraim@commerce.uct.ac.za

ABSTRACT

This paper examines the dimensionality of professional commitment amongst a sample of 240 South African actuaries. Data were obtained, via a mailed questionnaire, from members of the South African Actuarial Society employed in the financial services industry. Statistical analysis conducted on the data showed that the 3-component model first proposed by Meyer, Allen and Smith (1993) is appropriate for understanding professional commitment amongst South African professionals. The analysis also showed that South African actuaries are highly committed to their profession.

OPSOMMING

Hierdie artikel ondersoek die dimensionaliteit van professionele toewyding by 'n steekproef van 240 Suid-Afrikaanse aktuarisse. Die data is verkry deur 'n posvraelys aan lede van die Suid-Afrikaanse Aktuariële Vereniging wat in die finansiële dienstesektor werksaam was. Statistiese ontledings wat uitgevoer is op die data dui aan dat die drie-komponentmodel, aanvanklik voorgestel deur Meyer, Allen en Smith (1993), geskik is om professionele toewyding by Suid-Afrikaanse beroepslui te verstaan. Die ontleding dui verder aan dat Suid-Afrikaanse aktuarisse hoogs toegewyd is aan hulle profesie.

**Special thanks to Leonora Hayes for her assistance in the completion of this study.*

Decades of research on professional commitment and the widespread use of professional commitment measures in South Africa has not been accompanied by a critical examination of the construct. Most researchers treat professional commitment as a unidimensional construct that can be easily measured by adapting well-established measures of organisational commitment, such as the Organisational Commitment Questionnaire (OCQ) (Mowday, Steers, & Porter, 1979). Extant definitions of professional commitment also imply the unidimensionality of the construct (Blau, 1988; 1989; Morrow, 1993; Morrow & Wirth, 1989; Vandenberg & Scarpello, 1994; Wallace, 1993, 1995). For example Vandenberg and Scarpello (1994) defined professional commitment as "a person's belief in and acceptance of the values of his or her chosen occupation or line of work, and a willingness to maintain membership in that occupation" (p. 535). This widely accepted definition limited the construct to the affective dimension.

The psychological bond between an employee and the focus of their commitment (organisation, profession, team) assumes three quite distinct forms, each of which requires a distinguishing label and has different antecedents (Meyer & Allen, 1997). The multidimensionality of organisational commitment is now well-established (Allen & Meyer, 1990; Meyer, Allen, & Gellatly, 1990; Dunham, Grube, & Castañeda, 1994; Hackett, Bycio, & Hausdorf, 1994; McGee & Ford, 1987; Meyer, Allen, & Smith, 1993; Reilly & Orsak, 1991; Shore & Tetrick, 1991). Meyer, et al. (1993) believed that, just as organisational commitment was best explained by three distinct component measures; professional commitment should similarly be explained by three distinct component measures. They contended that a multidimensional understanding of professional commitment could have important implications for understanding the psychological bond between a professional and their particular profession. Adapting their work on organisational commitment, Meyer et al. (1993) defined three distinct components of professional commitment (they used the equivalent term: occupational commitment). In this study, these components are called affective professional commitment (APC), continuance professional commitment (CPC), and normative professional commitment (NPC). Affective professional commitment (APC) refers to identification with, involvement in, and emotional

attachment to the profession. Thus, employees with strong affective professional commitment remain members of their profession because they want to do so. For example, professionals with a strong sense of affective commitment to their profession will keep up with developments in their profession, subscribe to trade journals, attend professional meetings, and participate in their professional association. *Continuance professional commitment (CPC)* refers to commitment based on the employee's recognition of the costs associated with leaving their profession. Employees with strong continuance commitment remain with their profession because they realise that they have much to lose by not doing so. For example, professionals with high levels of continuance commitment might be less inclined to involve themselves in professional activities other than those required to retain membership of their profession (Meyer et al., 1993). *Normative professional commitment (NPC)* refers to commitment based on a sense of obligation to the profession. Employees with strong normative professional commitment remain members of their profession because they feel they ought to do so. Normative professional commitment may develop because of effective professional socialisation or the sacrifices involved in becoming a member of a particular profession (Meyer et al., 1993).

All three components of professional commitment have implications for an employee's staying with (or leaving) their profession. Common to the three components is the understanding that commitment is a psychological state that (a) characterises the employee's relationship with their profession and (b) has implications for the employee's decision to continue or discontinue membership of their profession. Given these differences, commitment is most meaningfully assessed using three separate measures.

Meyer et al. (1993) developed measures to assess each component of professional commitment and examined the factor structure of these measures. Confirmatory factor analyses on their sample of nurses demonstrated that Allen and Meyer's (1990) multidimensional model of organisational commitment could be extended to professional commitment, and that organisational commitment and professional commitment were distinguishable constructs. Their results also indicated that there were differential relationships between each of the three components of professional commitment and other variables (see Meyer et al.,

Requests for copies should be addressed to: JJ Bagraim, School of Management Studies, University of Cape Town, e-mail: jbagraim@commerce.uct.ac.za

1993). Irving, Coleman, and Cooper's (1997) confirmatory factor analysis evidenced the consistency of Meyer et al.'s (1993) measures across various occupations and the value of adopting the three-component conceptualisation of professional commitment. Unfortunately there has been very little further research on the multidimensionality of the professional commitment construct and no such research has been conducted in countries outside North America. Steers (1977) noted that "cross-validation studies in which hypotheses or models are tested and then replicated in diverse settings are rare" (p.46) and this remains the case. It is appropriate and important to confirm the construct validity of the three-component professional commitment model within South Africa before its application can be recommended.

The primary purpose of this research is to examine the construct validity and factor structure of Meyer et al.'s (1993) 3-Component Model of Professional Commitment amongst South African professionals. The secondary purpose of this research was to assess the nature and level of professional commitment amongst South African actuaries.

METHOD

Participants

The participants in this study were fellow and student members of the Actuarial Society of South Africa (ASSA) employed full-time in a life assurance company, mutual society or professional partnership that employed at least eighteen actuaries. There were a total of 434 potential participants (175 fellows and 259 students) and questionnaires were distributed to all 434 potential participants. Of the 434 questionnaires delivered, 241 were returned completed, representing an acceptable response rate of 55.5%. One returned questionnaire was not usable, as the respondent had already retired.

ASSA members, with few exceptions, are either a fellow or student members of the Faculty of Actuaries (FA) or the Institute of Actuaries (IA) in the United Kingdom. After the successful completion of all professional examinations and attendance at a professionalism course, student actuaries are eligible to register as "fellow actuaries" and are considered to be "qualified actuaries".

ASSA's mission statement is "to ensure that the professional conduct and skills of members always meet the highest standards, to develop the expertise of members as markets and conditions change, and to enhance the role and reputation of the profession". This mission statement reflects the requirements of a professional body and fulfils the requirements and characteristics of a profession (Morrow & Goetz, 1988; Vandenberg & Scarpello, 1994).

The majority of participants were married (58.3%). Over half (52.3%) the participants were qualified actuaries even though qualified actuaries comprised only 40.3% of the research sample. The mean tenure of the participants was 12 years for qualified actuaries and 4 years for student actuaries. The median age category for the qualified actuaries was from 30 to 39 years (39.2%). Most of the student actuaries (73.7%) fell within the 20-29-age category. At the time of the survey, 87.2 % of the qualified actuaries and student actuaries in South Africa were male, and in this sample 84.6 % were male. This provides some indication that the sample may have been representative of the total population.

Measures

Professional commitment was measured using Meyer et al.'s (1993) 18-item measure of affective, continuance and normative occupational commitment (six items in each scale). Five items were negatively phrased, and were reversed scored. The items were modified to apply to the actuarial profession (Meyer et al.'s (1993) items were written specifically for a sample of nurses). Responses to these items were on 7-point scales ranging from 1 (strongly disagree) to 7 (strongly agree).

In Meyer et al.'s (1993) study, coefficient alphas for these scales ranged from .73 to .87. In Irving, et al.'s (1997) assessment of these scales the coefficient alphas were .79, .83, and .83 for affective, continuance and normative commitment respectively. In the present study the coefficient alphas were .79, .85, and .82 respectively. These are within the acceptable range (Nunnally, 1978).

The personal characteristics included in this study were gender, marital status, age, and kinship responsibility (an index developed from marital status and number of dependents). The tenure and professional status (i.e., whether the person was a qualified actuary or a student actuary) of participants was also ascertained.

Procedures

After careful analysis of the descriptive statistics and the determination of satisfactory scale reliability, exploratory factor analysis was used to evaluate the extent to which the professional commitment scales demonstrated discriminant validity (Morrow & McElroy, 1986) and construct validity (Allen & Meyer, 1996). Kaiser's criterion and a Scree plot were employed in determining the number of factors to include (Stevens, 1992). Casewise deletion of missing data resulted in the analyses being conducted on 239 participants' responses. A minimum factor loading of .30 was considered meaningful for this sample size (Stevens, 1992). Further details on the statistical procedures used are available on request.

RESULTS

The dimensionality of professional commitment

Factor analysis of the 18 items relating to professional commitment yielded a three factor solution after varimax normalised rotation and are shown in Table 1. The use of Varimax rotation (orthogonal rotation) to dimensionalise the items is controversial because it assumes that the factors are relatively independent of one another; it does not consider the magnitude of their interrelationships as does oblique rotation (Kim & Mueller, 1978a; Kim & Mueller, 1978b). Neale and Liebert (1986) contended that choice of rotation method is subjective and of little practical and statistical import (cf. Pedhazur & Shmelkin, 1991). Allen and Meyer (1990) used Varimax rotation and it has been applied in all their subsequent research. Its use is consistent with their claim that the three components of commitment are separate constructs, that each component is independent of the other two (Dunham et al., 1994). Varimax rotation was used so that the results would be comparable with their research. Further studies should investigate the goodness-of-fit of alternative factor models.

The three professional commitment factors accounted for 47.84% of the total variance. This shows that professional commitment is a multidimensional construct with factor 1 reflecting continuance commitment, factor 2 reflecting affective commitment, and factor 3 reflecting normative commitment to the profession. The six items in each extracted factor exactly match the six-items in Meyer et al.'s (1993) occupational commitment scales. The factor loadings ranged from .41 to .95.

Intercorrelation between the professional commitment scales

The correlations between the professional commitment scales are shown in Table 2. The correlation between the continuance and affective components is significant but weak ($r=.18, p \leq 0.05$). Similarly the correlation between the normative and affective component is significant but weak ($r=.21, p \leq 0.05$). Neither of the two correlations is strong enough to cast serious doubt that the different component scales measure different dimensions of professional commitment.

Levels of commitment

The respondents indicated high levels of APC (mean of 5.6 on a 7-point scale) and CPC (mean of 4.9 on a 7-point scale). Their NPC was lower (mean of 2.5 on a 7-point scale).

TABLE 1
PROFESSIONAL COMMITMENT SCALE ITEMS, FACTOR LOADINGS, AND STATISTICS

Factor items	Rotated factor loadings		
	1	2	3
Factor 2: Affective professional commitment			
25. Being an actuary is important to my self image (4.68; 1.75)	.22	.41	.14
26. (R) I regret having entered the actuarial profession (5.88; 1.44)	-.23	.72	.07
27. I am proud to be in the actuarial profession (5.98; 1.15)	.04	.67	.07
28. (R) I dislike being an actuary (6.20; 1.08)	-.13	.74	.03
29. (R) I do not identify with the actuarial profession (5.57; 1.37)	.06	.57	.13
30. I am enthusiastic about being an actuary (5.48; 1.29)	-.01	.75	.13
Factor 1: Continuance professional commitment			
31. I have put too much into the actuarial profession to consider changing now (4.81; 1.92)	.62	-.02	.07
32. Changing professions now would be difficult for me to do (5.12; 1.83)	.83	.07	.08
33. Too much of my life would be disrupted if I were to change my profession (4.69; 1.85)	.95	.03	.09
34. It would be costly for me to change my profession now (5.11; 1.73)	.70	-.00	-.01
35. (R) There are no pressures to keep me from changing professions (4.77; 1.71)	.46	-.09	.02
36. Changing professions now would require considerable personal sacrifice (5.10; 1.71)	.63	.03	-.10
Factor 3: Normative professional commitment			
37. I believe people who have been trained in a profession have a responsibility to stay in that profession for a reasonable period of time (2.86; 1.72)	.04	.17	.66
38. (R) I do not feel any obligation to remain in the actuarial profession (3.28; 1.97)	.04	.05	.63
39. I feel a responsibility to the actuarial profession to continue in it (2.72; 1.63)	-.04	.20	.78
40. Even if it were to my advantage, I do not feel that it would be right to leave the actuarial profession now (2.05; 1.30)	.01	.09	.70
41. I would feel guilty if I left the actuarial profession (2.03; 1.37)	-.03	.07	.65
42. I am an actuary because of a sense of loyalty to the profession (1.83; 1.17)	.08	.01	.56
Summary Statistics			
Eigenvalue	3.23	3.45	1.92
Percentage of total variance	17.94	19.18	10.72
	4	8	2
Cumulative percentage variance	17.94	37.13	47.84
	4	3	4
Cronbach's α	.75	.87	.73

Note: N=231. Factor extraction was done using maximum likelihood. Factor rotation was done using varimax normalised. Factor loading > 0.3 are in boldface. Items numbers followed by (R) indicate reverse-scored items. Item means and standard deviations appear in parentheses, respectively, after each item. The higher the number, the greater the level of commitment.

Personal Characteristics

To examine the unique contribution of each of the personal characteristics included in this study (gender, marital status, age, and kinship responsibility) a stepwise multiple regression analyses was performed. The regression equations were computed for the total sample. R^2 was used as a measure of the variation in the dependant variable explained and an R^2 value of more than .2 would have been considered high in this study (Stevens, 1992; Siegel, 1994; Draper & Smith, 1981). None of the analyses performed yielded such a high coefficient.

TABLE 2
CORRELATIONS AMONG THE COMMITMENT SCALES
FOR THE TOTAL SAMPLE

Scales	Correlations		
	1	2	3
1. PC Affective	.79		
2. PC Continuance	<u>.18</u>	.85	
3. PC Normative	<u>.21</u>	.09	.82

Note: N=239 (Casewise deletion of missing data). PC=professional commitment. Numbers in the diagonal that appear in boldface are reliability estimates (coefficient alpha). Underlined correlations are significant at $p < .05$.

DISCUSSION

Dimensionality of professional commitment

The correlation analysis showed that APC was positively and significantly related to both CPC and NPC but none of these relationships were strong enough to question the integrity of the three-component conceptualisation of professional commitment.

The results of the exploratory factor analysis provide evidence that the three-component model of professional commitment is a viable and valuable approach to determining the professional commitment of South African professionals. The items making up the three commitment scales load onto three separate and distinct factors. Therefore, using this model will allow researchers to better understand the processes associated with forming attachments to one's profession.

Levels of commitment

The high levels of professional commitment (APC and CPC) indicated by the respondents in this study were not surprising. Actuarial Science is a classic profession and the classic professions by virtue of their long history of independent practice and collegiate control (Johnson, 1972, as cited in Gunz & Gunz, 1994) afford their members considerable influence over their employment relationship and engender a powerful sense of loyalty to the statutory professional body (Gunz & Gunz, 1994). These professional bodies are powerful in that they define training requirements, set performance standards, control

admission to the profession, and discipline members. The low level of NPC indicates that the respondents are not committed to the profession out of a sense of obligation.

Personal characteristics as antecedents of professional commitment

None of the personal characteristics included in this study were shown to be important predictors of professional commitment in the regression analysis. This was contrary to expectations (Colarelli & Bishop, 1990; Kaldenberg, Becker, & Zvonkovic, 1995). Further studies are required before any recommendations can be made regarding the importance of personal characteristics in understanding professional commitment.

CONCLUSION

The findings in this study contribute to a growing body of research that illustrates the appropriateness of a multidimensional approach to the study of professional commitment. Of course the study is limited in that it used a cross-sectional design and relied on self-reports from a small, highly select group of professionals. Nevertheless, this study clearly indicates that a multidimensional approach to the assessment of professional commitment is warranted and appropriate in the South African context. The results also indicate that South African actuaries are highly committed to their profession but that further research needs to be conducted to understand the antecedents of their professional commitment.

REFERENCES

- Allen, N. J. & Meyer, J.P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organisation. *Journal of Occupational Psychology*, 63, 1-18.
- Allen, A.J. & Meyer, J.P. (1996). Affective, continuance, and normative commitment to the organization: an examination of construct validity. *Journal of Vocational Behavior*, 49, 252-276.
- Blau, G. (1988). Further exploring the meaning and measurement of career commitment. *Journal of Vocational Behavior*, 32, 284-297.
- Blau, G. (1989). Testing the Generalizability of a Career Commitment Measure and Its Impact on Employee Turnover. *Journal of Vocational Behavior*, 35, 88-103.
- Colarelli, S.M. & Bishop, R.C. (1990). Career commitment: functions, correlates, and management. *Group & Organization Studies*, 15 (2), 158-176.
- Draper, N.R. & Smith, H. (1981). *Applied regression analysis*. New York: Wiley.
- Dunham, R.B., Grube, J.A. & Castaneda, M.B. (1994). *Organizational commitment: the utility of an integrative definition*. 79, 370-380.
- Gunz, H.P. & Gunz, S.P. (1994). Professional/organizational commitment and job satisfaction for employed lawyers. *Human Relations*, 47 (7), 801- 828.
- Hackett, Bycio, Hausdorf (1994). Further assessments of Meyer and Allen's (1991) three-component model of organizational commitment. *Journal of Applied Psychology*, 79 (1) 15-23.
- 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.
- Kaldenberg, D.O., Becker, B.W. & Zvonkovic, A. (1995). Work and commitment among young professionals: a study of male and female dentists. *Human Relations*, 48 (11), 1355-1377.
- Kim, J. & Mueller, C.W. (1978a). *Introduction to factor analysis: what it is and how to do it*. Beverly Hills: Sage.
- Kim, J. & Mueller, C.W. (1978b). *Factor analysis: statistical methods and practical applications*. Beverly Hills: Sage.
- McGee, G.W. & Ford, R.C. (1987). Two (or more?) Dimensions of organizational commitment: reexamination of the affective and continuance commitment scales. *Journal of Applied Psychology*, 72 (4), 638-642.
- Meyer, J.P, Allen, N.J. & Gellatly, I.R. (1990). Affective and continuance commitment to the organization: evaluation of measures and analysis of concurrent and time-lagged relations. *Journal of Applied Psychology*, 75 (6), 710-720.
- Meyer, J.P, Allen, N.J. & Smith, C.A. (1993). Commitment to organizations and occupations: extension and test of a three-component conceptualization. *Journal of Applied Psychology*, 78 (4), 538-551.
- Meyer, J.P., & Allen, N.J. (1984). Testing the "Side-Bet Theory" of organizational commitment: some methodological considerations. *Journal of Applied Psychology*, 69 (3), 372-378.
- Morrow, P.C. & Goetz, J.F. (1988). Professionalism as a form of work commitment. *Journal of Vocational Behavior*, 32, 92-111.
- Morrow, P.C. & McElroy, J.C. (1986). On assessing measure on work commitment. *Journal of Occupational Behavior*, 7, 139-145.
- Morrow, P.C. & Wirth, R.E. (1989) Work commitment among salaried professionals. *Journal of Vocational Behavior*, 34, 40-56
- Morrow, P.C. (1993). *The theory and measurement of work commitment*. Greenwich: JAI Press.
- Mowday, R.T., Steers, R.M. & Porter, L.W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14, 224-247.
- Neale, J.M. & Liebert, R.M. (1986). *Science and behavior: an introduction to methods and research* (3rd edition). Englewood Cliffs, NJ: Prentice-Hall.
- Nunnally, J.C. (1978). *Psychometric theory* (2nd edition). New York: McGraw-Hill.
- Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Erlbaum.
- Reilly & Orsak (1991). A career stage analysis of career and organizational commitment in nursing. *Journal of Vocational Behavior*, 39 (3), 311-330.
- Shore, L.M. & Tetrick, L.E. (1991). A construct validity study of the survey of perceived organizational support. *Journal of Applied Psychology*, 76 (5), 637-643.
- Siegel, A.F. (1994). *Practical business statistics*. (2nd ed.). USA: Irwin.
- Steers, R.M. (1977). Antecedents and outcomes of organizational commitment. *Administrative Science Quarterly*. 22, 46-56.
- Stevens, J. (1992). *Applied multivariate statistics for the social sciences*. (2nd ed.). Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Vandenberg, R.J. & Scarpello, V. (1994). A longitudinal assessment of the determinant relationship between employee commitment to the occupation and the organization. *Journal of Organizational Behavior*, 15, 535-547.
- Wallace, J.E. (1993). Professional and organizational commitment: compatible or incompatible? *Journal of Vocational Behavior*, 42, 333-349.
- Wallace, J.E. (1995). Organizational and professional commitment in professional and nonprofessional organizations. *Administrative Science Quarterly*, 40, 228-255.