

Commitment to organization versus commitment to profession: conflict or compatibility?

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ABSTRACT

There has been an interesting debate in organizational behavior literature on whether conflict or compatibility characterizes the relationship between employees' commitment to the organization and their commitment to the profession. To address this issue, a survey was conducted on a sample of research scientists in research institutions in the Klang Valley of Malaysia. Based on the analysis involving a sample size of 545 research scientists, the findings confirmed the assumption that there is no conflict between these concepts. Significant relationship exist between commitment to profession and the affective, continuance, and normative dimensions of commitment to the organization (coefficients of 0.43, 0.15, and 0.52 respectively). In other words, the results suggest that commitment to organization is compatible with commitment to profession. The outcome of the survey further suggests the relevance of assessing the relationship in the context of multidimensionality of, not only organizational commitment, but also of commitment to profession.

ABSTRAK

Terdapat perbincangan menarik dalam literatur kelakuan organisasi mengenai sama ada wujud konflik atau keserasian dalam perkaitan antara komitmen pekerja terhadap organisasi dengan komitmen mereka terhadap profesyen. Bagi menangani isu ini, satu survei telah dibuat ke atas satu sampel saintis yang bekerja di institusi-institusi penyelidikan di Lembah Klang, Malaysia. Berdasarkan analisis yang melibatkan satu saiz sampel terdiri daripada 545 saintis, dapatan kajian mengesahkan andaian bahawa tidak wujud konflik antara kedua-dua konsep. Hubungan yang signifikan didapati antara komitmen terhadap profesyen dengan dimensi afektif, 'continuance' dan normatif komitmen terhadap organisasi (masing-masing dengan koefisien 0.43, 0.15, dan 0.52). Dengan lain perkataan, hasil kajian mencadangkan bahawa komitmen pekerja terhadap organisasi adalah selari dengan komitmen pekerja terhadap profesyen. Hasil kajian seterusnya mencadangkan kerelevanan menilai hubungan tersebut dalam konteks kepelbagaian dimensi, bukan sahaja komitmen terhadap organisasi, bahkan juga komitmen terhadap profesyen.

INTRODUCTION

Among various forms of attitudes, commitment has gained substantial interest among organizational behavior researchers. Its significance stems from the belief that committed employees will demonstrate differential degree of organizational outcomes such as employee turnover, employee performance, and their intention to stay or leave an organization (Omar & Aziz 2002; Meyer & Allen 1997). Thus far, a lot of studies have been conducted to look into various issues of commitment – both conceptual and empirical. Unfortunately, a great majority of these studies have used US samples. Notably, only a few has employed non western or non US samples (examples, Vandenberghe, 1996; Zain, 1996) Hence, much of the development gained in commitment literature may not appropriately portray the reality within societies other than the US.

One particular issue of research that has attracted commitment researchers concerns the various foci of the concept. Indeed, employee attachment and commitment can be associated not only with organization, but also other 'referents' such as profession, family, immediate superior, religion, and so on. Two foci of commitment that have been popularly studied are organization and profession (Mathieu & Zajac, 1990). The issue between these objects of commitment is none other than whether both are compatible or in conflict with each other. The nature of the relationship between them is worth knowing as it may have impact on the behavior of individuals in organizations, and hence, the formulation and practice of human resource policies in these organizations.

THE CONCEPT OF ORGANIZATIONAL COMMITMENT

Conceptually, organizational commitment has been defined in various ways. A plethora of definitions can be found in commitment literatures. Table 1 demonstrates some of these definitions.

A scrutiny of these various definitions reveals the inconsistency underlying the understanding and perception of the concept of commitment among researchers. In their review of the conceptualization of commitment, Mathieu & Zajac (1990) suggested that these definitions signify a unidimensional nature of the concept. Allen & Meyer (1991) went further to propose that commitment, instead, should be conceived as multidimensional in nature. Accordingly, in their proposed three component commitment model, these authors suggest that commitment can be categorized into three different dimensions, namely affective, continuance, and normative.

Affective commitment refers to employees' emotional attachment to, identification with, and involvement in the organization. Employees with a strong degree of affective commitment continue employment with the

TABLE 1. Definitions of organizational commitment

The attachment of an individual's fund of affectivity and emotion to the Group (Kanter 1968).

The process by which the goals of the organisation and those of the individual become increasingly integrated or congruent (Hall, Schneider & Nygren 1970).

A partisan, affective attachment to the goals and values of the organisation to one's role in relation to goals and values, and to the organisation for its own sake, apart from its purely instrumental worth (Buchanan 1974).

The relative strength of an individual's identification with and involvement in a particular organisation (Mowday, Porter & Steers 1982).

Profit associated with continued participation and a 'cost' associated with leaving (Kanter 1968).

A structural phenomenon which occurs as a result of individual-organisational transactions and alterations in side-bets or investments over time (Hrebiniak & Alutto 1972).

The totality of internalised normative pressures to act in a way which meets organisational goals and interests (Wiener 1982).

The committed employee considers it morally right to stay in the company, regardless of how much status enhancement or satisfaction the firm gives him or her over the years (Marsh & Mannari 1977) .

organization because they want to do so. Continuance commitment refers to an awareness of the costs associated with leaving the organization. Employees whose primary link to the organization is based on continuance commitment remain because they need to do so. Finally, normative commitment reflects a feeling of obligation to continue employment. Employees with a high degree or level of normative commitment feel that they ought to remain with the organization.

THE CONCEPT OF COMMITMENT TO PROFESSION

Professional commitment has also been identified as career commitment (Mueller, Wallace & Price 1992), career salience (Randall & Cote 1991), occupational commitment (Ritzer & Trice 1969) and 'cosmopolitan-local' distinction (Gouldner 1957). According to Sorensen and Sorensen (1974), this construct can be defined in a number of ways, which includes an individual's identification with and involvement in the profession; commitment and dedication to the profession; and acceptance of professional ethics and goals. The term 'profession', which has yet to have a single,

authoritative and universally accepted definition, as shown, is the object of professional commitment in all these definitions. Despite the ambiguities in its definition, profession, according to Alexander (1981) and Kozlowski and Hults (1986), can generally be identified by the following characteristics: a common body of knowledge; autonomy in the application of that knowledge, commitment to a specialized line of work; identification with the line of work; responsibility to society for the ethical use of specialized knowledge and collegial maintenance of performance standards.

THE RELATIONSHIP BETWEEN ORGANIZATIONAL COMMITMENT AND COMMITMENT TO PROFESSION

As mentioned earlier, underlying the relationship between commitment to the organization and commitment to profession is the issue of conflict or compatibility. This issue, according to Mueller et al. (1992) emerges as the nature of the workforce changes toward increasing levels of education and professionalism. These changing trends have also led to the identification of two categories of professional employment: first, professionals working in professional organizations and second, professionals employed in non-professional organizations. Scott (1965) had earlier identified professional organization or settings as those where the majority of members were professionals; the professional content of work was central to the mission of the organization; and the goals of the organization were largely consistent with those of the professionals employed. Wallace (1995) cited medical clinics, research institutes, architectural offices, accounting firms, and law firms as examples of such organizations. Variations in employment settings, thus, have often been speculated to be a determinant of the nature of the relationship between professionals' identification with their organizations and their identification with the values and norms of their professions. Non-professional organizations, in particular, are assumed to be more 'bureaucratic' than the professional organizations (Wallace 1995). On the other hand, it is possible that some individuals, irrespective of whether they are working in professional or non-professional organizations, may respond more as 'professionals' than do others. These 'complexities' may result in inconsistent value systems, which, as emphasized by Lachman & Aranya (1986), may lead to a 'commitment dilemma'. This subsequently may influence other work attitudes and behaviors, such as job satisfaction, behavioral intentions, and turnover (Mueller et al. 1992; Bartol 1979).

The literature thus far, has, exposed two different views with regards to the professional commitment-organizational commitment relationship. Kornhauser (1962), Blau and Scot (1962), Scott (1966), Alexander (1981), Hall (1968) and Howell and Dorfman (1986) are examples of authors who had identified the presence of conflict between organizational and professional

commitment. Professional employees, as they argued, tend to be more committed to their profession and its values than to their employers or organizations. Kallerberg and Berg (1987) described the conflict between commitment to profession and commitment to organization as resembling the 'zero-sum' game concept, whereby an increase in the level of commitment to profession, for instance, will result in a decline in commitment to organization, and vice versa. A few other authors, Sorensen & Sorensen (1974), Miller (1967), and Howell and Dorfman (1981), for example, have suggested that bureaucratic organization structures result in restrictions on professional autonomy. The professional and organizational-bureaucratic value systems have often been regarded as incompatible or in conflict with each other, and associated with different role orientations. While the organizational-bureaucratic value system is assumed to be characterized by values such as hierarchical control and authority, conformity to organizational goals, norms and regulations, and organizational loyalty, the professional value system is known to emphasize values such as collegiality, professional control, conformity to professional standards and goals, professional autonomy, and client orientations and loyalty (Corwin 1961; Lachman & Aranya 1986).

The notion of conflict between these two forms of commitment, however, has not been well accepted by some other researchers. Aranya, Kushnir and Valency (1986), Hrebiniak and Alutto (1972), Organ and Greene (1981) and Podsakoff, Williams and Todor (1986), for example, suggested that there is a growing interpenetration of professional and bureaucratic characteristics at work. This has led to the contra assumption that there is no inherent conflict between commitment to the profession and the organization, provided the individuals' professional work expectations and goals are met by the employing organization. In other words, the 'commitment dilemma', as mentioned above, is assumed to be non-existent. This view has also been supported by Aranya and Jacobson (1975) and Aranya and Ferris (1983). Becker (1992), in a slightly different tone, though still consistent with the preceding view, proposed that employees may have a high degree of commitment to both their employing organization and profession. Both forms of commitment, in other words, are assumed to be compatible or complementary to each other and may occur simultaneously. In this context, Baugh and Roberts (1994) suggest that the simultaneous occurrence of high levels of both forms of commitment may be desirable for the organization, and could act as a 'check and balance' tool for each other. High professional commitment, for instance, may absorb some of the dysfunction of high commitment to the organization, such as the 'organization man' syndrome. Likewise, high professional commitment, alone, without the support of a reasonable level of organizational commitment, can be of less utility, as it may result in high quality work being produced, but work which is not

maximally tailored to the organization's needs. It too, as Greene (1978) suggested, may cause role conflict and alienation. Baugh and Roberts (1994) further suggest that the interaction of professional commitment with organizational commitment should provide a better prediction of job satisfaction than professional commitment or even organizational commitment alone. In addition, the authors also indicate that tenure with the organization has the potential to be influenced by both forms of commitment.

EMPIRICAL EVIDENCE

A review of empirical research on professional commitment suggests that thus far, not much attention has been offered by researchers to assessing this professional commitment-organizational commitment relationship, or the 'commitment dilemma'. Wallace (1993), in her literature search for a meta-analytic study of the relationship between professional commitment and organizational commitment for the period from 1966 until 1989, identified only 25 studies that met her selection criteria for analysis. These criteria included studies that reported correlation coefficients between both forms of commitment and those which referred to commitment in the context of work. Many previous studies on this subject, according to Wallace, were in the form of theoretical articles and literature reviews.

A summary of past empirical studies reviewed by the present researcher, which includes studies employed in Wallace's meta-analytic study, is presented in Table 2. As with studies investigating the relationship between demographic variables and organizational commitment, most of the studies examining the relationship between professional commitment and organizational commitment have also used affective commitment measures, i.e., the Organizational Commitment Questionnaire (OCQ). Thus, essentially, the assessment of the professional commitment-organizational commitment relationship in most of these studies was basically unidimensional and limited to only organizational affective commitment. While three studies were identified to have used behavioral commitment measures (Ritzer & Trice 1969; Aranya & Ferris 1983), only Mathieu and Zajac's (1990) meta-analytic study explicitly differentiates the relationship between professional commitment and the different forms of organizational commitment. Besides revealing a positive relationship between organizational commitment (using the overall scale) and professional commitment, Mathieu and Zajac also reported a stronger relationship between professional commitment and organizational affective commitment than professional commitment with organizational continuance commitment. According to Mathieu and Zajac, studies that examine the relationship between professional commitment and other dimensions of commitment, apart from organizational affective commitment, are still

scarce. More research, as the authors suggest, is needed to validate existing findings and explore further the nature of relationship between both types of commitment. Apart from these observations, it can also be seen from Table 2, that, statistically, the correlation coefficients representing the professional commitment-organizational commitment relationship range between $-.06$ to $.72$. This suggests a considerable degree of inconsistency in the pattern of relationship between the variables, which may imply the nature of the strength of compatibility or conflict between these two forms of commitment.

TABLE 2. Summary of studies examining the correlation coefficient between Professional and Organizational Commitment

Study	Sample	N	Correlation coefficient
1. Ritzer & Trice (1969)	Personal managers	419	.30 ^a
2. Rotondi (1975)	Business graduates -non managers	47	.20
3. Rotondi (1975)	Business graduates -managers	140	.43
4. Wiener & Vardi (1980)	Insurance agents	56	.32
5. Aranya et al. (1981)	Staff professionals	85	-.06
6. Aranya et al. (1981)	Accountants	173	.52
7. Aranya et al. (1981)	Accountants	344	.41
8. Aranya & Ferris (1983)	Accountants	404	.72 ^a
9. Aranya & Ferris (1983)	Accountants	469	.39 ^a
10. Aranya & Ferris (1984)	Accountants	1074	.45
11. Aranya & Ferris (1984)	Accountants in non- professional organizations	942	.14
12. Aranya et al. (1986)	Accountants	1053	.46
13. Lachman & Aranya (1986)	Accountants	344	.47
14. Lachman & Aranya (1986)	Accountants	150	.51
15. Lachman & Aranya (1986)	Accountants in non -professional organizations	298	.19
16. Stefy & Jones (1988)	Registered nurses	118	.32
17. Morrow & Wirth (1989)	University scientists and Professional staff	728	.34
18. Mathieu & Zajac (1990)	Meta-analytic study	-	.42, .50, .45 ^c
19. Wallace (1993)	Meta-analytic study	-	.45

Note: a studies using measures of behavioural commitment; c overall commitment

The meta-analytic studies (by Wallace 1993 and Mathieu and Zajac 1990) also seem to support a 'no conflict' situation between the two forms of commitment. Wallace's study, for example, revealed a 'true' correlation of the order of $.45$, indicating a moderately strong association. Further scrutiny

of these studies, however, suggests that more evidence needs to be produced before such conclusions can be convincingly confirmed. Wallace (1993), in her study, cautioned the fact that, while the majority of studies had employed North American samples, more than half were accountants. It is reasonable, thus, according to this author to expect or speculate that variations in sample characteristics, i.e., across cultures and types of professions, may possibly produce different results.

Wallace's study, in addition, suggests the importance of considering potential moderating effects on the magnitude and/or direction of the association between professional commitment and organizational commitment. Wallace mentioned the likelihood of two variables - the degree of professionalization of employees' occupations, and employees' designation or position in the authority hierarchy - as the sources of these potential moderating effects. The degree of professionalization relates to the nature of the profession, i.e. whether the professions are 'technical-scientific' (e.g., engineering, science) or 'personalized' (e.g., law, medicine, teaching). Wallace, in this respect, adopted Hall's (1968) categorization of the degree of professionalization into high and low professionalization. High professionalization includes staff professionals, accountants, nurses, and scientific university staff. Low professionalization, on the other hand, consists of professionals belonging to occupations such as personnel managers, business graduates, insurance agents, accountants in non-professional organizations, and supervisory staff. The results of her study suggest that the higher the professionalization of the occupation, the higher the association between professional commitment and organizational commitment.

With respect to employees' rank or position in the organization, Wallace found that a stronger correlation between professional commitment and organization persists within the ranks of professionals who hold higher positions (i.e., managers) than 'ordinary' professional staff. This may be explained by the fact that managerial positions reflect a greater degree of responsibility as well as 'benefits'. The benefits, particularly, could well represent 'investments' gained by the professional managers. Through higher positions, individuals' professional and organizational roles may be more highly integrated. Both investments and integration of roles, thus, may combine to contribute to a higher degree of compatibility in the professional-organizational relationship.

Lachman and Aranya (1986), in their study of a sample of Canadian certified accountants, apart from revealing some degree of congruence in the values and norms of the profession and organization, also investigate the possibility of organizational settings moderating employees' professional commitment-organizational commitment relationship. This possibility was not examined by Wallace (1993). Lachman and Aranya found that accountants in professional settings are more committed to the profession than their

colleagues in non-professional settings. There is evidence, thus, for organizational setting to constitute another important moderating factor in influencing employees' organizational commitment-professional commitment relationship.

A more recent source of evidence of the professional commitment-organizational commitment relationship can be found in the works of Baugh and Roberts (1994) who studied a sample involving 149 engineers in a U.S. Government military depot. One hundred and fourteen engineers, the majority of them (94 percent) male, responded. Professional commitment was assessed by a three item measure adopted from Kerr and Jermier (1978). They also included job satisfaction, measured by the Minnesota Satisfaction Questionnaire (MSQ). Baugh and Roberts hypothesized and tested the existence of significant interaction effects between organizational affective commitment and professional commitment on job satisfaction (controlling for organizational tenure) with individuals high in both commitments reporting the highest job satisfaction. Using a '2 X 2' analysis of covariance (ANCOVA), with tenure in the organization as the covariate, the authors found support for their hypothesis. Organizational affective commitment was found to have a significant main effect on job satisfaction, and a significant interaction between organizational affective commitment and professional commitment existed. The highest levels of satisfaction were reported by individuals high on both forms of commitment. Baugh and Roberts (1994) concluded that there is a complementary, rather than conflicting or mutually exclusive relationship, between the two constructs. In their comments on this relationship, the authors noted:

...Organizational commitment (i.e., organizational affective commitment) may serve as a motivational factor for higher job performance. Professional commitment may represent a capability factor. Engineers high on this factor are more likely to stay current in their profession and therefore will be more capable of job contributions. Or perhaps professional commitment is a second motivational factor, leading engineers to strive for high quality work. These combinations of motivation and ability may result in the higher levels of performance (or other work outcomes)...

(Baugh & Roberts 1994, p.112)

RESEARCH METHODOLOGY

Based on what has been discussed above, this research aims to seek answers to whether within a Malaysian context, compatibility or conflict prevails in the relationship between commitment to profession and organizational commitment. Specifically, this study attempts to explore whether there is significant positive relationship between levels of professional commitment

and levels of employees' organizational affective, continuance, and normative commitment.

Data were collected via a survey conducted on research scientists working in various research organizations in the Klang valley, Malaysia. These organizations, both public and private, were selected from a list of research institutions in Malaysia (Ministry of Science and Technology, 1985). A total of 2,180 questionnaires were distributed, out of which 545 were returned and usable for analysis. The number of questionnaires returned represents about 25 percent of the total number of questionnaires distributed. Table 3 demonstrates a profile of the sample.

TABLE 3. Sample Characteristics

Demographic characteristics		Number of responses	Percent
Age group (years)	20-30	217	39.8
	31-40	232	42.6
	41-55	96	16.9
Gender	Male	347	63.7
	Female	198	36.3
Ethnic origin	Malay	455	83.5
	Chinese	55	10.1
	Indian	35	6.4
Level of education	Diploma	76	13.9
	Bachelor	249	45.7
	Masters	165	30.3
	PhD	55	10.1
Designation	Assistant Research Officer	50	9.2
	Sr Asst Research Officer	25	4.6
	Research Officer	331	60.7
	Senior Research Officer	135	24.8
Income	<RM18,000	98	18.0
	RM18,001-24,000	165	30.3
	RM24,001-36,000	115	21.1
	RM36,001-48,000	65	11.9
	>RM48,000	98	18.0
Marital Status	Single	113	20.7
	Married	430	78.9
	Divorced	2	0.4
Tenure in Organization	1-5 years	273	50.1
	6-10 years	90	16.5
	11-25 years	178	33.4
Job tenure	1-5 years	247	45.3
	6-10 years	131	24.0
	11-25 years	159	29.2

The measures of organizational commitment were adopted from existing measures widely used by researchers on commitment. However, some of the items were modified to suit the sample. For example, measures for affective commitment were adopted from Jaros, Jermier, Koehler and Sincich (1993). Jaros et al. (1993) devised a 7 bipolar adjective items, using a seven-point Likert scale. However, in this research a 12 bipolar adjective items incorporating a ten-point Likert scale, was introduced. Respondents were asked to report the feelings they normally experienced when thinking of their employing organization. Sample items include pleasure-pain, sadness-happiness, and cold-warmth.

Continuance and normative commitment were measured using instruments designed by Meyer & Allen (1991). On a Likert scale of 1-5, eight items measure each of the dimensions. Sample items are, "My life would be very much disrupted if I leave this organization" and "I feel a sense of 'ownership' for this organization", respectively.

Commitment to profession was self-developed and measured by three items. Assuming this concept to be also multidimensional in nature, each item was designed to represent a dimension. The items are; "I feel proud to be in current profession", "I feel morally obliged to remain in current profession", and "If I leave this profession, life would be very much disrupted".

RESULTS AND DISCUSSIONS

Following past research using factor analysis of this nature such as that by Siguaw and Simpson (1997), a confirmatory factor analysis, employing a principal component for varimax rotation, was conducted on *the organizational commitment* measures. In order to ensure consistency in the scales of the measures, the ten-point Likert scale used to measure affective commitment was transformed into a five-point scale. The factor analysis generated three dimensions of the concept, which, could be labeled as *affective*, *continuance*, and *normative*. In Table 4, these dimensions correspond to factor 1, factor 2 and factor 3, respectively. The percentage of variance recorded for the three factors was 55.8 per cent, with almost 41 per cent of the total attributed to factor 1, that is affective commitment. Other statistics produced by the analysis, such as Bartlett Test of Sphericity (8083.76, significant at $p < 0.05$) and Kaiser-Meyer-Olkin Measure of Sampling Adequacy (a value of 0.95) indicate that the factor structure obtained is appropriate.

The lower percentages of variances recorded for the continuance and normative dimensions, as opposed to the affective dimension could be due to the inconsistency in the manner the statements representing the measures were posed. Nevertheless, in general, the dimensions generated are consistent with what was suggested and found by Allen & Meyer (1990). In other

TABLE 4. Results of factor analysis of organizational commitment measures

Item	Factor 1	Factor 2	Factor 3
Pain-pleasure	.8849	.0742	.0173
Disgust-fondness	.8705	.1651	.0211
Uncaring-caring	.8698	.1598	.0130
Frustration-satisfaction	.8618	.1421	.0167
Anger-peace	.8565	.0864	.0267
Discomfort-comfort	.8420	.1412	.0412
Lifelessness-spiritedness	.8383	.1544	.0983
Despair-hope	.8284	.1628	.0183
Boredom-excitement	.8144	.1766	.1101
Cold-warmth	.8060	.1655	.0705
Hate-love	.8031	.1663	.0721
Detached-belonged	.6832	.2156	.0781
Jumping from one organization to another seems unethical to me.	.1028	.7205	-.0232
I would feel it was not right to leave this organization.	.2272	.6397	.1159
Considering everything, I would find it difficult to leave this organization right now.	.3063	.6166	.2064
I feel a sense of 'ownership' for this organization.	.3801	.4085	.3059
I feel that I have too few options to consider leaving this organization.	.1269	.0193	.8316
I could easily get another job if I wanted to leave this organization.	.0182	.0710	.7644
Eigen value	10.188	2.078	1.6729
Percentage of variance	40.8%	8.3%	6.7%
Cumulative percentage of variance	49.1%	55.8%	
Cronbach's alpha	.96	.64	.68

words, with respect to the sample studied, there is evidence to substantiate the belief that organizational commitment is multi-dimensional in nature.

Table 5 presents the correlation coefficients derived from a correlation analysis between the composite index of items representing measures of professional commitment and each of the dimensions of organizational commitment generated. The values of the coefficients are relatively moderate. This could be due to weaknesses in the development of the measures for both the concepts of commitment. However, the statistics, which are positive and significant, are sufficient to suggest a 'no-conflict' situation between professional commitment and each dimension of organizational commitment. Professional commitment, in other words, is 'compatible' with each dimension of organizational commitment. An increase in the level of professional commitment would likely increase the level of each form of commitment, and vice versa. The results further suggested that while professional

TABLE 5. Coefficient correlations between commitment to profession and dimensions of organizational commitment

Variable commitment	Affective commitment	Continuance commitment	Normative
Commitment to profession	.43*	.15*	.52*

Note: * $p < 0.005$

commitment was best related to organizational normative commitment, it was least linked to organizational continuance commitment. The proposition that there is significant positive relationship between levels of professional commitment and levels of employees' organizational affective, continuance, and normative commitment is, thus, substantiated by the data in this study.

The following represents results of an extended analysis of the proposition. In this analysis, instead of regressing the composite index, all the 'individual' measures of professional commitment were regressed with the composite index of measures of each dimension of organizational commitment. The results of the stepwise regressions, are reported according to types or dimensions of commitment.

Prediction of organizational affective commitment. All measures of professional commitment: 'feel proud to be in current profession' and 'feel morally obliged to remain in current profession', and "leave profession - life would be disrupted" significantly predicted organizational affective commitment at $p < .05$ (beta values of .292, .214 and .212 respectively). The equation explained about 18 percent of the variance in organizational affective commitment. Item 'feel proud to be in current profession', alone, explained almost 15 percent of the percentage of variance (see Table 6).

TABLE 6. Results of stepwise regression of professional commitment and organizational affective commitment*

Variable\Equation	1 Beta(S.E)	2 Beta(S.E)	3 Beta(S.E)
Proud with profession	.38(.04)	.292(.04)	.290(.04)
Feel morally responsible to profession		.214(.04)	.213(.04)
Leave profession-life would be disrupted			.212(.04)
R ²	.14	.18	.185
Adj. R ²	.14	.18	.185
Δ in R ²		.03	.005
F-Value	94.75*	61.77*	59.84*

Note: * $n = 545$

Prediction of organizational continuance commitment. In the prediction of organizational continuance commitment, the results of stepwise regression, displayed in Table 7 revealed significant relationship between all the measures of professional commitment and this form of commitment. Professional commitment explained about 7 percent of the variance in this commitment dimension. Item ‘if I leave this profession, my life would be very much disrupted’ accounted for almost half of the percentage of the explained variance ($R^2 = .034$).

TABLE 7. Results of multiple regression of professional commitment and organizational continuance commitment*

Variable\Equation	1 Beta(S.E)	2 Beta(S.E)	3 Beta(S.E)
Leave profession-life would be disrupted	.18(.03)	.19(.03)	.21(.03)
Feel morally responsible to profession		.16(.04)	.11(.04)
Proud with profession			.10(.04)
R ²	.03	.06	.06
Adj. R ²	.03	.05	.06
Δ in R ²		.02	.009
F-Value	19.20*	7.29*	13.36*

Note: *n = 545

Prediction of organizational normative commitment. Table 8 shows the results of stepwise regressions which relate to the prediction of organizational normative commitment. All measures of professional commitment significantly predicted this commitment dimension and about 29 percent of the variance was explained. Item ‘I feel morally responsible or obliged to remain in my current profession’ explained the highest percentage of the variance i.e., 22 percent.

In summary, regression analyses of each individual item which measures professional commitment and the measures of each dimension of organizational commitment have cast further details of the nature of the relationship between these purportedly different foci of employee commitment. The results of the statistical analyses have shown a pattern of relationship which indicates certain item measure of professional commitment relating strongly to certain dimension, as opposed to other dimensions of organizational commitment. The results, for example, showed that while a normatively ‘orientated’ measure of professional commitment (represented by the item ‘I feel morally obliged to remain in current profession’) was strongest in the prediction of organizational normative commitment, an

TABLE 8. Results of multiple regression of professional commitment and organizational normative commitment*

Variable\Equation	1 Beta(S.E)	2 Beta(S.E)	3 Beta(S.E)
Feel morally responsible to profession	.47(.02)	.35(.03)	.33(.03)
Proud with profession		.25(.03)	.25(.03)
Leave profession-life would be disrupted			.13(.02)
R ²	.22	.27	.29
Adj. R ²	.22	.27	.29
Δ in R ²		.05	..01
F-Value	155.11*	103.10*	74.91*

Note: *n = 545

'affectively' inclined measure of professional commitment (represented by item 'I feel proud to be in current profession') associated highly with organizational affective commitment. Accordingly, a 'calculatively' designated measure of professional commitment (represented by item 'leaving this profession would very much disrupt my life') was strongest in its prediction of organizational continuance commitment. These indicate a 'venue' for further investigations on the possibility of professional commitment being also a multidimensional concept, and that different dimensions of professional commitment predict different dimensions of organizational commitment or vice-versa.

CONCLUSION

The results presented in this study indicate that there is no conflict between employees' commitment to their profession and their organizational commitment. This is consistent with previous findings (for example, Hoff & Mandell 2001; Wallace 1993). The findings confirmed that dual commitment exists, and that work orientations among research scientists ought to be viewed in multiple, rather than singular, terms. In short, there is reason to believe that there is no trade-off between these different forms of commitment. Interestingly, the results also suggest the existence of differential degrees of relationship between scientists' commitment to profession and their various dimensions of commitment to the organization. The fact that a much higher correlation was registered on the link between the affective and normative dimensions of organizational commitment and commitment to profession, compared to the association between the continuance dimension of organizational commitment and the latter, indicates that the relationships

between these forms of commitment are not only multi-dimensional, but also more attitudinal. In other words, scientists' commitment to their profession can be expected to enhance their stay in the organization for the reasons that they want and ought to do so, rather than their need to do so. For managers of research scientists, the findings imply the need to acknowledge and translate the complementary nature of these different foci of commitment in the formulation of their human resource policies and strategies. Strategies and practices that aim towards enhancing both forms of employee commitment should have a synergistic effect on work environment. In relation to this, future research that seek to investigate and compare the antecedents of both concepts of commitment is necessary. Investigations that employ other samples of professionals would also be more meaningful if generalizations are to be established. This is consistent with scholars' assumption that differences in types of occupation, employee demographics, and work cultures may influence the relationship between the concepts. Finally, efforts are certainly needed to improve on other limitations of this research, in particular, the development of a more valid and reliable measure of organizational commitment and commitment to profession.

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