

How Participating in a Stock Ownership Plan Affects Employee Absenteeism in Canada

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Introduction

Absenteeism in the workplace can be a serious problem for companies because it often involves high and unsuspected social and monetary costs. Absenteeism not only results in direct costs for the firm but may also trigger other negative effects such as slower production, accumulation of work, additional pressure on other workers, higher risk of accidents, schedule delays and inferior quality (Drapeau, 1988; Peel and Wilson, 1990). Even a slight reduction in absenteeism can generate substantial savings (Gesine, 1992).

For companies seeking a wise solution to the problem of absenteeism, the research is contradictory and confusing. The literature mentions a number of ways to counter the problem, including disciplinary measures, job enrichment, reorganization of work and stock ownership. The goal of this research is to see whether stock ownership plans¹ have an impact on absenteeism. A review of the literature shows that few researchers have focused on the direct relationship between stock ownership and workplace absenteeism (Aitken, 1989; Rhodes and Steer, 1981; Peel and Wilson, 1990; Rooney, 1995). Most researchers have concentrated on stock ownership and its effects on attitudes, for example loyalty (Courret, 1990), and how these attitudes affect absenteeism (Hammer et al., 1980). If the absenteeism level is a consequence of the level of loyalty and this attitude stems partly from stock ownership, absenteeism levels should be lower in employees who own stock, compared with those who do not. This study examines how effective stock ownership is in counteracting workplace absenteeism. The question we answer is this: Do stock ownership plans have an impact on the absenteeism levels of participants?

Definitions and Theoretical Framework

Definition of Absenteeism

Workplace absenteeism is the absence of an employee from their workplace. Not all absence is regarded as absenteeism; it depends on how it is defined.

There are various conceptions and definitions of the phenomenon of workplace absenteeism. The notion of absenteeism varies according to the philosophy of company directors (Rocheleau and Renaud, 2003). We reviewed the literature on definitions of absenteeism and found that absences are generally grouped into 2 main categories: unforeseen absences and planned, legislated or group absences. Unforeseen absences may be of 2 types: absence for

¹ An organizational arrangement whereby a significant percentage of the personnel working at the organization has the opportunity to acquire rights over the organization's capital stock (Pierce, 1991).

no reason (unjustified) or for a reason (justified). Absences for a reason can also be divided into 2 categories: absences due to illness or disability, and absences due to personal or family obligations (Statistic Canada, 1995).

For the purposes of this research, we concentrated on controllable absences, i.e. voluntary absences lasting at least 3 days, in order to ascertain the level of absenteeism due to dissatisfaction, lack of motivation or lack of commitment to the company. Absence for occasional illness lasting up to 3 days was also included in our data on voluntary absence, because when absence is voluntary, it is usually due to illness or personal obligations. A major portion of these absences can therefore be reduced. Other types of absence lasting more than 3 days were not examined because their incidence is not easily controllable and they are not due to employee dissatisfaction, i.e. absence due to short-term disability, long-term disability, gradual return to work, criminal act, road accident, armed robbery, workplace accident, maternity leave, child care (following birth or adoption), short- or long-term family obligation, preventive leave for pregnancy, full time studies, leave for summer period or a surgery.

Definition of Stock Ownership

The participation of salaried employees in a stock ownership plan is defined as "an organizational arrangement whereby a significant percentage of the personnel working at the organization has the opportunity to acquire rights over the organization's capital stock (*l'Institut de recherche et d'information sur la rémunération*, 1996)." Stock ownership is more than just being interested in the company's performance because it links the employee to the fate of their employer, with the risks and consequences for their status (Courret et al., 1990). Stock ownership should comprise 3 fundamental rights: the right to ownership of a material object or a financial security; the right to be informed about the situation of what is owned, and the right to exercise influence over the object owned. However, the last 2 aspects are not always present (Pierce et al., 1990).

There are various forms of stock participation. Unfortunately, researchers have often overlooked this aspect. Before comparing and generalizing about the impacts of stock ownership, it is important to take into account the different types and characteristics that may be involved. Generally, there are 4 types of plans: 1) stock purchase plans, 2) stock option plans, 3) stock option grants, 4) cooperative plans.

Impact of Stock Ownership on Absenteeism

Companies have various reasons for introducing a stock ownership plan. These incentives can be classified in terms of 2 dimensions: effects on employee attitudes and behaviours, and effects on the organization. However, this research is not intended to be an exhaustive study of all possible impacts of a stock ownership plan; it sets out to examine how this plan affects absenteeism.

The following section presents a review of the literature on stock ownership and its effects on absenteeism, to broaden our perspective for analyzing the subject. The views of different authors

are examined, to see how they relate to each other (convergences, divergences, complementarity).

These variables have been largely ignored by researchers. Existing studies do not provide a really solid basis for concluding that participation in shareholding can contain absenteeism. The little information there is seems to be compartmented. However, a number of researchers have looked at the relationship between stock ownership and attitudes, and between attitudes and absenteeism. In the light of these findings, we infer that stock ownership can reduce absenteeism by affecting the attitude of employees.

Direct empirical support for this view was found in certain research studies from the United States, which show that absenteeism declines when a stock ownership plan is introduced. Marsh and McAllister (1981) studied managers at 229 companies. In many cases, stock ownership plans were found to reduce absenteeism.

Peel and Wilson (1990) surveyed 49 companies in the metal industry, each with 50 to 3,000 employees. They concluded that stock ownership plans were major predictors with a strong negative influence on absenteeism. Firms that adopted these plans saw absenteeism decline by some 11%, compared with similar firms without them.

Rhodes and Steer (1981) compared producers at a cooperative and a conventional firm and reached unexpected conclusions. Cooperative members were more engaged in their organization than employees at conventional firms, thanks to greater participation in decision making and a greater sense of justice regarding distribution of profit. But surprisingly, these cooperatives experienced a higher level of absenteeism and lateness than among employees of conventional firms. However, these discrepancies appear to relate more to a difference in absence control policies than in attitudes.

Other authors have focused on the impact of stock ownership on the attitudes of employees with shares. Employees see a number of advantages in joining a stock option plan. They include the possibility of increased income, advancement, benefitting from various tax advantages (Therrien, 1993), taking part in decisions (Long et al., 1987), individualizing their salary and improving their quality of life (Hammer et al., 1980; Hochner et al. 1985). According to many studies, these stock ownership-related advantages influence employee attitudes and modulate certain employee behaviours.

As regards to employee attitudes, surveys show that owning shares triggers a stronger sense of employee identification (Cable, 1980, Richardson et al., 1986), ownership (Tuckner, Nock and Toscano, 1989), corporate spirit, loyalty (Courlet, 1990), commitment, stability towards the company (Long et al., 1987), and psychological and financial motivation (Peel and Wilson, 1990), and also boosts morale (Marsh and McAllister, 1981).

In conclusion, stock ownership tends to be valued by employees and employers alike because of its various advantages and effects on attitudes and behaviours. Sixty-seven per cent of workers would apparently prefer to work for employers who promote profit-sharing (Long et al., 1987).

Based on our review of the literature, we postulate that stock ownership can reduce employee absenteeism because it has been shown to have a beneficial effect on various employee attitudes and behaviours. However, there are other factors affecting absenteeism that have to be kept constant in order for the genuine impact of stock ownership on absenteeism to be measured.

Other Factors Explaining Absenteeism

There are a number of other explanations for absenteeism. We list the most commonly cited. Most authors divide these factors into categories. Category names vary slightly from one study to another, but all the authors distinguish between individual and organizational factors. We separate the various factors into 2 categories: socio-demographic factors and job-related factors.² Table 1 shows the main findings of research into the impact on absenteeism of socio-demographic and job-related factors.

Table 1
Impacts of Other Factors Explaining Absenteeism

Variables	Impacts	Authors Selected
Socio-demographic Variables		
Age	Older workers are absent more	Rocheleau and Renaud, 2003; Hackett, 1990; Martocchio, 1989.
Gender	Women are absent more	Côté-Desbiolles, 1985; Hedges, 1977; Black, 1970.
Family responsibility	Employees with children are absent more	Rocheleau and Renaud, 2003; Côté-Desbiolles, 1985; Derry et al., 1995.
Health	Healthy employees are absent less	Rhodes and Steers, 1984.
Education	More educated employees are absent more	Rocheleau and Renaud, 2003; Thériault et al., 1985.
Job-Related Factors		
Employment status	Part-time employees are absent less	Rocheleau and Renaud, 2003; Thériault et al. 1985.
Hierarchic level	Entry-level employees are absent less	Hedges, 1977.
Seniority	Employees with least seniority are absent less	Côté-Desbiolles, 1985.

² Cyclical factors such as state of the economy, unemployment, etc. were not counted because the nature of our empirical data is not affected by this type of factor.

Theoretical Framework

There are various theoretical standpoints from which to view the link between stock ownership and absenteeism. They include the "economic man" theory, according to which high performance-related monetary rewards encourage individuals to work harder and more productively in order to maximize their income. The operant conditioning theory states that the incidence of expected behaviours should increase if employees are rewarded. Vroom's expectancy theory suggests that the decision to act in the interest of the company depends on the link employees perceive between their efforts, performance, rewards and the value they attribute to these rewards. Clearly, these theories all point in the same direction; however, for this study, we explain the link between stock ownership and absenteeism using the agency theory. This theory, rooted in neoclassical theories of organizational economy, focuses among others on the relationships between shareholders and workers. It can be summed up as a contract between 2 parties. The agency relationship represents a contract under which the principals (owners, shareholders in the organization) use the services of one or more agents (executives, salaried employees). The agents have to perform a task delegated by the principal.

However, this contract involves 2 major problems: 1) the agency issue, which presupposes a conflict of interest between principal and agent and the difficulty for the principal of verifying how the agent is actually behaving, and 2) risk sharing, which presupposes a difference in attitudes between the 2 parties with regard to risk. This theory is based on the principle that economic man's only desire is to maximize his own interests. The agency issue arises when the principal has trouble checking exactly how the agent behaves in terms of the assignment. For the principal, it is important to have information about the agent's performance because the 2 players' interests may be opposed. The principal's prime goal is maximum profit; the agent's goal is maximum remuneration. Faced with this apparent contradiction, principals have to ensure that agents acts in the firm's best interests; and to ensure this, they have to supervise or monitor their agents. There are 2 types of monitoring: direct supervision by executives or linking the agent's remuneration with the results of their performance.

Participation in stock ownership is related to the second type of control. This strategy has the effect of transferring the risk to the agent and raising their level of uncertainty about the compensation they will receive. Stock ownership is thus a way to create common objectives for the 2 conflicting parties and a type of control that encourages the worker to stay at work and furnish maximum effort in order to benefit from the results (Jensen and Meckling, 1976). The more impact the contract has on remuneration, the stronger the relationship between these 2 variables.

Research Hypothesis

Our review of the literature and the agency theory enables us to formulate the following general working hypothesis about the effect of stock ownership on absenteeism: *"Employees who own stock display less absenteeism than employees who do not own stock (agency theory)."*

Many other variables influence workplace absenteeism, as mentioned in our review of the literature. However, this is an exploratory study mainly designed to throw light on the possible

empirical link between stock ownership and absenteeism. For this reason, we simply keep these variables constant, without proposing specific hypotheses about their probable impact on employee absenteeism.

Methodology

The general working hypothesis set out above was verified using the employee database of a major Canadian bank with nearly 12,000 employees. This financial institution supplied us with data for 1996, taken from the records of 1,687 individuals; some owned stock, others did not, but all were employed by the bank at the end of 1996. The technique of probabilistic sampling was chosen (simple random sampling) to select individuals for the study, to ensure the sample was as representative as possible of the population's characteristics. This technique is really like a random draw and gives each person a known, equal and non-zero chance of being picked.

Table 2 sums up the definition of all the variables in the study, with the mean, minimum, maximum and standard deviation for each. The dependent variable, days of absence, corresponds with the number of days' voluntary absence or absence related to occasional illness during 1996. When absence was for the following reasons, it was excluded from our definition of absence: short-term disability, long-term disability, gradual return to work, criminal act, road accident, armed robbery, occupational accident, 35 weeks' maternity leave following childbirth or adoption, long-term family obligation (4 weeks to 1 year), preventive leave for pregnancy, full-time studies, summer period or surgery. The minimum number of absences in our sample was 0, and the maximum was 19 days during the year. Employees in our sample were absent on average for 2.14 days, with a standard deviation of 2.87 days.

The independent variable of the stock purchase plan enabled us to discriminate between employees who owned stock and those who did not. The bank gives all its employees the right to purchase bank shares at 75% of the market price, for up to 25% of their annual salary. The bank defrays the remaining 25% of the cost of the share. Employees have to keep shares purchased in this manner for at least a year before the portion defrayed by the bank becomes theirs. This stock ownership plan fits our definition of a share purchase plan. We measured stock ownership using a dichotomic variable to which we attributed the value "1" for people who owned stock and the value "0" for those who did not. Table 2 shows that 18% of the employees in our sample had acquired shares in the bank through the stock purchase plan. Essentially, we used the same explanatory factors for absenteeism reported in our review of the literature to isolate the impact of stock ownership on absenteeism. These variables are shown in Table 2.

Table 2
Definitions, Means, Minimum, Maximum and Standard Deviation
in Explanatory Factors for Workplace Absenteeism

Variables	N	Minimum	Maximum	Mean	Standard Deviation
Sociodemographic Variables					
Age of employee	1,687	21	64	40.91	7.80
Age squared	1,687	441	4,096	1,734.76	642.28
Women employees	1,687	0	1	0.82	0.38
Employees with one or more children	1,687	0	1	0.64	0.48
Educational level	1,687	1	5	1.77	1.15
Educational level squared	1,687	1	25	4.45	5.87
Job-Related Variables					
Part-Time employee	1,684	0	1	0.21	0.41
Executive employee	1,687	0	1	0.39	0.49
Senior auxiliary	1,687	0	1	0.17	0.37
Seniority in years	1,687	0.09	41.01	15.07	8.52
Seniority squared	1,687	0.01	1,681.82	299.64	298.70
Variables Related to Absenteeism					
Days absent in 1996	1,687	0	19	2.14	2.87
Variables Related to Stock Ownership					
Stock ownership participation in 1996	1,687	0	1	0.18	0.39

Presentation of Results and Discussion

To verify our general working hypothesis, we first performed an analysis of differences in means by pairs based on Student's test, between absenteeism levels in stockowners and that of non-stockowners. Student's test compares the difference in means between 2 groups. We compared the mean number of days' absence for people participating in the stock purchase plan compared with the mean number of days' absence for those not participating. We then used multiple regression based on the method of least squares, to isolate the effect of stock ownership on absenteeism. This procedure, also known as correspondence analysis or reciprocal averaging, reveals the links between many variables at the same time, and shows us the meaning of the relationship between each variable affecting absenteeism, and the strength of the relationship. We can use this technique of statistical analysis of data because workplace absenteeism,

measured in days, is measured using a continuous scale and its distribution is normal. This condition is one of the most important fundamental assumptions required for applying multiple regression based on the method of least squares (Norusis, 1988).

Table 3 presents the results of the comparison between stockholders and non-stockholders. To begin with, it appears that stock ownership has a significant link with absenteeism. Bank employees who were also stockholders were absent for 1.95 days, compared with 2.13 days for non-stockholders. This meant there was a difference of 0.18 days in favour of stockholders, a very significant deviation ($p < 0.01$), as indicated by Student's test. However, this analysis of mean differences does not take into account other factors affecting employee absenteeism levels. Therefore, we had to consider the multivariate analysis in order to isolate the specific impact of participation in the stock ownership plan on absenteeism.

Table 3
Student's Test of Means of Two Sets on
Absenteeism in Stockholders and
Non-Stockholders

Variables	Mean Days of Absence
Shareholders	1.95
Non-shareholders	2.13
Student's Test	27.50 ***
N	1,687

*, **, *** = to 0.1, 0.05 and 0.01 respectively for a unidimensional test.

We then performed regression analysis of the variable related to stock ownership and all the other controlled variables on absenteeism. Table 4 shows the regression coefficients of all these variables in the study. We standardized the coefficients of each variable in order to rank them in order of importance in the regression. This ranking is shown in brackets next to each of the significant regression coefficients. Our analysis model adapted well to the study data. Generally speaking, it explained more than 6% of the variation in absenteeism. Our model is highly significant, as indicated by Fisher's test ($p < 0.01$).

Table 4
Regression (Least Squares) of Absenteeism

Variables	Mean Days of Absence in 1996	Order of importance
Age	-0.199**	2
Age squared	0.002**	
Gender	0.504***	5
Child	0.223**	7
Education	-0.619**	3
Education squared	0.063	
Part-time	-0.630***	4
Executive	0.072	
Senior auxiliary	0.098	
Seniority	0.223***	1
Seniority squared	-0.006***	
Stock ownership participation	-0.330**	6
Constant	5.456***	
Adj. R ²	0.064***	
N	1,684	

*, **, *** = respectively significant to 0.1, 0.05 and 0.01

Our multivariate results also seem to confirm our hypothesis. When we controlled our socio-demographic factors and job-related factors, we found a negative relationship between participation in a stock ownership plan and the number of days employees are absent. Those taking part in the stock ownership plan were absent 1/3 of a day less in 1996 than employees not taking part. This negative relationship is statistically significant ($p < 0.05$).

Our multivariate results confirm that participation in the stock ownership plan is related to absenteeism. This in turn confirms our hypothesis based on the agency theory. Turning to authors dealing with this subject, we find that our results bear out those of Marsh and McAllister (1981), which show that stock ownership plans reduced manager absenteeism. Our results also correspond with those of Peel and Wilson (1990), who studied the metal industry and found that stock ownership plans had a strong negative influence on absenteeism. In that

particular case, the firms that adopted these plans had seen absenteeism rates fall by about 11%, compared with a similar company without this type of plan.

The results for absenteeism as regards other explanatory factors (socio-demographic and job related) are nearly all identical to those usually found in studies on this topic. They strengthen our confidence in the validity of the empirical link we found between stock ownership and absenteeism.

Conclusion

Our research question was as follows: "Does participation in a stock ownership plan have an effect on the absenteeism levels of participants?" Our working hypothesis was this: "Employees who own stock should display a lower level of absenteeism than employees who do not own stock (agency theory)."

Our sample consisted of 1,687 employees of a major Canadian bank. Of these employees, 18% were members of the stock purchase plan offered by their employer. The results of our analysis of mean differences and multiple regression confirm our working hypothesis that participation in the stock purchase plan reduces employee absenteeism.

Taking part in a stock ownership plan seems to have a beneficial effect on the rate of absenteeism among workers. This study gave us a clearer understanding of our subject. Examining the impact of stock ownership opens up major practical perspectives for human resource managers and companies as a whole. As we saw, a stock ownership plan can be immensely valuable to companies, because its effects on absenteeism may reflect a change in employee attitudes: closer identification with the company, a greater sense of ownership among employees, stronger corporate spirit, increased loyalty and higher motivation. In a world of incessant change, stock ownership may even make employees more receptive to the inevitable changes companies have to make in order to stay ahead of ever-growing competition.

Future research should focus on the impacts of other types of stock ownership on absenteeism, for example, stock purchase plans, stock option grants and cooperative plans. Moreover, this research could ascertain whether the number of shares held by employees has a differential impact on absenteeism levels. Last but not least, even a slight reduction in absenteeism will not only trim a company's direct costs but may also boost production rates, reduce surplus work, alleviate pressure on other workers, lower the risk of accidents, reduce the number of late deliveries and ensure superior quality.

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