

**Shared Capitalism and Individual Level Outcomes:
Long-term and Short-term Perspectives**

Kyongji Han

**Human Resource Department
School of Management and Labor Relations
Rutgers University**

ABSTRACT

This study aims to examine the mechanism of shared capitalism operation at the individual level. Building on both psychology and economic literatures, this study anticipates that shared capitalistic practices influence employees' feeling of ownership, which mediates the relationship between shared capitalism plans and employees' attitudes of job satisfaction and organizational commitment. Further, building on strategic HR theories, this study suggests that two groups of shared capitalism - short-term oriented shared capitalism and long-term oriented shared capitalism – influence on employees psychological ownership and attitudes either additively or by substituting for each other. Empirical findings support that psychological ownership mediates the positive relationships between the two types of shared capitalism and employees' attitudes. Also the current study proves that there are additive effects of the two types of shared capitalism on employees' psychological ownership, but there are substitution effects on employees' job satisfaction and organizational commitment. Further discussions and limitations are explained.

Keywords: short term oriented shared capitalism; long term oriented shared capitalism; psychological ownership; work attitudes; internal fit

INTRODUCTION

Directly involving employees in activities that contribute to organizational goals has been considered as increasingly important by both researchers and practitioners in the human resource management field. One theory is that collective incentives can be a way to facilitate employee participation that increases firms' performance. Collective incentives refer to a diverse set of compensation practices that tie employees' pay or wealth to the performance of firms or work groups. Employee stock ownership plans (ESOPs), employee stock purchase plans (ESPP), 401(K)'s holding company stock, profit sharing, gain sharing, and stock options are examples of shared capitalism practices. Among them, the present study focuses on profit sharing, gain sharing and employee ownership plans.

Profit sharing indicates that employees share in the profit of their firms. Such payments are usually given to employees annually. There can be various forms of profit sharing in how the profits are given to employees (e.g. deferred to retirement plan, given in company stocks, etc), but in the current study, profit sharing refers to all incentives that depend on company performance. *Gain sharing* compensates employees based on the performance of their work group rather than overall company-level performance. The *ESOP* is one type of employment ownership features which allows employees to have stock ownership of the company by being given stock in a retirement trust. Usually an ESOP company contributes stocks or funds to an ESOP trust to buy employees stocks. Employees can have an ownership stake without purchasing as the stocks in the trust are allocated to individual employees automatically (Freeman et al., 2010; Klein, 1987). An *ESPP* is a company-run program which allows employees to purchase their company's stocks at a discounted price. Employees save their wage into funds, which will be used for purchasing the company stocks. A *401(k)* is a retirement

saving plan which allows a worker to save some of his or her wages into his or her account for retirement. In most cases the employee has a choice of where his or her deferred wages are invested, and the choice can include company stock. Companies often match employee 401(k) contributions in full or in part, and the company match may also be put in company stock. *Stock options* are a “hybrid between profit sharing and employee ownership” (Freeman et al., 2010: 5). Employees with stock options have the right to buy stock at a particular price and then, they may benefit by selling the stocks at higher price than the price at the time of purchasing.

Generally, the studies on shared capitalism practices are conducted in one of two approaches: individual practices or indices. In the individual practice approach, only one form of shared capitalism has been investigated. For example, Klein (1987) and Rousseau and Shperling (2003) investigated ESOPs, Oyer and Schaefer (2005) tested stock options, and Kruse (1993) examined the effectiveness of profit sharing. An advantage of this approach is that the impact of that specific practice can be tested. However, as this approach does not take the complementary or substitutive effects of other shared capitalist practices into account, the ability to explain the mechanisms behind the operation of shared capitalism may be limited. On the other hand, the thermometer style index approach is employed for testing the collective effects of various shared capitalist practices. For example, Freeman, Kruse, and Blasi (2010) combined all shared capitalist practices into an index to test worker responses to shirking under shared capitalism. The collective effects of shared capitalism are explored but this approach does not explain the way in which the practices work together: they can operate in additive, substitutive, or synergistic ways.

Concerning the outcomes of shared capitalism, the findings of prior research are presented at two levels: individual and organizational outcomes. Examples of individual-level

outcomes are employees' attitudes to their jobs and organizations as well as individual behavior such as absenteeism or work effort (Long, 1980; Keef, 1998; Klein, 1987; Klein & Hall, 1988; Kruse & Blasi, 1997). At the organization level, examples of positive outcomes include productivity (Kruse & Blasi 1997) and the firms' survival rate (Park, Kruse, & Sesil, 2004). . Employees' attitudes toward risk, aptitudes for teamwork, orientation toward collective action, and employees' entrepreneurial ideas have been examined as moderators of the relationship between shared capitalism and its effectiveness (Hochner & Granrose, 1985).

The numerous findings of positive results are promising for both practitioners and researchers. However, both the individual and index approaches are problematic in terms of understanding the mechanisms underlying shared capitalism. Regarding the individual approach, it ignores the possible supplementary or complementary relationships among the shared capitalist practices, as many companies adopting shared capitalism have more than one practice. The index approach cannot explain how much each practice or subset of practices contributes to the outcomes. It would clearly be useful to identify which practices are most effective in different situations, and how the practices may work in combination.

One characteristic that may be important in the effects of shared capitalism plans is whether they are oriented to encourage short-term or long-term perspectives. Long-term and short-term programs may have different impacts on performance: long term practices such as ESOP or stock options reward activities that raise stock price, which reflects future expected profitability of the company, while short term practices reward activities that aim to raise current profits or performance. Kruse, Blasi, and Park (2010) noted the possible advantage of combining short term practices with long term practices, as short term practices might facilitate day-to-day performance whereas long term practices would help the companies succeed in the long term

through improved employees' positive attitudes (e.g., commitment, loyalty). While there have been a number of studies of both long-term and short-term practices, no study has carefully analyzed the effects of combining them. The current study aims to empirically test the contributions of each types of shared capitalism (short-term and long-term) and the contributions of those types of shared capitalism to outcomes in combination.

In addition to exploring long-term and short-term perspectives of shared capitalism, this study employs one more concept that has become popular in ownership plan research, which is psychological ownership. Previous research on shared capitalism has only a limited explanation for how the incentives depend on group performance work and how they are different from other compensation practices. The most compelling and widely accepted theory from economics is principal-agent theory which describes how shared capitalism may increase a firm's financial performance by aligning employees' interests with employers' interests. The direct link between employee pay and company performance, however, may be very weak, especially as the firm grows in size. Traditional perspectives of motivation, commitment, or loyalty may not be enough to differentiate shared capitalism and other monetary compensation. The current study focuses on the psychological ownership perspective, expecting it to be a key variable that makes shared capitalism different from other incentives or compensation practices.

In sum, exploring these rationales for shared capitalism, the current study aims to advance the field by investigating: 1) the broad benefits of short-term oriented shared capitalism and long-term oriented shared capitalism (hereafter STSC and LTSC respectively), 2) the operational mechanisms of STSC and LTSC, and 3) the combined contribution of STSC and LTSC to employees' attitudes and feeling of ownership. The arguments are summarized in Figure 1.

Insert Figure 1 about here

THEORETICAL DEVELOPMENT AND HYPOTHESES

Long term and short term oriented collective incentives

Scholars have been proposing multiple criteria for deciding which period should be considered long term or short term for incentives. Condly, Clark, and Stolovitch (2003) categorize incentive programs into three periods: less than one month (short term), between one month and six months (intermediate term), and more than six months (long term). According to Westphal and Zajac (1994), long term incentive plans target increasing the long term performance of the company, consequently, long term might mean at least more than a one-year period. Narayanan (1985) proposes an even longer period of time, saying “long term compensation schemes are based on three- to five-year moving averages of some performance measure, like earnings (1483).” In accordance with Westphal and Zajac (1994), and Milkovich and Newman (2002), the current study draws a line between short term and long term based on one-year criteria.

Therefore, considering prior research models, the theoretical criteria for dividing incentive plans into two time periods is tied to which period of performance decides the amount of money after encashment. The present study divides incentive practices into short term or long term based on whether the rewards are realized in less than one year or more than one year, in alliance with Westphal and Zajac’s (1994) and Milkovich and Newman (2002). Based on this, profit sharing and gain sharing are forms of short term incentive plans since the bonuses are given at least once per year while employee ownership plans (i.e. ESOP, ESPP, 401(k) and stock options) are generally long-term incentives (Kruse, et al., 2010) because stock prices reflect

long-term expectations of profitability and the returns from some forms of employee ownership cannot be obtained for a number of years.

Employees' attitudes

By creating a closer link between employer and employee outcomes, shared capitalist practices have been theorized to improve employee attitudes. However, the evidence from previous studies is mixed. For example, Long (1982) and Kruse (1993) showed negative or non-significant effects of shared capitalism practices. Further, with colleagues, Klein discovered that there were no significant relationships between ownership and employees' commitment and job satisfaction (Klein, 1987; Klein & Hall; 1988). With the sample of New Zealand managers, Keef's (1998) longitudinal analysis on employee shared ownership effectiveness proved that "employee shared ownership didn't result in expected improvement in attitudes" (abstract). There are also, however, a number of studies that show shared capitalism contributing positively to employees' attitudes. For example, Tuckers, Nock, & Toscano (1989) found a higher level of commitment among employee-owners using a Canadian sample. Peterson and Luthans (2006) investigated the effects of profit sharing, and Arthur and Jelf (1999) studied the effects of gain sharing, finding that these plans are related to low turnover which is usually considered an outcome of employees' commitment, satisfaction, and motivation. Consistent with French and Rosenstein's findings (1982), the review by Kruse and Blasi (1997) finds that employees' attitudes are improved or at least unaffected under employee ownership.

In the present study, positive relationships among both STSC and LTSC and employee attitudes (job satisfaction and organizational commitment) are assumed following the theories and prior research.

Hypothesis 1: Both STSC and LTSC are positively associated with employees' job satisfaction.

Hypothesis 2: Both STSC and LTSC are positively associated with employees' organizational commitment.

Psychological ownership

In the recent shared capitalism field, there is growing recognition of the importance of “feeling of ownership” as an important intervening variable between shared capitalism practices and its positive attitudinal or behavioral outcomes. According to Pierce, Kostova, and Dirks’ (2001) research, psychological ownership refers to the “state in which individuals feel as though the target of ownership (material or immaterial in nature) or a piece of it is theirs” (p. 299). The most important nature of psychological ownership would be “the feeling of possessiveness” as Van Dyne and Pierce (2004) noted that “a sense of possession is the core of psychological ownership (440).” In attempting to distinguish other constructs (e.g., organizational identity) from psychological ownership, Pierce et al. (2001) conclude that ownership is based on “possessiveness,” whereas commitment is the desire to remain, while identification is defining oneself using elements of an organization’s identity, and internalization is sharing goals and values. They emphasize that psychological ownership answers the “Is this organization MINE?” question.

How shared capitalism can increase psychological ownership can be explained by two theories, which are (a) residual right of control theory and (b) social identity theory. First, residual right of control refers to “the right to make decisions concerning the use of an asset” (Sesil, Kruse, & Blasi, 2001: 5). Milgrom and Roberts (1992) and Ben-Ner and Jones (1995) indicated that residual right of control should accompany a residual right of return to motivate

employees for the most efficient outcomes. The “residual right to control” is usually related to “possessiveness” to some degree. Therefore, shared capitalism may be more effective when it combines the residual right of control with the residual right of return, creating a greater sense of psychological ownership whose underlying dimensions are control, self-identity, and belongingness.

Second, social identity theory may depicts how shared capitalism shape employees’ psychological ownership. From social identity perspective, an individual identifies himself or herself as a member of a particular group in an organization. When the individual identifies himself or herself as part of the group, he or she would perceive the group characteristics as his or her features and then be more likely to adopt and follow the norms and rules of the group (Ellemers, Gilder, & Haslam, 2004). There are several factors that derive individuals’ social identification such as age, gender, or education. Beside the demographic factors, scholars have argued that group incentives can also induce individuals’ group identity by tying the individual-rewards to the group performance (Welbourne & Cable, 1995; Kim & Gong, 2009). In other words, an individual begins to identify his or her success as the group’s or the organization’s success when he or she is part of a group incentive. Then, individuals who hold social identity may attribute the success of organization to themselves. Those processes may increase individuals’ feeling of ownership.

Empirical evidence for the impact of psychological ownership is limited. Regarding the outcomes of shared capitalism, these issues have been investigated by a few studies, and they suggest that psychological ownership may have a positive effect on employees’ attitudes (e.g. job satisfaction, organizational commitment, and job involvement), and employees’ behavioral outcomes (e.g. organizational citizenship behavior) including performance (Avey, Avolio,

Crossley, and Luthans, 2009; Pierce, Kostova, & Dirks; 2003). While research has just begun, there are a few encouraging empirical findings. Studies on employee ownership implicate the mediating role of psychological ownership for the effectiveness of the ownership plan (e.g., Klein, 1987; Pierce, Reubenfeld, & Morgan., 1991). Scholars also assume psychological ownership would explain the operation of profit sharing (e.g. Coyle-Shapiro, Morrow, Richardson, & Dunn, 2002). Although few studies explored whether stock options or gain sharing might generate psychological ownership empirically, due to the similar characteristics among shared capitalism practices (e.g. holding stock, sharing financial performance, and stressing the importance of employees' participation) stock options and gain sharing are also assumed to have a positive correlation with psychological ownership (Klein, 1987; Rousseau & Shperling, 2003). For example, borrowing Klein's (1987) arguments, Yanadori and Kang (2009) say that "[under long term incentives] by holding company stock, employees become owners of the organization, and the sense of ownership increases their commitment to the organizations" (Klein, 1987: pp. 9- 10).

In sum, based on both theoretical rationales of shared capitalism and empirical findings of previous research, it is hypothesized that shared capitalism results in employees' perception of ownership, which improves employees' attitudes. Thus, the present study suggests that psychological ownership mediates between shared capitalist practices and employees' positive attitudes.

Hypothesis 3: Both STSC and LTSC are positively associated with employees' psychological ownership.

Hypothesis 4a: Psychological ownership mediates the relationship between both STSC and LTSC and job satisfaction.

Hypothesis 4b: Psychological ownership mediates the relationship between both STSC and LTSC and organizational commitment.

Variation in effects of STSC and LTSC

One of the remaining inquiries is which types of shared capitalism plans have larger effect on employees' psychological ownership and attitudes. They might have equivalent effects on those individual level outcomes, but there have been some theoretical reasons and empirical findings that support variation in level of effects of STSC and LTSC on employees' feeling of ownership and attitudes.

Relying on Laverty (1996), individuals are more likely to pursue the actions securing short term results than long term results because of role ambiguity and uncertainty associated with the long term. This argument of short-termism may be supported by expectancy theory (Vroom, 1964) that posits the effort-result relationship is much clearer in the short-term than in the long-term. Freeman and his colleagues, in accordance with the theoretical argument, provided the empirical supports that profit sharing and gainsharing have stronger effects on individuals' anti-shirking intervention than stock option and stock ownership do. Consequently, the current study anticipates that STSC would have stronger effects on employees' attitudes than LTSC does.

With regard to employees' psychological ownership, however, LTSC may have a larger effect than STSC. According to the psychological ownership literature, when individuals hold the rights to control their environments, they can feel a sense of efficacy and feeling of having place that lead to emergence of ownership feelings (Pierce et al., 2001). This argument would be more relevant to LTSC than STSC because holding stocks allows the employees the rights to participate in decision making. In other words, employees holding company stocks become

shareholders who have some formal privileges to participate in company's decision making such as voting on the directors nominated by the board, voting on the major issues in the company, and transferring the ownership by selling or purchasing. Accordingly, LTSC based on stock ownership may affect individual ownership feeling more than STSC does. Therefore the current study suggests that LTSC has larger effect on employees' psychological ownership than STSC.

Hypothesis 5: The positive effects of STSC on job satisfaction and organizational commitment are larger than the effects of LTSC.

Hypothesis 6: The positive effect of LTSC on psychological ownership is larger than the effects of STSC.

Relationship between STSC and LTSC

If one certain form of shared capitalism has a stronger influence on outcomes than other forms, why do we need both? Scholars in shared capitalism have suggested that a mixture of long term and short term forms of shared capitalism would be beneficial by helping achieve higher gains in performance through a complementary relationship between long term and short term shared capitalist practices (Narayanan, 1985; Kruse et al. 2010). However, whether short term and long term group incentives are complements, and what types of mechanisms underlie their relationship, has not been the focus of research. Most prior research has attempted to investigate just one type of shared capitalist practice or tested total effects by bundling shared capitalistic practices (e.g. Rosen, Klein & Young's ESOP study (1986); Kruse, Freeman & Blasi's shared capitalism study (2010)).

Recently, the literature in HRM theory has paid great interest to the relationships among HRM practices (e.g., Delery, 1998, Huselid, 1995). Especially, Lepak and colleagues (2006) illustrate that HRM practices work together to build employees' abilities, motivation and effort,

and opportunity to contribute in additive, substitute, or synergetic manner. Building on their argument, Jiang and colleagues (2010) propose that the type of relationship would be determined by the target outcomes (ability, motivation and effort, or opportunity to contribute) of each HRM practices and the dependence among HRM practices. Building on their argument, STSC and LTSC could have an additive or substitutive relationship in affecting employees' motivation and effort. On the other hand, Chadwick (2010) proposes that the relationship among HRM practices might be one of synergetic relationships: virtuous overlaps, independent effects, and efficient complementarities. Building on his assertion, if STSC and LTSC have distinctive high specialization but interacted with each other, we can expect a complementary relationship among STSC and LTSC.

As discussed above, not only STSC but also LTSC are expected to influence employees' psychological ownership, overall job satisfaction, and organizational commitment, which are all related to motivation and effort domain of HR policy relying on Jiang and colleagues' (2010) argument. Therefore, it would be hard to say they are highly specialized. Consequently, building upon Jiang and colleagues' (2010) propositions, the current study postulates that STSC may provide incremental benefit to the prediction of psychological ownership and organizational commitment achieved by LTSC (i.e., additive affects) because it targets to increase both employees' job satisfaction and organizational commitment by giving different types of ownership right: with short term, residual return right is given but with long term, residual control right is given to employees. Similarly, LTSC may add incremental benefit to job satisfaction on the top of contribution of STSC. Therefore, the present study assumes that the relationships among STSC and LTSC would be additive.

Hypothesis 7: STSC and LTSC have additive effects on employees' psychological ownership and employees' job satisfaction, and organizational commitment.

METHODS

Sample

The data for analysis are from National Bureau of Economic Research (NBER) project investigating shared capitalist practices based on employee surveys in fourteen companies. The data were collected from 323 workplaces over the 2001 to 2006 time period. A total of 41,206 workers responded, with an average response rate of 53 percent. Each company participating in the NBER survey had one or more shared capitalism plans. All of the companies had employee ownership plans but the types varied (i.e. ESOPs, 401(k) ESOP, Employee Stock Purchase Plans, and 401(K) with company stock). Eleven companies had profit sharing plans while five had stock option plans. To avoid the effects of any exogenous factors associated with year, the sample that participated in surveys in 2005 was employed for this study. After sorting out unusable samples (e.g., missing values in each shared capitalism plans), the final sample size was 17,255 employees of seven companies.

Measures

Collective incentives. The amount of employees' STSC and LTSC was collected from employees' reported information. STSC was measured based on employee report as the amount of profit sharing or gain sharing in proportion to fixed pay. To avoid the effects of extreme cases, the upper 1% of the ratio was trimmed. For LTSC, ESOP, ESPP, stock options and 401(k) plans that were invested in the company stocks were chosen. To measure the long term forms, each

amount of ESOP, ESPP, stock options and 401(k) in company stocks were summed up and divided by fixed pay. As with STSC, the upper 1% of cases was trimmed.

A body of prior studies in compensation has used a measure of eligibility for certain types of compensation (e.g., 1 if an employee has a certain type of compensation, otherwise 0). It is also useful, however, to consider the actual amount of money that employees are receiving because, building on motivation theory, the amount of money would likely be related to the level of employees' satisfaction (Kuvaas, 2006). Further, the continuous measure may be more valid than scale, interval or dummy measures because it may have less measurement error (Judge, Piccolo, Podsakoff, Shaw, & Rich, 2010). In alliance with those arguments, this study adopted a ratio measure of shared capitalism: that was the amount of short term oriented and long term oriented shared capitalism divided by fixed pay.

Employee attitudes. Job satisfaction and organizational commitment are measured by one and three items respectively. Wanous, Reichers, and Hudy (1997) proved through meta-analytic investigation that a single item scale of overall job satisfaction met the minimum level of reliability and the single item was strongly correlated with a multiple item scale which had been used for measurement in the job satisfaction studies. Accordingly, this study uses a single item that asks global satisfaction in job, which is “how satisfied are you in your job?”

As illustrated by Porter, Steers, Mowday, and Boulian (1974), organizational commitment indicates that an individual's feeling of being tied to a certain organization: that is “the strength of an individual's identification with and involvement in a particular organization (p.604).” The current study adopted three measures that were consistent with items that have been used in the literature. The three items are: (1) how much loyalty would you say you feel toward the company you work for as a whole (reverse); (2) how likely is it that you will decide

to look hard for a job with another organization within the next twelve months (reverse); and (3) to what extent do you agree with this statements, “I am willing to work harder than I have to in order to help the company I work for succeed” (reverse). The item factor loading were .73, .84, and .71, respectively. The first two questions were asked to report on 4-point scale, but the last question had a 5-point scale. All questions about organizational commitment were standardized and combined into a single item. The internal consistency reliability for combining the three items into one scale was .64.

Psychological ownership. As the relationship between shared capitalism and psychological ownership is studied at the individual level, the present study measured employee’s perception of ownership as “how much do you feel you are an owner of this company?” This measure is in accordance with the measure in Pendleton and colleagues’ (1998) study that assessed psychological ownership asking “the extent to which employees feel that they really are owner of the firm.”

Control variables. This study controlled for company, occupation, job level, tenure, age, education background, risk disposition, union status and disability. As the majority of the sample came from one company, there could be a unique factor of the company that might influence the outcomes. Also, prior studies have demonstrated demographic variables are related to job satisfaction (e.g., Miceli & Lane, 1991). In addition, Klein and Hall (1988) posited that education level would be related to ESOP satisfaction arguing that more educated people might understand the messages delivered via ESOP better than less educated people. Therefore education background was controlled. Furthermore, the current study controlled for occupation and job level because those variables are related to the level of participation in decision making (Hrebiniak, 1974), which in turn facilitates employees’ ownership feeling and attitudes. Union

involvement was also controlled as some researchers (e.g., Kim & Sutton) expect that union involvement may trigger the positive effects of group incentive on organizational level outcomes assuming union's support for group incentives. Disability was employed as a control variable because it may attenuate the relationship between shared capitalism and employees' positive attitudes. Prior work in disability proves that people with disability tend to be less satisfied with their jobs and less committed to the organization as they have less support from their coworkers and supervisors (Schur, Kim, Han, Kruse, Aday, & Blanck, 2010). Therefore, disability was used in the analyses as a control variable. Finally, risk disposition was included in the analyses as a control because when an individual is risk averse, he or she is likely to have a low level of satisfaction with group incentives due to the potential for income variability (Milgrom & Roberts, 1992).

Analyses

Ordinary least squares (OLS) regression analyses were used to test the main effects (hypotheses 1, 2, and 3) and hierarchical OLS regression analyses were employed to test the mediation effects and effects comparison (hypotheses 4 to 8). With the purpose of testing Hypotheses 7, STSC was multiplied by LTSC (multiplicative SC) and then employed in the hierarchical OLS regression analysis.

RESULTS

As all variances were rated by a single respondent, there is a possibility of common-method bias. To assess the extent of common-method bias, the present study employed Harman's one-factor test that posits that if there is a common-method variance, the variance in data can be explained by one common-factor (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). CFA with LISREL 8.7 (Jöreskog & Sörbom, 2004) was employed for Harman's one-factor test

following Podsakoff and colleagues' (2003) procedure. As the current study includes variables that were measured by a single indicator (i.e., psychological ownership and job satisfaction), the current study assigned an independent estimate and fixed measurement error for those variables. To do so, Anderson and Gerbing's (1988) recommended that an independent estimate for the error variance of the single indicator can be set as the value from prior research or the value of .95. Relying on Anderson and Gerbing (1988) procedure, the current study set the factor loading with .95 for job satisfaction and psychological ownership. The error variance of single-indicator factors was set to $(1-.90) \times \text{variance of measure}$: .1687 for job satisfaction and .7545 for psychological ownership.

Some of the goodness of fit indices of the CFA for one factor model ($\chi^2 = 2043.91$, $df = 14$, $p < .001$, RMSEA = .095, CFI = .93, IFI = .93, GFI = .93, AGFI = .93) were below than acceptable level (the acceptable level of RMSEA is near or below than .05 as Cohen and colleagues (2004) explanation). On the other hand, the five factor model (i.e, Long term and short term shared capitalistic practices, psychological ownership, job satisfaction, and organizational commitment) yielded an acceptable or good level for all goodness of fit indices ($\chi^2 = 543.34$, $df = 8$, $p < .001$, RMSEA = .063, CFI = .98, IFI = .98, GFI = .99, AGFI = .97). The results indicate that the five factors are separate constructs and there is not a high likelihood of common method bias in this study.

Means, standard deviations, and zero-order correlations of all variables are presented in Table 1.

Insert Table 1 about here

Employees' attitudes and Psychological ownership

In order to test the main effects of shared capitalism on employees' attitudes, three OLS regression analyses were performed. As seen in model 1 and model 2 in Table 2, both STSC and LTSC positively influenced on employees' perception of ownership, supporting hypothesis 3 ($\beta = .074$ and $\beta = .105$, $p < .001$, respectively). STSC affect both employees' job satisfaction and organizational commitment significantly as Model 3 in Table 2 and Model 8 in Table 3 indicate ($\beta = .024$, $p < .01$ and $\beta = .053$, $p < .001$, respectively). Although the effect of LTSC on employees' job satisfaction is marginally significant ($\beta = .016$, $p < .10$), still the influence of LTSC on organizational commitment is statistically well supported ($\beta = .034$, $p < .001$). Therefore, hypotheses 1 and 2 are all supported.

Psychological ownership as mediator

Hypothesis 4a and 4b predict that psychological ownership mediates the relationship of STSC and LTSC to job satisfaction and organizational commitment. To test the mediation, the procedure suggested by Baron and Kenny (1986) was employed. The results of hierarchical OLS regression in Model 5, 6, and 7 in Table 2 confirmed that psychological ownership fully mediates the effects of STSC and LTSC on job satisfaction. As seen in Model 10, 11, and 12 in Table 3, psychological ownership partially mediates the effect of STSC on organizational commitment whereas it fully mediates the relationship between LTSC and organizational commitment. All results support hypothesis 4a and 4b.

Insert Table 2 and 3 about here

Importance of STSC and LTSC

To determine the relative importance of STSC and LTSC, dominance analysis suggested by Budescu (1993) was employed. Dominance analysis is the one of the most popular method to

test the contribution of each predictor to the total variance predicted by all predictors. Building on the procedure that described in LeBreton and Tonidandel's (2008) paper, the current study calculated the contributions of STSC and LTSC in predicting psychological ownership, job satisfaction and organizational commitment by "average the ΔR^2 obtained by adding each predictor variable to all possible subsets of the remaining predictor (p.330)". To do so, (1) the ΔR^2 obtained by adding only STSC in the regression equation was calculated by using SPSS; and then (2) ΔR^2 obtained by adding STSC in the regression equation containing LTSC was calculated. Finally, (3) the ΔR^2 scores were averaged. Similarly, (4) the ΔR^2 obtained by adding only LTSC in the regression equation was calculated; and then (5) ΔR^2 obtained by adding LTSC in the regression equation containing STSC was calculated. The total scores of ΔR^2 of LTSC were averaged. The Table 4 shows the results.

According to the results in Table 4, even though the differences are minimal, LTSC was more important in prediction of employees' psychological ownership and job satisfaction (.035 and .0025 over .030 and .0015 respectively), while STSC was more important in prediction of employees' organizational commitment (.0135 over .0105). Therefore, hypothesis 5 was partially supported when hypothesis 6 was supported.

Insert Table 4 about here

Relationship between STSC and LTSC

In hypothesis 7, additive relationships among STSC and LTSC were expected. As viewed in Table 4, LTSC cannot provide incremental benefit to job satisfaction achieved by STSC ($\Delta R^2 = .0001, n.s.$). The results indicate that there is substitutive relationship between STSC and LTSC when they target employee's job satisfaction.

For psychological ownership, STSC provides incremental amount of variance to R^2 achieved by LTSC ($\Delta R^2 = .003, p < .001$). Also, in terms of organizational commitment, LTSC give incremental prediction in addition to STSC ($\Delta R^2 = .001, p < .01$). It would be possible that the incremental effects of STSC and LTSC attribute to the synergetic effects of STSC and LTSC, the test for synergetic effects was employed by creating multiplicative index of STSC and LTSC (Chadwick, 2010). The results of synergetic relationship tests (Table 5) indicate that STSC and LTSC didn't affect psychological ownership synergistically (β of multiplicative SC = $-.013, n.s.$). However, in terms of organizational commitment, β of multiplicative SC showed as negative ($\beta = -.023, p < .01$), which implies that the effects of STSC and LTSC are largely overlapped. Therefore, targeting organizational commitment, there is substitutive relationship among STSC and LTSC. In sum, Hypothesis 7 is partially supported: only for psychological ownership, there is additive relationship among STSC and LTSC; otherwise, it was substitutive relationship.

Insert Table 5 about here

DISCUSSION AND CONCLUSION

The findings of this study are summarized as follows. As expected, the current study found employees with STSC or LTSC have higher perceptions of ownership and have positive attitudes such as job satisfaction and organizational commitment. It also proved that employees' job satisfaction and organizational commitment would be shaped by employees' psychological ownership that is created by STSC or LTSC. However, it was found that the mechanisms of influence operation of STSC and LTSC on job satisfaction and organizational commitment are distinctive. More specifically, the employees with STSC had job satisfaction only when they had feeling a sense of ownership whereas there was negative pure effect of LTSC on job satisfaction

controlling for psychological ownership implying that high levels of LTSC made employees a) more worried about risk, or b) more dissatisfied with their level of input in decision-making, holding psych ownership constant. Similarly, STSC influenced employees' organizational commitment not only through the employees' psychological ownership, but also directly. Also, employees with LTSC had organizational commitment only when they had psychological ownership. Moreover, each type of shared capitalism forms might provide unique prediction for psychological ownership (independently), but could not work together for job satisfaction and organizational commitment.

The findings have several theoretical and practical implications. First, this study confirmed the effects of shared capitalism on employees' perception of ownership. The literature in group incentives and shared capitalism has argued that those incentives can generate employees' feeling of ownership by providing a right for residual return and consequently blur the boundary among employers and employees (Rousseau & Shperling, 2003). Controlling for other possible variables that help the employee have a sense of ownership such as job level or occupation, shared capitalism still has pure effects on employees' perception of ownership. The findings, thus, theoretically imply that shared capitalism enables employees to feel a sense of ownership, which influences employees' attitudes, behaviors, and finally individual and organization performance.

Second, this study shows that the operation mechanism of shared capitalism is distinctive depending on the time-orientation of shared capitalism practices. Prior studies have proposed that the effects of short-term oriented and long-term oriented on individual and organizational level outcomes would be separated, but there are few studies that have investigated the variations in those effects of shared capitalism. Finding the larger influence of STSC on organizational

commitment, and the larger effects of LTSC on psychological ownership and job satisfaction, the current study provides practical implication for the real world. For example, an organization with limited financial incentive sources that wants to instill employees' feelings of ownership can make the decision to provide employees LTSC. However, if the organization emphasize organizational commitment, it would be better to focus only on STSC.

Third, the present study also supports the theoretical argument of internal fit of strategic HRM literature empirically. The findings support the additive and substitutive relationships among STSC and LTSC when both target employees' psychological ownership, job satisfaction, and organizational commitment. Those findings may help practitioners in developing incentive systems by indicating that to facilitate employees' job satisfaction and organizational commitment, only one form of incentives (i.e., STSC) is needed.

The current study is not without limitations. First, there is possibility of common method bias in the data because all items were answered by individual employees. However, because the theories were established at individual level, and because the level of analysis was also individual level, individual employees were the most appropriate respondents for the current study as individuals are the most knowledgeable about their feelings and perceptions. In this case, common method bias may not be a serious problem in this study. Nevertheless, employing multiple respondents to assess the theoretical model is strongly recommended for future research.

Second, the measures of employees' psychological ownership and job satisfaction were single item measures, which may results in measurement error in the data. However, although they are single measures, they assess the critical and global dimension of employees' psychological ownership (i.e., the perception of possession of the organization) and job satisfaction (i.e., general satisfaction with job). Furthermore, some studies provide favorable

support for single-item measure arguing the reliability of single-item measure is as good as multiple-item measures (e.g., Wanous et al., 1997). Therefore, the error created by measuring variables with single-item may not be serious for this study. However, to enhance the reliability, future research should adopt multiple-item measures.

Third, this study investigated just one part of the operation mechanism of shared capitalism rather than shedding light on whole process. Adopting the attitudinal variables as outcome variables provides limited information about the effects of shared capitalism as the picture of process from employees' attitudes to individual and organization performance are missing. However, prior studies consistently support that there are strong causal relationships among attitudes, behaviors and performance (e.g., Harter, Schmidt, & Hayes, 2002 and Weigel & Newman, 1976). Furthermore, a number of researchers have emphasized employing employees' attitude measures in addition to individual and organizational performance measures explaining employees' attitude measures only can be conducive to long-term performance and organization sustainability (Awasthi, Chow, & Wu, 2001; Youssef & Luthans, 2007). Therefore, it would be appropriate to adopt employees' attitude measure to predict effects of shared capitalism in terms of long-term performance perspective. To conduct more profound investigation, however, future research should employ various types of outcome variables that assess behaviors and performance such as organizational citizenship behavior, absenteeism, performance rating, innovation, and so on. Especially, as the theoretical model of the current study emphasizes the variation in influence of shared capitalistic practices generated by time orientation difference, adopting measures that assess short term performance and long term performance will greatly contribute to literature.

In conclusion, this study proposes that short-term oriented and long-term oriented shared capitalism affect employees' sense of ownership, job satisfaction, and organizational commitment independently or interdependently. The current study contributes to our understanding of collective shared capitalism effects on employees' attitudes and psychological ownership, and contributes to strategic HRM literature by indicating additive, substitutive, and synergetic relationships among shared capitalism plans. Also, the current study contributes to improvement in designing and implementing of shared capitalistic practices in real world.

REFERENCES

- Anderson, J. C., & Gerbing, D. W. 1988. Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103: 411-423.
- Arthur, J. B. & S. Jelf, G. S. 1999. The effects of gainsharing on grievance rates and absenteeism over time. *Journal of Labor Research*, 20: 133-145.
- Avey, J. B., Avolio, B. J., Crossley, C. D., & Luthans, F. 2009. Psychological ownership: theoretical extensions, measurement and relation to work outcomes. *Journal of Organizational Behavior*, 30: 173-191.
- Awasthi, V. N., Chow, C. W. & Wu, A. 2001. Cross-cultural differences in the behavioral consequences of imposing performance evaluation and reward systems: an experimental investigation. *The International Journal of Accounting*, 36: 291-309.
- Baron, R. M. & Kenny, D. A. 1986. The moderator–mediator variable distinction in social psychological research. *Journal of Personality and Social Psychology*, 51: 1173–1182.
- Ben-Ner, A. & Jones, D. C. 1995. Employee participation, ownership, and productivity: A theoretical framework. *Industrial Relations*. 34(4): 532-554.
- Budescu, D.V. 1993. Dominance analysis: A new approach to the problem of relative importance of predictors in multiple regression. *Psychological Bulletin*, 114: 542-551
- Chadwick, C. 2010. Theoretical insights on the nature of performance synergies in human resource systems: Toward greater precision. *Human Resource Management Review*, 20: 85-101.

- Condly, S. J., Clark, R. E. & Stolovitch, H. D. 2003. The effects of incentives on workplace performance: A meta-analytic review of research studies. *Performance Improvement Quarterly*, 16(3): 46-63.
- Delery, J. E. 1998. Issues of fit in strategic human resource management: implications for research. *Human Resource Management Review*, 8(3): 289-309.
- Ellemers, N., Gilder, D. D., & Haslam, S. A. 2004. Motivating individuals and groups at work: a social identity perspective in leadership and group performance. *Academy of Management Review*, 29 (3): 459-478.
- Freeman, R, Blasi, J. R., & Kruse, D. L. 2010. "Introduction," in Kruse, Freeman, and Blasi, eds., *Shared capitalism at work: employee ownership, profit sharing, gainsharing, and broad-based stock options*. Chicago, IL: University of Chicago Press.
- French, J. L. & Rosenstein, J. 1982. Employee ownership, work attitudes, and power relationships. *Academy of Management Journal*, 27(4): 861-869.
- Harter, J. K., Schmidt, F. L. & Hayes, T. L. 2002. Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology*, 87: 268-279.
- Hochner, A. & Granrose, C. S. 1985. Sources of motivation to choose employee ownership as an alternative to job loss. *Academy of Management Journal*, 28(4): 860-875.
- Hrebiniak, L. G. 1974. Effects of job level and participation on employee attitudes and perception of influence. *Academy of Management Journal*, 71(4): 649-662.
- Huselid, M. A. 1995. The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38(3): 635-672.

- Jiang, K., Lepak, D. P., Han, K., Hong, Y., Kim, A. & Winkler, A. 2010. Clarifying the construct of human resource systems: Relating human resource management to employee performance, Working paper.
- Jöreskog, K., & Sörbom, D. 2004. *LISREL 8.7: Users reference guide*. IL: Scientific Software International.
- Judge, T. A., Piccolo, R. F., Podsakoff, N. P., Shaw, J. C., & Rich, B. L. 2010. The relationship between pay and job satisfaction: A meta-analysis of the literature. *Journal of Vocational Behavior*, 77: 157-167.
- Keef, S. P. 1998. The causal association between employee share ownership and attitudes: A study based on the long framework. *British Journal of Industrial Relations*, 36(1): 73-82.
- Kim, H & Gong, Y. 2009. The role of tacit knowledge and OCB in the relationship between group-based pay and firm performance. *Human Resource Management Journal*, 19(2); 120-139.
- Kim, H., & Sutton, K. 2009. Group-based pay-for-performance plans and firm performance. Paper presented at the 69th annual conference of the Academy of Management, Chicago.
- Klein, K. J. 1987. Employee stock ownership and employee attitudes: A test of three models. *Journal of Applied Psychology*, 72: 319-332.
- Klein, K. J. & Hall, R. J. 1988. Correlates of employee satisfaction with stock ownership: Who likes an ESOP most? *Journal of Applied Psychology*, 73(4): 630-638.
- Kruse, D. L. 1993. *Profit sharing: Does it make a difference?* Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

- Kruse, D. L. & Blasi, J. R. 1997. Employee ownership, employee attitudes, and firm performance. *Handbook of Human Resource Management*, Greenwich, CM: JAI Press.
- Kruse, D. L., Blasi, J. R., & Park, R. 2010. Shared capitalism in the U.S. economy: Prevalence, characteristics, and employee views of financial participation in enterprise, in Kruse, Freeman, and Blasi, eds., *Shared capitalism at work: employee ownership, profit sharing, gainsharing, and broad-based stock options*. Chicago, IL: University of Chicago Press.
- Kuvaas, B. 2006. Work performance, affective commitment, and work motivation: the role of pay administration and pay level. *Journal of Organizational Behaviour*, 27: 365-385.
- Laverty, K. J. 1996. Economic “short-termism”: the debate, the unresolved issues, and the implications for management practices and research. *Academy of Management Review*, 21(3): 825-860.
- LeBreton, J. M., & Tonidandel, S. 2008. Multivariate relative importance: Extending relative weight analysis to multivariate criterion spaces. *Journal of Applied Psychology*, 93: 329-345.
- Lepak, D.P., Liao, H., Chung, Y., & Harden, E. 2006. A conceptual review of HR management systems in strategic HRM research. In J. Martocchio (ed.), *Research in Personnel and Human Resource Management*, 25. Greenwich, CT.: JAI Press.
- Long, R. J. 1980. Job attitudes and organizational performance under employee ownership. *Academy of Management Journal*, 23: 726-737.
- Miceli, M.P. & Lane, M.P. 1991. Antecedents of pay satisfaction: A review and extension. In K.M. Rowland & G.R. Ferris (Eds.). *Research in personnel and human resources management*, 9. Greenwich, CT.: JAI Press.

- Milgrom, P. & Roberts, J. 1992. *Economics, organization, and management*, Prentice-Hall International (UK) Limited: London.
- Milkovich, G. T. & Newman, J. M. 2002. *Compensation* (7th edition). NY, NY: McGraw-Hill.
- Narayanan, M. P. 1985. Managerial incentives for short-term results. *The Journal of Finance*, 40(5): 1469-1484.
- Oyer, P. & Schaefer, S. 2005. Why do some firms give stock options to all employees? An empirical examination of alternative theories. *Journal of Financial Economics*, 76: 99-133.
- Park, R, Kruse, D. L., & Sesil, J. 2004. "Does Employee Ownership Enhance Firm Survival?" in Virginie Perotin and Andrew Robinson, eds., *Advances in the Economic Analysis of Participatory and Self-managed Firms*, Vol. 8. Greenwich, CN: JAI Press, 2004.
- Pendleton, A., Wilson, N., & Wright, M. 1998. The perception and effects of shared ownership: Empirical evidence from employee buy-outs. *British Journal of Industrial Relations*, 36(1): 99-123.
- Peterson, S. J., & Luthans, F. 2006. The impact of financial and nonfinancial incentives on business-unit outcomes over time. *Journal of Applied Psychology*, 91: 156-165.
- Pierce, J. L., Kostova, T., & Dirks, K. T. 2001. Toward a theory of psychological ownership in organizations. *Academy of Management Review*, 26: 298-310.
- Pierce, J. L., Kostova, T., & Dirks, K. T. 2003. The state of psychological ownership: Integrating and extending a century of research. *Review of General Psychology*, 7: 84-107.
- Pierce, J. L., Reubenfeld, R. A., & Morgan, S. 1991. Employee ownership: a conceptual model of process and effects. *Academy of Management Review*, 16: 121-144.

- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., & Podsakoff, N.P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88: 879-903.
- Porter, L. W., Steers, R. M., Mowday, R. M., & Boulian, P. V. 1974. Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59(5): 603-609.
- Rosen, C. M., Klein, K. J., & Young, K. M. 1986. *Employee ownership in America: The equity solution*. MA: Lexington.
- Rousseau, D. M. & Shperling, Z. 2003. Pieces of the action: Ownership and the changing employment relationship. *Academy of management Review*, 28(4): 553-570.
- Schur, L., Kim, A., Han, K., Kruse, D., Adya, M., & Blanck, P. 2010. Disability at work: job characteristics and attitudes of employees with disabilities. *Working paper*.
- Sesil, J. C., Kruse, D.L., & Blasi, J. R. 2001. Sharing ownership via employee stock ownership, Discussion Paper No. 2001/25, World Institute for Development Economics Research, United Nations University.
- Tabachnick, B. G. & Fidell, L. S. 2007. *Using multivariate statistics* (5th edition). Boston, MA: Pearson Education, Inc.
- Tucker, J., Nock, S. L., & Toscano, D. J. 1989. Employee ownership and perceptions of work: The effect of an employee stock ownership. *Work and Occupations*.16: 26-42
- Van Dyne, L., & Pierce, J. L. 2004. Psychological ownership and feeling of possession: three field studies predicting employee attitudes and organizational citizenship behavior. *Journal of Organizational Behavior*, 25: 439-459.
- Vroom, V. H. 1964. *Work and motivation*. New York: Wiley.

- Wanous, J. P., Reichers, A. E. and Hudy, M. J. 1997. Overall job satisfaction: how good are single-item measures? *Journal of Applied Psychology*, 82, 247–52.
- Weigel, R. H. & Newman, L. S. 1976. Increasing attitude-behavior correspondence by broadening the scope of the behavioral measure. *Journal of Personality and Social Psychology*, 33: 793-802.
- Welbourne, T. M. & Cable, D. M. 1995. Group incentives and pay satisfaction: understanding the relationship through an identity theory perspective. *Human Relations*, 48 (6): 711-726.
- Westphal, J. D. & Zajac, E. J. 1994. Substance and symbolism in CEO's long-term incentive plans. *Administrative Science Quarterly*, 39: 367-390.
- Yanadori, Y. & Kang, S. 2009. Alternatives of Employee Pay Mix and Their Implications for Organizational Human Capital Management. The 69th Academy of management annual meeting, Chicago, IL.
- Youssef, C. M. & Luthans, F. 2007. Positive organizational behavior in the workplace: the impact of hope, optimism, and resilience. *Journal of Management*, 33(5): 774-800.

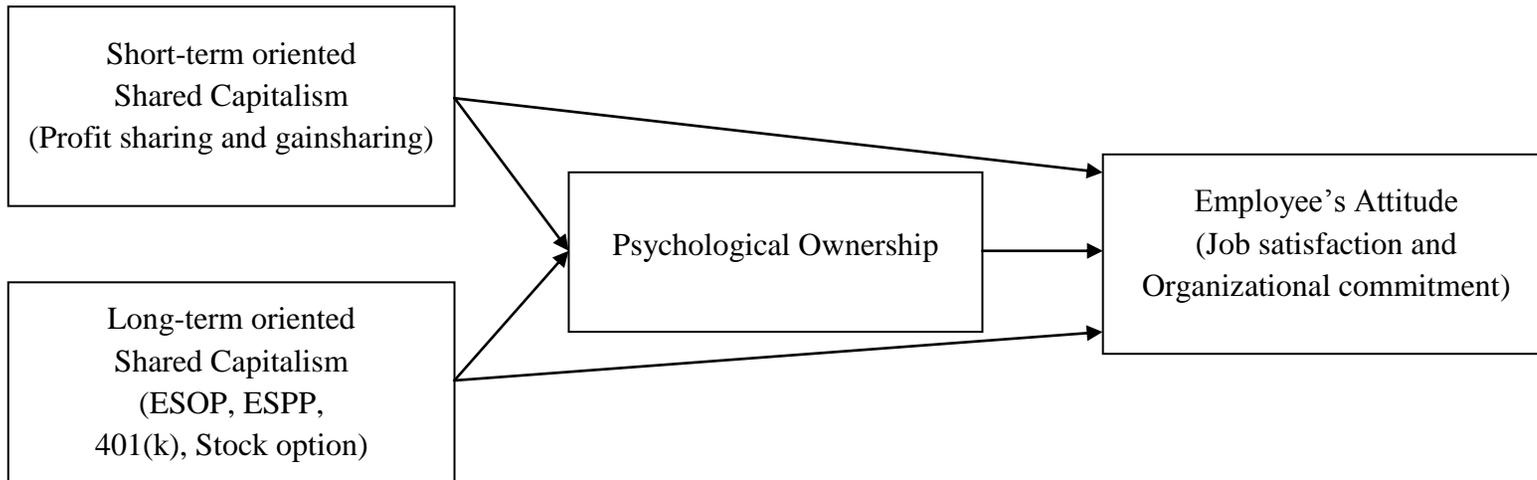


FIGURE 1 A theoretical model of the operation mechanism of short-term and long-term oriented collective incentives.

TABLE 1 Descriptive Statistics and Correlations

Variables	M	s.d.	N	1	2	3	4	5	6	7	8	9
1. Company ^a	13.09	1.87	17,255									
2. Production	.52	.50	17,227	.095								
3. Administrative staff	.06	.24	17,227	-.109	-.265							
4. Profession/Technician	.24	.42	17,227	-.030	-.574	-.145						
5. Sales	.04	.20	17,227	-.052	-.212	-.053	-.114					
6. Customer Service	.03	.16	17,278	.081	-.171	-.043	-.092	-.034				
7. Low management	.05	.22	17,227	-.072	-.193	-.049	-.119	-.042	-.033			
8. Middle management	.06	.23	17,227	.027	-.240	-.060	-.125	-.044	-.034	-.058		
9. Upper management	.02	.14	17,227	-.004	-.136	-.036	-.074	-.025	-.024	.043	-.035	
10. Tenure	11.68	9.44	17,222	.129	-.008	-.037	-.044	-.034	.013	-.033	.080	.057
11. Age	43.09	10.37	17,032	.131	.005	-.009	-.058	-.008	.024	.043	.057	.059
12. No degree	.29	.45	17,054	.000	.107	.075	-.106	-.049	.043	.009	-.074	-.067
13. AA degree	.11	.30	17,054	-.011	-.039	.037	.051	.000	.010	-.005	-.030	-.039
14. Bachelor's degree	.21	.40	17,054	-.005	-.426	-.028	.319	.172	-.020	.034	.139	.073
15. Graduate degree	.07	.26	17,054	.013	-.263	-.056	.161	.016	-.021	.051	.158	.185
16. Risk Disposition	5.53	2.34	17,255	.104	-.007	-.069	.046	.071	-.015	.045	.104	.068
17. Union	.08	.272	17,104	-.040	.258	-.072	-.146	-.058	-.039	-.045	-.062	-.029
18. Disability	.06	.238	17,049	-.004	.093	.009	-.059	-.019	-.020	-.029	-.021	-.009
19. STSC	.05	.08	17,255	.225	-.319	-.053	.132	.060	-.024	.065	.225	.261
20. LTSC	.50	.92	17,255	.081	-.204	.032	.055	.045	-.033	.089	.081	.176
21. Psychological Ownership	4.11	2.75	17,255	.149	-.204	.013	.040	.061	-.006	.089	.149	.143
22. Job Satisfaction	4.98	1.30	17,255	.054	-.068	.042	-.006	.030	-.016	.019	.054	.052
23. Org. Commitment	.00	2.28	17,255	.097	-.184	.067	.025	.071	.033	.056	.097	.060

Note. Numbers 1-23 in the top row correspond to the variables in the respective sections of the table. For all correlations above .013, $p < .10$; for all correlations above .015, $p < .05$; for all correlations above .020, $p < .01$; for all correlations above .025, $p < .001$.

a. Companies are coded as 7 to 14

TABLE 1 Descriptive Statistics and Correlations Continued

Variables	10	11	12	13	14	15	16	17	18	19	20	21	22
11. Age	.522												
12. No degree	.013	-.010											
13. AA degree	-.007	.006	-.219										
14. Bachelor's degree	-.061	-.056	-.326	-.176									
15. Graduate degree	-.025	.020	-.179	-.097	-.137								
16. Risk Disposition	-.042	-.070	.020	.006	.096	.083							
17. Union	.096	.074	-.008	-.042	-.136	-.075	-.003						
18. Disability	.040	.085	.023	.000	-.068	-.035	-.035	.065					
19. STSC	.158	.127	-.114	-.032	.233	.244	.097	-.165	-.037				
20. LTSC	.274	.165	-.049	.006	.110	.115	.044	-.092	-.009	.226			
21. Psychological Ownership	.075	.117	-.031	-.005	.098	.103	.091	-.163	-.055	.193	.206		
22. Job Satisfaction	.008	.061	-.017	-.017	-.007	.006	-.023	-.047	-.052	.049	.051	.353	
23. Org. Commitment	.062	.121	-.011	-.004	.049	.037	.011	-.134	-.065	.128	.116	.412	.577

TABLE 2 Regression Results for Psychological Ownership and Job Satisfaction

Variables	Psychological Ownership		Job Satisfaction				
			Main		Mediation		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Company	-.105 ***	-.067***	-.052 ***	-.04***	-.015 *	-.015 †	-.021 **
Production	-.029	-.034	-.097 **	-.10**	-.086 *	-.087 *	-.091 **
Administrative	.021	.016	.008	.00	.001	.000	-.001
Professions/Technicians	.034	.035	-.019	-.02	-.031	-.031	-.034
Sales	.050 **	.050**	.020	.01	.003	.002	.001
Customer Service	.008	.006	-.030 *	-.03*	-.032 *	-.033 **	-.034 **
Low management	.077 ***	.075***	.002	.00	-.025 †	-.025 †	-.026 †
Middle management	.119 ***	.126***	.044 *	.04**	.001	.001	.000
Upper management	.114 ***	.115***	.045 ***	.04***	.004	.005	.006
Tenure	.016 †	-.006	-.037 ***	-.03***	-.043 ***	-.043 ***	-.037 ***
Age	.120 ***	.118***	.080 ***	.08 ***	.038 ***	.038 ***	.039 ***
No degree	.004	.003	-.055 ***	-.05***	-.056 ***	-.056 ***	-.056 ***
AA degree	-.002	-.004	-.056 ***	-.05***	-.055 ***	-.055 ***	-.054 ***
Bachelor's degree	.006	.006	-.104 ***	-.10***	-.106 ***	-.106 ***	-.104 ***
Graduate degree	.014	.015†	-.072 ***	-.07***	-.077 ***	-.077 ***	-.075 ***
Risk disposition	.058 ***	.058***	-.027 **	-.02**	-.048 ***	-.048 ***	-.047 ***
Union	-.130 ***	-.127***	-.043 ***	-.04***	.004	.004	.002
Disability	-.040 ***	-.040***	-.054 ***	-.05***	-.039 ***	-.039 ***	-.039 ***
Short term SC	.074 ***		.024 **			-.003	
Long term SC		.105***		.01†			-.022 **
Psychological Ownership					.356 ***	.357 ***	.358 ***
F	122.1 ***	127.1***	26.59 ***	26.3***	145.6 ***	138.3 ***	138.7 ***
(df)	(19)	(19)	(19)	(19)	(19)	(20)	(20)
R ²	.121	.125	.029	.02	.141	.141	.141
Adjusted R ²	.120	.124	.028	.02	.140	.140	.140
ΔR^2_a	.004 ***	.008***	.0004 **	.000†	.112 ***	.000	.00002 **

Note. a.Increased in R² over prior model (control or main effect). † p<.10; * p<.05; ** p<.01; *** p<.001

TABLE 3 Regression Results for Organizational Commitment

Variables	Organizational Commitment				
	Main		Mediation		
	Model 8	Model 9	Model 10	Model 11	Model 12
Company	-.070 ***	-.055***	-.028 ***	-.030 ***	-.030 ***
Production	-.234 ***	-.247***	-.233 ***	-.223 ***	-.234 ***
Administrative	-.020	-.026	-.032 †	-.028	-.032 †
Professions/Technicians	-.099 **	-.105***	-.117 ***	-.111 ***	-.118 ***
Sales	.009	.007	-.012	-.009	-.012
Customer Service	-.017	-.021	-.023 †	-.020	-.023 †
Low management	-.007	-.009	-.038 **	-.036 *	-.038 **
Middle management	.019	.022	-.025	-.026 †	-.026 †
Upper management	.011	.015	-.029 **	-.032 **	-.028 *
Tenure	-.005	-.009	-.008	-.011	-.007
Age	.130 ***	.131 ***	.086 ***	.085 ***	.087 ***
No degree	-.023 **	-.024 **	-.025 **	-.025 **	-.025 **
AA degree	-.031 ***	-.031***	-.030 ***	-.030 ***	-.030 ***
Bachelor's degree	-.067 ***	-.063***	-.066 ***	-.070 ***	-.065 ***
Graduate degree	-.054 ***	-.049***	-.055 ***	-.059 ***	-.055 ***
Risk disposition	-.005	-.004	-.026 ***	-.027 ***	-.026 ***
Union	-.100 ***	-.102***	-.054 ***	-.052 ***	-.054 ***
Disability	-.056 ***	-.056***	-.041 ***	-.041 ***	-.041 ***
Short term SC	.053 ***			.026 **	
Long term SC		.034***			-.006
Psychological Ownership			.375 ***	.374 ***	.374 ***
F	77.11 ***	75.83***	224.9 ***	214.3 ***	213.7 ***
(df)	(19)	(19)	(19)	(20)	(20)
R ²	.080	.079	.203	.203	.202
Adjusted R ²	.079	.078	.202	.202 **	.201
Δ R ² _a	.002 ***	.001***	.124 ***	.0004 **	.000

Note. a.Increased in R² over prior model (control or main effect)

† p<.10; * p<.05; ** p<.01; *** p<.001

TABLE 4 Dominance Analysis of STSC and LTSC

Variables	Psychological Ownership			Job Satisfaction			Org. Commitment		
	ρ^2	Additional contribution		ρ^2	Additional contribution		ρ^2	Additional contribution	
		STSC	LTSC		STSC	LTSC		STSC	LTSC
-		.037	.043		.002	.003		.016	.013
STSC	.037	-	.028	.002	-	.002	.016	-	.008
LTSC	.043	.023	-	.003	.001	-	.013	.011	-
Avg.		.030	.035		.0015	.0025		.0135	.0105

TABLE 5 Regression Results for Multiplicative SC

	β	R^2	Adjusted R^2	ΔR^2	Sig.
Psychological Ownership					
<i>Step 1:</i> LTSC	.099				
STSC	.064	.128	.127		***
<i>Step 2:</i> STSC \times LTSC	-.013	.128	.127	.000	
Job Satisfaction					
<i>Step 1:</i> STSC	.022				
LTSC	.014	.029	.028		***
<i>Step 2:</i> STSC \times LTSC	.017	.029	.028	.000	
Organizational Commitment					
<i>Step 1:</i> STSC	.050				
LTSC	.029	.081	.079		**
<i>Step 2:</i> STSC \times LTSC	-.025	.081	.080	.0003	*

Note. * $p < .05$; ** $p < .01$; *** $p < .001$