"What Kind of Commitment Does a Final-Earnings Pension Plan Elicit?"

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What Kind of Commitment Does a Final-Earnings Pension Plan Elicit?

ANDREW A. LUCHAK
IAN R. GELLATLY

In a sample of 427 employees in a large, unionized public utility company, we examined the incentive effects of a final-earnings pension plan on employees’ commitment to the organization. Two types of organizational commitment, affective and continuance commitment were measured using scales described by Meyer and Allen (1997). We found evidence that higher accruals under the pension plan increased continuance commitment but reduced affective commitment. Organizational commitment was also found to vary by job satisfaction, specific training, seniority, wage premia, and the perceived effectiveness of alternative dispute resolution methods. Implications for pension theory, research, and policy are discussed.

The most common form of occupational pension plan provides a retirement benefit based on a formula that multiplies earnings at the time of retirement by years of accumulated service and a constant. Such final-earnings plans reward employees willing to make a long-term commitment to the organization, or penalize those unwilling to make such a commitment, for two main reasons. First, the final-earnings benefit formula fixes the pension in nominal terms at the point of departure so that job stayers (e.g., career employees) but not early leavers (e.g., quitters, those dismissed for just cause) receive a pension indexed to their salary just prior to retirement. Second, such plans make eligibility for more generous early
retirement subsidies conditional on higher years of “continuous” service or membership in the pension plan. Assuming non-portability between plans, quitting creates discontinuities, which prevents early leavers from qualifying for these more generous retirement options.

Generally, the anticipated gain in pension accrual\(^1\) from staying, or foregone accrual from failing to stay, in a final-earnings pension plan escalates over an employee’s career, peaking in the year that the employee first becomes eligible for a full (undiscounted) pension, and turning negative thereafter. Considerable empirical research has been devoted to understanding why many pension plans are structured in this way and whose interests such structures serve (reviewed in Allen and Clark 1987; Ippolito 1987, 1994; Mitchell 1988; Bodie 1990; Lazear 1990; Gustman, Mitchell and Steinmeier 1994; Dorsey 1995). For example, worker demand for pensions has been studied as a function of tax incentives (Long and Scott 1982), economies offered through group purchase and record keeping (Ghilarducci and Terry 1999; Mitchell and Andrews 1981), retirement insurance (Bodie 1990), and union preferences (Freeman 1981), while firm supply has been examined as a function of the pension’s ability to further certain personnel goals (Lazear 1990), as well as to allow firms, and possibly unions, to pursue more opportunistic ends (Deaton 1989; Ghilarducci 1990).

An important next step for pension research is to better understand these differing rationales for employer-sponsored pension plans and the possible sources of integration between different explanations (Gustman, Mitchell and Steinmeier 1994). Understanding why employees desire final-earnings pensions is especially important because there is little or no direct evidence that they systematically evaluate the opportunities and risks they face over time under such arrangements (Clark and Pitts 1999). This is especially evident with respect to one of the final-earnings plan’s most crucial implications; namely, that employees must make a long-term commitment to the organization. The problem is that the pension literature has never fully elaborated upon or directly estimated the pension-commitment relationship. This is an important gap to fill because there is a substantial amount of organizational behaviour research that argues that commitment is not a monolithic construct, can be influenced by reward structures (Young, Worchel and Woehr 1998), and that the nature of employee commitment matters for organizational outcomes such as employee performance (e.g., Meyer \textit{et al.} 1989).

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\(^1\) Pension accrual may be defined as the present value difference in wealth from the pension plan if one were to terminate immediately, rather than one year later.
In this study, we examine how pension accruals under a final-earnings pension plan influences commitment to the organization. After describing two distinct forms of organizational commitment, we then examine how different perspectives on pensions yield different predictions about how pension accruals may be expected to be related to these two forms of commitment. The methodology, data, and empirical results are then presented, followed by a discussion and conclusion.

**DISTINCT FORMS OF ORGANIZATIONAL COMMITMENT**

Although several definitions of commitment appear in the organizational behaviour literature, it is common to distinguish between two dimensions or types of commitment, an affectively-based or attitudinal type, and a rationally-based or calculated type of commitment (Mathieu and Zajac 1990). Affective commitment refers to one’s emotional attachment to, identification with the goals and values of, and involvement in the organization. This type of commitment has been shown to be affected by the quality of one’s work experiences, especially those that increase the level of comfort (e.g., perceived equity in reward distribution, role clarity), dignity (e.g., perceived influence over decision-making) and competence (e.g., perceived opportunities to experience accomplishment, job challenge) on the job. Affective commitment is also expected to be higher where employees believe the firm is motivated out of a genuine concern for the welfare of employees, rather than ulterior motives (see Meyer and Allen 1997). It is expected that employees, whose work experiences are consistent with their expectations and satisfy their basic needs, will develop a stronger affective attachment to the organization than will those whose work experiences are less satisfying (Meyer, Allen and Smith 1993).

Continuance commitment refers to one’s general awareness of the costs and benefits associated with leaving or staying in the organization, and is affected by anything that increases or decreases these factors (e.g., acquisition and/or loss of non-transferable skills, attractive and/or unattractive compensation and benefits, gain and/or loss of seniority privileges). This type of commitment increases when employees believe that suitable alternatives do not exist and/or when the personal costs of leaving are too high or benefits of leaving are too low (see McGee and Ford 1987; Allen and Meyer 1990).

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2. Employees are assumed to possess a working-knowledge of their pension accruals given empirical evidence that knowledge of pension plan characteristics increases with the growth of such accruals (Luchak and Gunderson 2000) and because reporting and disclosure requirements in most jurisdictions across Canada require that plans report accumulated pension wealth to members on an annual basis.
The distinction between types of commitment is not trivial because the empirical research shows that measures of affective and continuance commitment correlate negatively with turnover, but that the two types of commitment relate to work outcomes, other than turnover, in different ways (for reviews see, Meyer and Allen 1997; Stanley et al. 1999). Specifically, affective commitment has been shown to be positively related to job performance (Meyer et al. 1989; Konovsky and Cropanzano 1991), attendance (e.g., Gellatly 1995; Hackett, Bycio and Hausdorf 1994) and organizational citizenship behaviour (Organ and Ryan 1995), while continuance commitment has been shown to be negatively or only weakly related to these same criteria (see Stanley et al. 1999).

PENSION MODELS AND ORGANIZATIONAL COMMITMENT

We propose several models of the pension-commitment relationship (see Table 1). According to the retirement savings model, pensions are owned by employees but managed by a firm sponsor (Mitchell 1988) because economies of scale reduce investment and administrative costs (Ghilarducci and Terry 1999; Mitchell and Andrews 1981) and it is only through firm sponsorship that contributions, and investment income on those contributions, are allowed to accumulate on a tax-deferred basis (Long and Scott 1982). Under this model, employment is organized on a period-by-period basis, with no explicit commitment by either party to renew the relationship beyond a single period. In each period, therefore, workers are paid total compensation that exactly compensates them (no more or less) for the value of their output to the organization and they would be unwilling to agree to any compensation that was contingent with remaining employed beyond the immediate period. Since the concept of an inter-temporal gain or loss in pension accrual is inapplicable to this model, being controlled through compensating adjustments to other forms of compensation, there should be no necessary relationship between pension accruals and organizational commitment, particularly continuance commitment.

The retirement insurance model argues that benevolent employers looking out for the best interests of their employees may offer final-earnings plans because of several insurance functions that protect against economic insecurity in retirement and ensure ultimate receipt of the pension (Bodie 1990). For example, the risk of the real value of pension benefits being eroded by inflation can be insured by a final-earnings benefit formula that indexes one’s pension to earnings just before retirement or provides periodic cost-of-living adjustments once the pension is in pay (Gustman, Mitchell and Steinmeier 1994). Within this context, pension accruals should be positively associated with both forms of organizational commitment.
### TABLE 1

**Main Study Hypotheses**

<table>
<thead>
<tr>
<th>Pension Model</th>
<th>Effect of Pension Accrual on Type of Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Affective</td>
</tr>
<tr>
<td>Retirement Savings</td>
<td>No relationship</td>
</tr>
<tr>
<td>Retirement Insurance</td>
<td>Positive</td>
</tr>
<tr>
<td>Union Preferences (strained labour relations)</td>
<td>Negative</td>
</tr>
<tr>
<td>Implicit Contracting</td>
<td>No relationship</td>
</tr>
<tr>
<td>Opportunism (elite employees only)</td>
<td>Positive</td>
</tr>
</tbody>
</table>

Affective commitment should rise because the pension’s retirement insurance role provides employees with an increasingly more comfortable and secure current working environment. Continuance commitment should increase to the extent employees understand that untimely departure effectively nullifies their “retirement insurance,” and consequently, increases their personal cost of leaving.

The *union preference model* emphasizes that unions encourage the formation of defined-benefit plans because they are more likely to be preferred by union members who are, on average, older, less mobile and have more to gain from such plans (Freeman 1981). Unions may also prefer such plans because they offer a form of institutional security in that individuals are more likely to rely on a union to monitor the complex and technical details of the plan (Freeman 1981) and because the union can provide a source of voice or protection from arbitrary treatment (Freeman and Medoff 1984), particularly when the risks of pension losses are high. The union preference model suggests that continuance commitment to the organization should increase as pension accruals increase. However, the relation between pension characteristics and affective commitment may depend more on the quality of labour-management relations (see Belman 1992). To the extent that positive and constructive labour-management relations increase the quality of one’s current work experiences and environment (e.g., fair policies, supportive supervision), pension accruals, like the retirement insurance model, should increase both continuance commitment and affective commitment. To the extent that negative labour-management relations reduce the perceived quality of one’s current work experiences and environment, affective commitment will decrease even
though continuance commitment remains strong. In the present study we examined pension-commitment relations within a context of strained labour-management relations, therefore differential pension-commitment relations are expected under the union preference model.

The *implicit contract model* views the pension as a central element of an optimal, long-term contract between workers and the organization. According to this perspective, performance conscious employers require employees to defer a portion of their pay until retirement, in exchange for an implicit guarantee of employment security until this date. This arrangement protects employer concerns over such issues as attracting stable workers (Allen, Clark and McDermed 1993; Ippolito 1994), reducing monitoring costs (Hutchens 1987), preventing shirking, recouping training investments (Dorsey and Macpherson 1997) and regulating turnover and retirement flows (Ippolito 1987, 1991; Allen, Clark and McDermed 1993; Gustman and Steinmeier 1993) because the deferred pay is forfeited by the employee for failing to perform adequately or for not making a long-term commitment to the organization. Employees go along with this arrangement because it provides them with a mechanism to save for retirement and an implicit guarantee of employment security. If there is a concern about employers reneging on their pension commitments, they can be made to pay compensating wages for the heightened risk of pension loss faced by employees. Because this is a self-enforcing contract created through the deferral of employees’ own pay, there should be no necessary relationship between pension accruals and affective commitment. The absence of this relationship is likely reinforced by the lack of trust implied by this model about the work motivation of employees and the self-interest of the employer in establishing this type of compensation arrangement. Pension accruals should be positively related to continuance commitment, as all employees should recognize those provisions that contribute to the risk of pension losses.

Finally, the *opportunism model* views pensions as a means by which opportunistic firms and unions can take advantage of those with little power and influence in the workplace (Deaton 1989; Ghilarducci 1990). For example, firms may opportunistically layoff workers most vulnerable to pension losses in an effort to reduce pension liabilities. Generally, this strategy is facilitated by maintaining high levels of pension ignorance among workers, which can lead to potentially sub-optimal decisions that save the firm money or which allow the firm or union to redistribute benefits to more valued or influential persons without much resistance from other workers. Presumably, the opportunist’s agenda works most effectively where workers do not recognize the risks they face under the pension plan. Thus, we expect future pension accruals to be unrelated to commitment.
for all but the most elite, high-status in the organization who may be expected to have higher levels of both affective and continuance commitment.

**METHODOLOGY**

The data used in this study was gathered through a survey administered in the late spring/early summer, 1997 to a random sample of approximately 1,250 regular, full-time employees in a large, unionized, public utility company in the province of Ontario. While the restriction to a single pension plan limits the generalizability of this study, this concern needs to be balanced against the needs of pension research to develop new sources of data that provide stronger tests against plausible alternative explanations for pension incentives (Gustman, Mitchell and Steinmeier 1994).

Surveys were distributed through the company’s inter-office mail system to union members at their places of work. Data collection continued throughout the summer with two follow-up letters reminding individuals to complete and return the survey. In the end, 427 usable surveys were returned for a response rate of approximately 35%. This response rate is somewhat low and is most likely due to the long length of the questionnaire (12 pages), sensitive nature of some of the questions, and its distribution during summer months. While this low response rate limits the generalizability of our findings, this problem is mitigated somewhat by the fact that the characteristics of our achieved sample compare very favourably with the actual characteristics of the bargaining unit made available at the time of data collection.3

**Dependent Variables**

The two commitment components, affective commitment and continuance commitment, were measured using scales developed by Meyer and Allen (see Allen and Meyer 1990; Meyer and Allen 1984, 1991, 1997). The affective and continuance commitment scales each consisted of eight, self-report items. Respondents expressed their level of agreement or disagreement with the 16 items on 7-point scales, ranging in value from 1 = strongly disagree to 7 = strongly agree. The affective commitment scale included items such as “I really feel as if this organization’s problems are

3. For example, descriptive statistics provided by the union showing 19% of all bargaining unit members to be female and, on average, to be 41 years of age with 15 years of service, and earning $57,000 annually compare favourably with sample means for these variables found in Table 2.
my own” and “This organization has a great deal of personal meaning for me,” whereas the continuance commitment scale included items such as “I feel that I have too few options to consider leaving this organization” and “It would be very hard for me to leave this organization right now, even if I wanted to.” Item responses were averaged to produce a score for both scales. The reliability (coefficient alpha) of the affective and continuance commitment scales was .81 and .76, respectively.

**Independent Variables**

**Pension Accruals.** Pension accruals are defined as the present value of the difference in maximum pension payments if one were to terminate immediately rather than one year later. The measure used is similar to the option value concept developed in the work of Lazear and Moore (1988) and Stock and Wise (1990) in that a worker who quits or is discharged loses the option of working and, consequently, accruing additional pension benefits. Generally, pension accruals steadily rise over an employee’s career and then typically turn negative after the date at which the employee becomes eligible for an unreduced pension. Positive accruals indicate that leaving immediately will be more costly in terms of forgone pension wealth than if one terminated a year later. Accrual values near zero indicate that if one left immediately or in one year, the cost in terms of forgone pension wealth would be negligible. A negative accrual value indicates that leaving in one year will incur a greater cost in terms of foregone pension wealth than if one terminated immediately. The transition in later life from positive to negative pension accrual reflects the fact that the gain in wealth from working an additional year and acquiring entitlement to a higher nominal pension (due to the additional year of service and salary increment) is eventually offset by the loss in wealth caused by the shorter time period over which the pension will actually be received.

Pension accruals in this study were calculated in the context of a plan that provided a pension payable as early as age 55. The benefit received was based on a varying percentage of employees’ highest three consecutive years of salary multiplied by their years of contributory service under the plan. Annual benefits receive a guaranteed annual increase equal to three-quarters of the previous year’s increase in the consumer price index. In constructing the pension accrual measure, certain assumptions were made: inflation and nominal interest rates were assumed to grow at annual rates of 3% and 8%, respectively, and date of death varied by current age. On average, working the current year meant gaining entitlement to wealth representing 10% of current annual salary. As outlined in Table 1 earlier, pension accruals will be related to organizational commitment depending on the particular pension model being considered.
Alternative Workplace Practices. Following the recommendations of previous pension researchers (see Gustman, Mitchell and Steinmeier 1994), we attempt to control for the role of alternative workplace practices that may also have the effect of encouraging long-term employment relations. The alternative practices examined include: specific training, seniority, wage premia, labour market sorting, job satisfaction, labour-management relations, and perceptions about the effectiveness of alternative dispute resolution methods. Generally, practices that increase employee’s feelings of attachment to and identification with the firm are expected to be positively related to affective commitment, while those that increase the perceived costs of leaving the organization are expected to be positively related to continuance commitment perceptions.

Investments in training specific to the organization can be made more efficiently under long-term employment contracts because of the longer time to amortize the quasi-fixed costs and realize the benefits of such training. Since the returns to specific training can only generally be captured through continued employment, specific training should increase continuance commitment to the organization. Specific training may also increase affective commitment to the extent that it helps employees perform new skills or refine existing ones (Trott 1997), thereby strengthening feelings of competence and security in the organization. Specific training was measured by a question that asked respondents how much they agreed with the statement that the employer-sponsored education, training and development they received over the past 3 years would not be very useful outside the organization. Responses were measured on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree.

Seniority in the organization is measured by years of continuous employment in the organization. On average, respondents had 15 years of service. In the collective agreement governing the respondents of this study, seniority was tied, among other things, to wage increases, work assignments (layoff, recall and promotions), vacations, and to the continuation of certain benefits after termination such as supplemental health and dental benefits. The general non-portability of seniority-based benefits between jobs should lead to higher levels of continuance commitment (Wahn 1998). Seniority may also increase affective commitment to the extent that it reflects greater firm-specific experience to do the job, thus adding to employment security and reinforcing the long-term employment contract.

Paying wages above competitive levels can generate affective commitment to the extent that such wages are tied to employee inputs into the job. Such wages should also increase continuance commitment, as employees will not want to forego their wage premiums by terminating employment. Wage premia was measured by a question asking respondents
to indicate how much better they believed the wages of other comparable employees were relative to their own. Measurement was on a 7-point scale ranging from 1 = much worse to 7 = much better. Scores were reverse coded so that higher wage premia values represent the extent that employees feel their own wages are better than those paid in their next best labour market alternative.

People who knowingly gravitate to jobs that suit their preferences for long-term reward structures have more realistic expectations that are less likely to be violated. Such people are likely to have higher levels of both affective and continuance commitment. This preference is measured by a 3-item scale that asked respondents to think back when they were first hired and indicate the extent that they “were attracted to the organization in hopes of a stable, long-term job,” “accepted the job knowing that a long-term relationship was expected and would be rewarded” and “had a good understanding of terms and conditions of employment, including the pension plan.” Measurement was on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree. Coefficient alpha reliability for this scale was .72.

Job satisfaction is a well-established predictor of affective commitment (Baird, Zelin and Marxen 1998; O’Driscoll and Randall 1999) with more satisfied employees likely viewing their work settings as more attractive places to perform their jobs. More satisfied employees might also find it more personally costly to leave the organization, leading to higher levels of continuance commitment. Job satisfaction was measured by a global item that asked respondents how satisfied they were with the overall job. Responses were measured on a 7-point scale ranging from 1 = very dissatisfied to 7 = very satisfied.

We are able to examine how labour-management relations may influence long-term employment contracts by examining the commitment perceptions of union stewards. The role of the steward is particularly important given recent evidence that commitment to both the union and organization significantly predict organizational productivity (Kunze 1997). Under conditions of strained labour-management relations, stewards may have to place relatively greater emphasis on the concerns of the union membership over the employer so that they are likely to have lower levels of affective commitment (Orpen 1998). Given their greater expertise about job rights, union representatives should know more about their pensions and other HR programs and so may be more cognizant of the costs associated with their leaving the organization. The union steward variable is measured dichotomously (1 = union steward; 0 = otherwise). Stewards represented approximately 17% of the sample.
Employee perceptions about the effectiveness of alternative methods available for resolving disputes at work are likely to influence commitment to the organization. We are able to measure perceptions of four dispute resolution alternatives: exit; voice; reduced effort; and trust in management. Employees who believe exit from the organization or retaliatory actions such as reduced effort are effective likely experience little recognition in the organization and perceive little influence over decision-making, thus leading to lower levels of affective commitment. To the extent these same persons have little to lose from an organization that does not value their inputs, they may have lower continuance commitment perceptions as well. For the opposite reasons, employees who believe speaking up and/or waiting patiently for a problem to get resolved are likely to be more affectively and less continuously committed. These four perceptions were measured by a question that asked respondents to rate the effectiveness of a list of alternative methods for resolving a problem at work. Two and three items were used to measure exit (quit and work for another employer; threaten to quit) and reduced work effort (lower inputs, not do extra things; do something extreme like go on strike), while one item was used for each of voice (voice your concerns) and trust in management (wait quietly, patiently for things to change). Measurement was on a 7-point scale ranging from 1 = highly ineffective to 7 = highly effective.

Other Variables. Three demographic variables are included in the model. Years of age has been examined in previous commitment studies with mixed results (see Meyer and Allen 1997). Age may vary positively with continuance commitment because of the higher costs of mobility among older workers. Age may be positively related to affective commitment as those closest to retirement likely value their increasing retirement security most. Alternatively, if older workers are vulnerable to layoff and job loss then they will be less affectively committed. The average respondent was approximately 42 years of age. Females are not expected to be any more or less committed to the organization than males since we control for many of the factors affecting commitment that would otherwise be correlated with gender (Lee and Fahr 1999; Ngo and Tsang 1998). Approximately 19% of the sample was female. Persons in poorer health may be more or less affectively committed to the organization depending on the accommodations made for them for their disabilities. If such persons are targets for layoff, however, a negative relationship would be expected. Because those in poor health are likely less mobile, they will tend to be more continuance committed to the organization, particularly in large organizations where opportunities for modified duties to accommodate workplace disabilities are likely to be more plentiful. Health status was measured by a 3-item scale that asked respondents how strongly they agreed with statements about the state of their general health such as “compared
to other people my age, my health is a little better.” Measurement was on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree. Coefficient alpha reliability for this scale was .70.

Spousal characteristics have been found related to commitment perceptions (Abdullah and Shaw 1999). Married persons and those with dependants may be less affectively committed because spousal and dependent relationships may limit the extent of involvement people are willing to make in their work environment. These same variables may lead to higher levels of continuance commitment because of the higher adjustment costs married persons or persons with dependants face when deciding to change jobs. Marital status is measured dichotomously (1 = married; 0 = otherwise), as is dependent status (1 = has dependants; 0 = otherwise). Approximately 86% of the sample was married and 76% had one or more dependants.

Among job characteristics, employees with more years of schooling may have greater opportunities for challenging and rewarding tasks, as well as greater within firm mobility in cases of organizational restructuring leading to higher levels of affective commitment. Higher education has been found related to lower continuance commitment (Wahn 1998), presumably because the returns to education are not generally confined to a specific organization. Our education measure reflects the number of years of formal schooling received by respondents. If salaries equitably reflect employee inputs into the job, then they should be positively related to affective commitment. If higher salaries are foregone through termination they should be positively related to continuance commitment. Employees’ annual salary is calculated from weekly salaries assuming a 52-week, work-year. Finally, previous research has found an association between affective commitment and occupation (Meyer and Allen 1997), presumably because those in different occupations may experience greater opportunities for job challenge. The higher status accompanying such positions may also make job changing more personally costly thus leading to higher levels of continuance commitment. Five occupational dummy variables are included in the model to control for these factors. In a similar vein, two work location variables are used to control for geographic sources of variation in the dependent variables.

**FINDINGS**

The final specification of a reduced form OLS equation in which affective and continuance commitment are regressed on the various independent variables is found in Table 2. The table shows the mean of each independent variable, as well as the unstandardized regression coefficients and t-statistics for each equation. We estimate the unique effects of each
independent variable, holding all others constant, because pension accrual and alternative workplace practices are potential substitutes for each other. Also, our accrual measure is calculated, and hence determined simultaneously with other independent variables in the equation (e.g., age, seniority, earnings, gender-specific life expectancy).

### TABLE 2

**OLS Regression of Affective and Continuance Commitment**  
(N = 427)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Affective</th>
<th>Continuance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Coeff. T-Stat</td>
</tr>
<tr>
<td>Affective Commitment</td>
<td>3.85</td>
<td></td>
</tr>
<tr>
<td>Continuance Commitment</td>
<td>5.25</td>
<td></td>
</tr>
<tr>
<td>Pension Accrual</td>
<td>0.10</td>
<td>-0.37 -2.01**</td>
</tr>
<tr>
<td>Specific Training</td>
<td>3.68</td>
<td>-0.05 -1.72*</td>
</tr>
<tr>
<td>Seniority</td>
<td>15.08</td>
<td>0.00 0.06</td>
</tr>
<tr>
<td>Wage Premia</td>
<td>4.42</td>
<td>0.09 2.38**</td>
</tr>
<tr>
<td>Labour Market Sorting</td>
<td>5.89</td>
<td>0.15 3.39***</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>4.78</td>
<td>0.24 6.10***</td>
</tr>
<tr>
<td>Union Steward</td>
<td>0.17</td>
<td>-0.31 -2.16**</td>
</tr>
<tr>
<td>Exit</td>
<td>1.68</td>
<td>-0.11 -2.16**</td>
</tr>
<tr>
<td>Voice</td>
<td>5.09</td>
<td>0.06 2.08**</td>
</tr>
<tr>
<td>Reduced Effort</td>
<td>3.01</td>
<td>-0.25 -4.70***</td>
</tr>
<tr>
<td>Trust in Management</td>
<td>2.45</td>
<td>0.06 1.63</td>
</tr>
<tr>
<td>Age</td>
<td>41.60</td>
<td>0.01 1.06</td>
</tr>
<tr>
<td>Female</td>
<td>0.19</td>
<td>0.22 1.09</td>
</tr>
<tr>
<td>Health Status</td>
<td>5.13</td>
<td>0.01 0.13</td>
</tr>
<tr>
<td>Marital Status</td>
<td>0.86</td>
<td>-0.10 -0.65</td>
</tr>
<tr>
<td>Dependent Status</td>
<td>0.76</td>
<td>-0.14 -1.06</td>
</tr>
<tr>
<td>Years Education</td>
<td>13.49</td>
<td>0.02 0.38</td>
</tr>
<tr>
<td>Annual Salary (’000)</td>
<td>53.09</td>
<td>0.01 1.07</td>
</tr>
<tr>
<td>[Operator]</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>Other Trade</td>
<td>0.10</td>
<td>0.05 0.20</td>
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<tr>
<td>Maintainer Trade</td>
<td>0.25</td>
<td>-0.12 -0.68</td>
</tr>
<tr>
<td>Civil Trade</td>
<td>0.08</td>
<td>-0.01 -0.05</td>
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<tr>
<td>Clerical</td>
<td>0.16</td>
<td>0.10 0.34</td>
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<tr>
<td>Technical</td>
<td>0.26</td>
<td>-0.15 -0.84</td>
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<td>[Nuclear]</td>
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<tr>
<td>Regional Office</td>
<td>0.37</td>
<td>-0.14 -1.21</td>
</tr>
<tr>
<td>Head Office</td>
<td>0.14</td>
<td>0.16 0.93</td>
</tr>
<tr>
<td>Constant</td>
<td>1.10</td>
<td>1.08 6.32</td>
</tr>
<tr>
<td>R-Square</td>
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<td></td>
</tr>
<tr>
<td>F-Stat</td>
<td>7.99***</td>
<td>4.26***</td>
</tr>
</tbody>
</table>

p < .10 *, p < .05 **, p < .01***; omitted reference category in square brackets.
Regression imputation procedures were used to estimate missing values for the few cases that had missing information on some of the independent variables. No variable under consideration had any more than 5 missing values and there was no evidence of systematic variation between respondents with and without complete survey responses. Multi-collinearity is not an issue amongst the variables with the worst offending variable pairs being age and seniority (r = .59), female and annual salary (r = -.60), female and clerical (r = .73), and clerical and annual salary (r = -.66).\(^4\)

For our main independent variable, pension accrual, the significant negative and positive coefficients in the affective and continuance commitment regressions confirm that those with higher pension accruals are committed to the organization not because of a felt sense of attachment and identity but rather because of the high perceived costs of leaving at this point in their careers. Generally, these results are most consistent with the union preferences model under conditions of strained labour-management relations, however, the positive continuance commitment findings are also consistent with the retirement insurance and implicit contracting theses.

Variables tapping alternative workplace practices for influencing organizational commitment had some measure of influence on the dependent variables. Specific training increased continuance commitment, a finding likely related to the fact that the returns to such training can only generally be realized through continued employment in the organization. Specific training was also significantly related to affective commitment, however, the direction of the coefficient is unexpectedly negative. This unexpected result may reflect the fact that little training has recently been occurring in this organization and thereby has had a minimal impact on job specific knowledge, skills and abilities.

Seniority was positively related to both affective and continuance commitment. However, only the latter was significant at conventional levels. The continuance commitment effect is consistent with prior research (Meyer and Allen 1997) while the affective commitment effect represents the potential for deferred compensation schemes to work by tying employment security and continued receipt of other benefits to length of tenure in the organization. Wage premia can have a similar effect as evidenced by the positive coefficients for both the affective and continuance commitment equations.

The two positive labour market sorting coefficients suggest that part of the final-earnings plan’s incentives operate through the sorting of “job

\(^4\) A zero-order correlation matrix of the independent variables is available from the authors upon request.
stayers” into long-term employment contracts. This is an indirect route by which pensions may elicit the more desirable, affective form of commitment to the organization.

Consistent with previous research, job satisfaction had a robust, positive relationship with affective commitment but was not significantly related to continuance commitment (Meyer and Allen 1997), highlighting the importance of an attractive work setting in which to incur the risks of a long-term employment contract. Union stewards were significantly less likely to be affectively committed to the organization suggesting the importance of the labour relations function for encouraging appropriate attitudes and behaviour at work. Finally, perceptions of the effectiveness of alternative dispute resolution mechanisms had an important influence over commitment perceptions with 5 of the 8 coefficients being statistically significant at p < .10 and all 8 coefficients being in the direction hypothesized.

Among the remaining independent variables, age and female were insignificant in both equations, which is in keeping with previous reviews of the commitment literature (Meyer and Allen 1997). Better health was not significantly related to affective commitment but reduced continuance commitment, which likely reflects the broader set of opportunities available to healthy individuals to find suitable, alternative employment. Surprisingly, married persons were less continuance committed, which stands at odds with the higher adjustment costs married persons face when considering a job change. Finally, annual salary was positively and negatively related to affective and continuance commitment respectively, but only the latter effect was robust for the population. Higher income earners may have more marketable skills that reduce their dependence on a single employer.

**DISCUSSION**

Bearing in mind the limits on the generalizability of our findings, particularly the singular organizational context in which labour-management relations are strained, our results have implications for alternative perspectives on occupational pension plans and sources of integration between them.

Our findings are least supportive of the retirement savings and opportunism theses. The lack of support for the retirement savings model is perhaps not surprising given the growing amount of evidence that defined benefit pensions are connected with a myriad of labour market outcomes such as work effort, turnover and retirement. The lack of support for this model does not mean that final-earnings pensions do not serve a savings function, only that their function is broader than the simple savings role
that this model suggests. Our findings largely refute the opportunism model, which is perhaps not surprising in light of the difficulties of maintaining worker ignorance and engaging in acts of arbitrary exploitation, particularly in a unionized environment where due process guarantees are stronger. This does not mean that employer or union opportunism is an irrelevant concern, only that long-term contracts may be able to structure pensions and job rights to limit opportunities for such opportunism to occur.

Both the implicit contract and retirement insurance models received only partial support. While both of these models accurately predicted the positive continuance commitment relationship with pension accruals, neither could explain the negative relationship with affective commitment. This limited support does not question the fact that final-earnings pensions can act as personnel tools for employers, but it does suggest a potentially more restrictive range of employee behaviours that the pension can influence. In particular, while the pattern of pension accrual over an employee’s career is likely to ensure that turnover does not occur too early or late, and that job threatening behaviours such as shirking will be less common, it may also mean that job stayers are only motivated to perform at average or minimally required levels. Indeed, the lower affective commitment generated by rising pension accruals may potentially be associated with lower overall levels of performance. This follows from recent research linking lower levels of affective commitment with reductions in various extra-role, citizenship and contextual activities (e.g., working with enthusiasm, persisting at difficult tasks, helping and cooperating with others, supporting and defending the organization) (see Borman and Motowidlo 1993; Organ and Ryan 1995; Organ and Paine 1999), all of which may be important predictors of overall levels of performance (Van Scotter and Motowidlo 1996).

While our findings do not refute the potential for the final earnings plan to play an insurance role for employees, they do call into question the assumption of the employer acting as a neutral agent out of benevolence for the employees. A fuller test of the retirement insurance thesis will need to reconsider the incentives for employers to insure employees in this way and what may be expected to happen when the employer is perceived to have violated employee expectations regarding the pension contract.

Recognizing our inability to test fully the union preferences model, our results are most (but not fully) consistent with this perspective. The negative affective commitment result is perhaps not surprising given that employee and labour relations have soured in this organization over the 1990s, in part due to employer attempts to take pension contribution holidays, claim pension surplus, and declare certain classes of employees redundant. Employees for whom exit is not a reasonable option may have
little opportunity to vent their frustrations other than by way of psychologically and behaviourally detaching from their work roles and employer. Notwithstanding this partial support, however, this model has problems that limit its predictive validity generally, and its relevance to the immediate work setting, in particular. For example, this model cannot explain the presence of pensions outside of the union sector despite the fact that non-union pensions increase in prominence as union density in North America continues to decline. Further, the pension plan in this study was established well before the employees in question had the right to engage in collective bargaining with their employer. Thus, contrary to conventional views that unions help establish pension plans (e.g., by sponsoring multi-employer plans in high turnover industries), it is equally plausible that they emerge to protect workers’ interests after a pension plan has been established.

Taken together, our results suggest that rather than serving any single function, the pension contract is more likely defined by numerous stakeholder conceptions, which hold the potential for eliciting desirable or undesirable outcomes depending upon asymmetries in information and differences in market power between the stakeholders. Under conditions of stable economic growth, each of the stakeholders is likely to have their goals met through the pension contract and any competing views they may have about its role and functions are likely to remain latent. When economic conditions de-stabilize, however, these differences will surface as the stakeholders attempt to adjust the pension contract to their new economic realities. It is at this point that an issue such as “ownership of the pension surplus” can become an important source of conflict as employees’ desires for using it as a pool of savings or as an insurance fund will compete with the firms interest in using it to help contain its costs. This view is consistent with the history of the current organization. It is also consistent with the experience of the pension industry in Canada in the 1980s, which was characterized by significant debate and legal battles over the appropriate uses of pension surpluses and opportunities to take contribution holidays in the midst of the turbulent economic environment of that decade.

Future research needs to examine employees’ commitment perceptions across a broader range of organizational contexts to determine whether the negative effects of pension accruals on affective commitment found in this study are particular to all final earnings plans or only those under conditions of strained labour-management relations. Future research also needs to verify relations between pension characteristics, organizational commitment, and both the technical (job-specific) and contextual aspects of job performance (cf. Borman and Motowidlo 1993). In the present context, employees may view wage premia but not deferred pay as more
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distributively fair and consistent with their expectations and needs because they cannot count on a long-term career and pay-off with the organization. This may be particularly so if wage premiums are most prevalent earlier in life when pension accruals are low and employees are not likely to have reached the top of their job ladders. A likely important ingredient to the development of an effectively functioning pension contract may be high mutual obligations between the parties about each other’s roles and responsibilities (Shore and Barksdale 1998). Absent this condition, compensation arrangements that tie employees into the organization without appropriate provision for their needs for growth, security and recognition are likely to lead to counter-productive attitudes with detrimental consequences for employee performance. Future research should also examine how pension accruals vary with union commitment. This will provide a stronger basis for differentiating between the union preferences and opportunism theses.

CONCLUSIONS

Using a unique data set that links pension incentives to individual employee’s commitment perceptions, we find that as pension accruals increase, affective commitment declines and continuance commitment increases. Organizational commitment also varies by other HR practices, as well as by the personal circumstances of employees. Our results are significant for a number of reasons. First, they suggest no unanimously shared view by the pension stakeholders about the functions served by the final-earnings pension contract. Second, our results suggest a limit to the performance enhancing features of such pensions, at least through the commitment mechanism, which helps to understand the inability of previous research to establish a strong relationship between pensions and firm performance (Allen 1981; Allen and Clark 1987). Lower labour costs under the pension contract achieved through the regulation of turnover and retirement may be offset by lower levels of employee performance and citizenship behaviour among the same group of job stayers. Finally, the personnel goals served by long-term employment relationships are more likely to be accomplished where the firm implements an integrated set of HR practices.

REFERENCES


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**RÉSUMÉ**

Quel type d’engagement peut générer un régime de retraite selon les gains terminaux ?

La forme la plus commune de régime de retraite professionnel, le régime selon les gains terminaux, fournit des prestations de retraite basées sur une formule qui multiplie le salaire gagné au moment de la retraite par les années de service accumulées et une constante. Dans ce type de régime, le gain anticipé de l’augmentation des prestations en demeurant dans l’entreprise, ou encore les pertes prévisibles en n’y demeurant pas, s’intensifie durant la carrière de l’employé, atteignant son niveau maximum durant l’année où l’employé devient éligible à une pleine pension et diminue par la suite selon une pente négative. Plusieurs recherches empiriques s’attardent à comprendre pourquoi les régimes de retraite selon les gains terminaux sont structurés de cette façon, néanmoins, plusieurs questions significatives à propos de ces structures demeurent sans réponse. En particulier, les implications les plus cruciales de ce type de régime, à savoir si les employés désirent s’engager à long terme dans l’organisation et dans quelle mesure ils veulent le faire, sont encore très peu explorées.

La littérature concernant les régimes de retraite n’a jamais permis d’évaluer les formes d’engagement qu’ils peuvent générer. Il faut donc pousser plus loin la réflexion à ce sujet puisqu’une quantité substantielle de recherches concernant les comportements organisationnels soutiennent que l’engagement n’est pas un construit monolithique et que la nature de l’engagement des employés influence les résultats organisationnels. Bien
qu’il existe plusieurs définitions de l’engagement dans la littérature sur les comportements organisationnels, deux dimensions de l’engagement se dégagent. Le premier type, l’engagement affectif, réfère à l’attachement émotionnel de l’individu, à son identification aux buts et aux valeurs de l’organisation de même qu’à son degré d’implication. Le second type, l’engagement rationnel, réfère davantage à l’évaluation par l’employé des coûts et des bénéfices associés au fait de quitter ou de demeurer dans l’organisation. Il est important de distinguer ces deux types d’engagement puisqu’il a été démontré que l’engagement affectif est associé positivement au rendement au travail, aux comportements d’assiduité et de citoyenneté organisationnelle, tandis que l’engagement rationnel est négativement ou faiblement associé à ces mêmes critères.

Cette étude vise à comprendre comment l’augmentation des prestations sous un régime de retraite selon les gains terminaux peut influencer l’engagement affectif et l’engagement rationnel. Différents modèles présentant le rôle et les fonctions de ce type de régime guideront l’analyse et serviront de base pour la formulation des hypothèses concernant l’influence potentielle des prestations de retraite sur l’engagement du travailleur. Par exemple, si le régime de retraite ne représente qu’une façon d’économiser en vue de la retraite et que ces économies ne sont pas affectées par les particularités du régime, il ne devrait donc y avoir aucune relation entre l’augmentation des prestations attendue et l’engagement organisationnel. De même, si le régime de retraite assume uniquement une fonction d’assurance, l’augmentation des prestations devrait être positivement associée à l’engagement affectif et à l’engagement rationnel parce que les employés vont s’identifier davantage à leur employeur et l’augmentation de leur sécurité d’emploi et de leur caisse de retraite sera grandement appréciée. De plus, si le régime de retraite constitue une priorité syndicale et que les relations du travail sont tendues au sein de l’organisation, l’augmentation des prestations de retraite devrait être négativement et positivement liée aux deux types d’engagement. Aussi, si le régime de retraite est une composante clé d’un contrat implicite, alors il ne devrait y avoir aucune relation entre l’augmentation des prestations de retraite et l’engagement affectif, mais une relation positive avec l’engagement rationnel. Cette relation s’explique par la conception du lien d’emploi comme un échange non émotif et purement économique. Finalement, si les employeurs utilisent ce type de régime de façon opportuniste pour récompenser les meilleurs employés au profit des salariés des statuts inférieurs, alors il ne devrait y avoir aucune relation pour cette dernière catégorie de travailleurs entre l’augmentation des prestations de retraite et les deux types d’engagement, puisque seule l’élite est tenue au courant des incitatifs du régime.

Notre analyse est basée sur des données recueillies par une enquête administrée en 1997 à un échantillon aléatoire d’environ 1 250 employés

Nos résultats sont partiellement compatibles avec plusieurs modèles de régimes de retraite, mais ils ne sont pas entièrement compatibles avec aucun modèle. En gardant à l’esprit les limites de la généralisation de nos résultats, en particulier le contexte spécifique dans lequel les relations du travail sont tendues, nous suggérerons que plutôt que d’exercer une seule fonction, le contrat de retraite est probablement défini par les nombreuses conceptions des dépositaires qui peuvent provoquer des résultats désirables ou non selon les asymétries contenues dans l’information qui circule et de l’emprise que chacun des dépositaires possède sur le marché. Cela suggère une limite aux performances du régime de retraite selon les gains terminaux, du moins à travers le mécanisme d’engagement, et aide à expliquer l’incapacité des recherches précédentes à établir un lien fort, s’il en existe un, entre les régimes de retraite et la performance organisationnelle. Des coûts de main-d’œuvre moins élevés, obtenus par la diminution du roulement du personnel et par le régime de retraite, peuvent être neutralisés par des niveaux moins élevés de rendement des employés et de comportement de citoyenneté parmi ceux qui demeurent dans l’organisation.