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**SHARE OWNERSHIP AND EMPLOYEE ATTITUDES:
SOME EVIDENCE FROM CHINA'S POST-PRIVATIZATION
RURAL INDUSTRY**

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**Share Ownership and Employee Attitudes:
Some Evidence from China's Post-Privatization Rural Industry¹**

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Abstract

In this paper, we report the impacts of share ownership on employee attitudes in China's privatized rural industries based on a survey administered in the Provinces of Jiangsu and Shandong. Our results indicate that, in general, employee shareholders have higher levels of job satisfaction, perceive greater degrees of participation in enterprise decision-making, display stronger organizational commitment, and have more positive attitudes towards the privatization process than non-shareholders in privatized firms.

JEL classifications: P3, P2, J5.

Key words: Employee Ownership, Satisfaction, Participation

1. Introduction

The economic effects of employee share ownership remain controversial. In a survey of the literature dealing primarily with producer cooperatives in Western countries, Bonin *et al.* (1993) pointed to the disjuncture between theoretical and empirical studies. Since then, the mass privatization programs in the transition economies of central and eastern Europe as well as Russia have been faced with critical issues over the role of employee ownership. Here, the controversies around employee ownership concern questions of economic performance and distributive justice as well as of political dynamics (see Estrin, 1994).

How employee share ownership affects these broad outcomes depends, in part, on how share ownership affects employee attitudes and behavior. However, as Kruse and Blasi (1995: 11) have argued, “there is no clear *a priori* answer” to the question of how employee attitudes and behavior might be affected by employee ownership. As they note, “employee ownership may have positive effects if employees value ownership in itself or perceive that it brings greater income, job security, or control over jobs and the workplace. On the other hand, it may have negligible or even negative effects if employees perceive no difference in their worklives, dislike the extra risk to their income or wealth, or have raised expectations that are not fulfilled.” These ownership effects are an important, but relatively neglected, area of study. They are important because they reflect directly on the non-pecuniary welfare of employees, which affects work incentives and industrial relations of privatized enterprises. The ownership effects on employee attitudes and behavior are relatively neglected in the literature on economic transition because economists have typically been concerned with analyzing the efficiency outcomes of property rights changes, which is understandable given that the intended outcome of all privatization programs has been to increase efficiency. However, to focus only on efficiency in this way misses the opportunity to examine some of the broader welfare implications of privatization programs. To examine the latter may require using data on subjective issues which economists have been largely reluctant to employ as they measure what people say rather than what they do. However, the use of subjective data has gained

acceptance in economics and it has been shown that such data reveal valuable information in cross-sectional analysis.²

This paper is a contribution to this neglected area and examines the impact of employee share ownership on employee attitudes and behavior in China's newly privatized rural industries based on a specially-collected survey of over 1000 workers in 45 enterprises in the Provinces of Jiangsu and Shandong. As such, this paper is one of the first to extend the analysis of ownership and employee attitudes to China's privatized rural industrial sector. As Earle, Frydman and Rapaczynski (1993) have demonstrated, the privatization process – as opposed to its aims – has differed substantially among the countries of central and eastern Europe depending on factors such as the relative power of the state and enterprise insiders and the availability of capital domestically and from abroad. In short, institutional path dependence is important in explaining the privatization process. Since the privatization process may influence employee attitudes and behavior, in the next section of the paper we provide a brief overview of the privatization process in rural China and indicate the context within which employee share ownership arose.

Section 3 provides details of our sample and the variables used in our analysis. Regression results on the impacts of employee share ownership are reported in Section 4 for the following areas: employee job satisfaction, perceived employee participation in firm decision-making, employee commitment to the firm as expressed through turnover intentions, and employee perceptions of how they were affected by privatization. Because of the design of our sample, we are able to compare results for employee shareholders with non-shareholders in privatized enterprises and with employees in non-privatized firms. Our results indicate that, in general, employee shareholders have higher levels of job satisfaction, perceive greater degrees of participation in enterprise decision-making, display stronger organizational commitment, and have more positive attitudes towards the privatization process than non-shareholders in privatized firms. Comparing shareholders in privatized firms with employees in

non-privatized firms, we find that the two groups have similar levels of job satisfaction and that shareholders in privatized firms perceive higher levels of participation in enterprise decision-making. We provide a brief conclusion in section 5 which points out that, despite the potential advantages of employee share ownership, the trend in rural China is for further concentration of shareholding in the hands of enterprise managers.

2. Employee Share Ownership in Rural China: The Institutional Context

For much of the post-1978 reform period, China's transition to a market economy did not involve the mass privatization programs that characterized much of central/eastern Europe's transition. Instead, reforming state and collectively owned enterprises proceeded in a more evolutionary manner through a series of experiments. However, in the early 1990s, with rural industries growing more slowly and the financial performance of the urban collective and state sectors deteriorating, some local governments attempted to maintain fiscal revenue by "privatizing" locally owned enterprises (known as Township and Village enterprises, TVEs) under a wide variety of ownership forms. Following the lead of these localities, and seeking to stimulate a deflationary economy, the central government, during the 15th CCP National Congress in 1997, adopted the policy of "grasp the large and release the small" under which the government retained ownership of a small number of large enterprises and privatized most small- and medium-scale collective and state enterprises.³ The actions of local cadres and the change in policy at the central level resulted in an enormous change in property rights in rural industries. The Ministry of Agriculture estimated that by the end of 1998 about 80 percent of China's TVEs had been converted into shareholding cooperatives, shareholding companies, partnerships, proprietorships, or had been reformed through merger, leasing, collateral contracting, or bankruptcy (Yuan, 2000).

Our analysis of this privatization process is based on information gathered through in-person interviews with enterprise managers and with local leaders at the county, township and village levels in three counties in Shandong and Jiangsu provinces in 1999 and 2000. These two

provinces, which constitute the heartland of the rural collective sector,⁴ have been relative latecomers to the privatization process and the changes underway in the mid- and late-1990s offer a more dramatic example of change during this period than in some other provinces. Both provinces are located on the eastern coast and had, respectively, the second and third largest provincial economies in China in 1998. The three counties, Penlai and Yanzhou in Shandong and Wujin in Jiangsu, are above the national and their respective provincial average per capita income levels, although the income levels of the three counties do nevertheless vary widely with Wujin being the highest and Yanzhou the lowest.⁵

Our interviews suggest that while the central government tried to direct the reform process, it was local leaders who controlled the pace and direction of privatization. Thus, even though the central government had endorsed a privatization model that encouraged the sale of a majority of shares to employees, this was not the principal method used to privatize TVEs in the surveyed counties. Because managerial incentives were seen as the over-riding concern for leaders in all three surveyed counties, the primary goal of privatization was to provide adequate incentives to managers by making them the majority owners of the privatized TVEs. In the surveyed counties, most small TVEs were sold to their managers or to senior employees led by the managers. Nevertheless, because of a greater need to raise large amounts of capital and to bolster support for privatization among workers, employee share ownership played a more prominent role in the privatization of larger enterprises. In the enterprises where employees were involved in the privatization process, however, it was often the managers who determined how many shares were sold to employees, and who was eligible for share purchase, and at what prices. Most shares that were purchased were done so voluntarily, although there were instances in which employees were required to buy shares. Often employees who wished to purchase shares in their enterprise were unable to do so because managers wished to restrict share ownership.⁶ As a result of the privatization policies of local leaders and enterprise

managers, the pattern of share ownership of privatized TVEs in all three counties was heavily skewed in favor of the manager and/or a managerial group.

This pattern is evident in our sample. We obtained detailed survey data from 45 enterprises operating in the light industrial goods sector, of which 39 had been privatized and 6 remained owned by local governments.⁷ The 6 non-privatized enterprises were large, profitable enterprises; concerns over loss of revenue appeared to be the main reason of these enterprises remaining in local government ownership. Of the 39 privatized TVEs, 16 had sold shares to their employees. The manager or the managerial group held more than 50% of the shares in 33 of the privatized enterprises, and employees were the majority shareholders in the remaining 6 privatized enterprises. Table 1 provides descriptive statistics and shareholding structures of the enterprises in the sample. For the sample as a whole, employees held about 18% of the shares in the 39 privatized enterprises, managers 53%, other board members 25%, and local government and others 3%.

This distribution of share ownership reflects the fact, noted above, that local cadres and enterprise managers were influential in determining the outcome of privatization. Workers in rural enterprises were in a much less powerful position since industrial jobs are typically highly prized by rural residents and because rural workers lack the organizational ability and historic privileges of their counterparts in state-owned enterprises. Given this lack of bargaining power, the limited role of workers in the privatization process should not come as a surprise. Based on this description of the privatization process, it is perhaps reasonable to hypothesize that employees, whether owning shares or not, are unlikely to see themselves as being positively affected by a process structured in this way. Added to this, previous work by Bowles and Dong (1999) indicated that employees in rural private firms showed significantly lower levels of organizational commitment than workers in enterprises owned by local governments. Certainly, there are grounds for thinking that privatization would be unlikely to have positive effects on employee attitudes.

On the other hand, while employee ownership did not emerge as the major ownership form of privatization in the three counties, where it did occur it was accompanied by noticeable changes in enterprise governance. For example, in the 6 privatized TVEs where employees were the majority shareholders, employees (on the basis of one person one vote) elected the managers and other members of the Board of Directors. In the other privatized TVEs, employee shareholders participated in decision-making in selected areas, with votes in proportion to their shares. We were also told in our interviews that some managers believed that employee share ownership had the advantage of improving work incentives, enhancing employees' loyalty to the enterprise, and developing better relations between management and employees.⁸ Moreover, some local leaders expressed the concern that while making managers the majority shareholders succeeded in solving managerial incentive problems, the highly concentrated share ownership structure that resulted appeared to have also alienated workers and increased conflict between management and employees. As Kruse and Blasi (1995:2) have noted, "employee ownership is not a simple, unidimensional concept" but varies greatly from highly democratic cooperatives to firms where employees own shares but which confer no rights. The remarks and organizational changes noted above suggest that employee share ownership *may* have some non-minimal content and *may* therefore be expected to positively affect employee attitudes and behavior.

In the next two sections, we examine these hypotheses by testing the impacts of employee share ownership on employees' job satisfaction, participation, commitment to the enterprise, their assessments of how they had been affected by TVE privatization and their attitudes towards their enterprises.

3. Data and Variables

Our analysis is based on a 1999 survey of over 1,000 employees drawn from the 45 enterprises in the three counties. Approximately 25 employees in each enterprise (mainly production workers but also some technical, sales, and mid-level managerial personnel)

participated in the survey.⁹ Using the questionnaire survey instrument, we obtained information on the employee's shareholdings, earnings, education levels, sex, work history, and position in the firm. Summary statistics of the employee sample are presented in Table 2. In our sample, 33% of the employees in privatized enterprises held shares. The mean value of shares is 11,649 *yuan*, about 165% of average annual earnings. About 75% of the shareholders received dividend payments in 1998. The rate of return to share ownership was quite respectable, 11.6% for shareholders who received dividend payments and 8.6% for all shareholders in the sample. The introduction of employee shareholding contributed significantly to earnings with dividend payments accounting for 17.6% and 14.1% of total earnings for dividend receiving shareholders and all shareholders, respectively.

To investigate how share ownership affected employees' attitudes, the selected employees were asked to respond to a series of subjective questions covering job satisfaction, perceptions of participation in decision-making in the firm, turnover intentions, and assessments of how they had been affected by privatization. The variables on job satisfaction are obtained from employees' own assessments in 10 aspects of their jobs which include income and benefits, opportunity for advancement, skill matching, job security, working conditions, social status, manager-worker relations, treatment by co-workers, opportunity to participate in enterprise's decision-making, and skill development. Employees were asked to describe their satisfaction with each of these ten aspects of their current jobs on a five-point Likert scale with a range of 1 = very dissatisfied to 5 = very satisfied. The participation variables are derived from employees' responses to questions concerning their influence in nine areas of enterprise decision-making (safety, technological innovation, welfare and benefits, bonus distribution, firing/hiring, pace of work, promotion, internal job changes, and appointment of enterprise manager). Respondents were asked to rank their participation in each of the nine decision-making areas on a three-point scale with 1 = none, 2 = some, and 3 = a lot.

We use turnover intention of an employee as a proxy for the employee's commitment to the enterprise. Many studies have shown that there is a significant association between organizational commitment and turnover intentions (for example, see Mowday, Steer and Porter, 1979), and that turnover intentions are strong predictors of actual turnover behavior (Cotton and Tuttle, 1986). We gauge information on turnover intentions with the question: "how likely is it that you will actively look for a new job in the next year?" The response format again employed a three-point scale with 1 = not likely, 2 = likely, and 3 = very likely. Employees from all 45 enterprises in the survey answered the questions concerning job satisfaction, participation and turnover intentions. We also asked the employees of the 39 privatized TVEs to assess the impacts of privatization in nine areas (income and benefits, job security, work intensity and conditions, social status, treatment by managers, treatment by co-workers, opportunity to participate in enterprise's decision-making, opportunity to develop skills and abilities, and willingness to continue to work for the enterprise), with 1 = has had negative effects, 2 = has had no effect, and 3 = has had positive effects. These responses are used to assess the extent to which shareholders and non-shareholders in the privatized firms exhibit different degrees of satisfaction with, and implicitly support for, the privatization program.

Summary statistics of the employees' responses to these questions are reported in Table 3. To get an overall picture of employees' attitudes, we compute the average score of an employee's response in all the areas of each subject and t-statistics for the difference in the average score among three groups of employees (shareholders and non-shareholders in privatized enterprises and employees in non-privatized enterprises). The tests for the between-group differentials reported in this table show that there is a significant positive association between employee share ownership and employees' satisfaction, participation, and support for privatization and a significant negative association between employee share ownership and turnover intention. However, these results are not, in themselves, sufficient to establish causal relationships because the shareholding status of an employee is associated with other

characteristics, such as age, position in the enterprise, gender, education, and seniority, that are likely to affect employee satisfaction and participation (and/or the employees' expectation of jobs and involvement in enterprise decision-making), organizational commitment, and attitudes towards the privatization. Furthermore, the choice of ownership structure of privatized TVEs may be affected by historic patterns of industrial relations, which are correlated with certain enterprise characteristics (e.g., firm size) and with region. To estimate the impacts of share ownership, we therefore introduce a multivariate regression analysis of employee satisfaction, participation, turnover intention, and assessment of the impact of privatization with the identification strategy based on the "selection-on-observable" assumption.¹⁰ We apply ordered probit techniques to estimate employees' attitudes in each area to assess the impact of share ownership in the respective area. We also report OLS estimates for the average scores in each category to estimate the general effects. OLS is applied in the latter case because the average scores are not discrete. The t-statistics for the OLS estimates are calculated using heteroskedastic-consistent standard errors.

In these regressions, variables measuring individual characteristics, firm size, and regional variation, together with the dummy variable for employees with positive shareholdings,¹¹ are introduced as the explanatory variables. The position variable is a dummy variable that is defined as equal to one for a managerial personnel and zero for other employees. The gender dummy is defined as equal to one for a male employee and zero for a female. An employee's seniority and education are measured, respectively, by years of employment with the enterprise and years of schooling. The variable of firm size is the total number of employees in log form. For regional dummies, Yanzhou is the omitted category. Age and age squared are introduced to the satisfaction regression, following the convention of the empirical studies of job satisfaction (see Clark, 1996), whereas seniority is used in the participation equations, as work experience is seen as a more relevant determinant of an employee's involvement in enterprise's decision-making.

We also control for the effects of earnings in the satisfaction and turnover intention regressions,¹² and the perceived likelihood that the employee was able to find a job in another enterprise in the turnover intention regressions. These variables are expected to have no direct influence over perception of participation after we control for other observable characteristics of the employee. However, earnings are likely to be an important determinant of satisfaction and turnover intention. Turnover intention is also expected to be positively correlated with the availability of alternative employment opportunities. The earnings variable is the log of total annual earnings including both wages and dividends in 1998. The variable measuring employment alternatives is derived from the employee's response to the question "how likely is it that you can find a job with another employer at about the same pay and benefits you have now?", and the response format again employed a three-point Likert scale with 1 = not likely, 2 = likely, and 3 = very likely. For the regressions for satisfaction, participation and turnover intention, we also control for the difference between privatized and non-privatized enterprises with a dummy variable for non-privatized enterprises.

4. Regression Results

4.1 Job Satisfaction

Results of regressions for job satisfaction are reported in Table 4. To examine ownership effects, consider first the results of the OLS regression using job satisfaction averaged over the ten areas at the dependent variable. This regression indicates that share ownership is significantly positively related to job satisfaction. Also of positive significance are earnings and position within the firm. Workers in non-privatized firms report higher job satisfaction but employees in Wujin, male employees, and more educated employees report lower job satisfaction. With respect to the last two variables, it should be noted that job satisfaction is a relative concept and, in particular, is relative to expectations. It is perhaps for this reason that males and more educated workers report lower levels of job satisfaction. This is discussed further in analyzing other results.

Turning to a disaggregated analysis, we now examine the impact of employee ownership on employee job satisfaction in ten separate aspects of their current jobs. For satisfaction with income and benefits, two equations are estimated, with and without the earnings variable. Regarding satisfaction with income and benefits, the estimates for shareholders, managerial personnel, male employees, firm size, and the dummy variable for Penglai have positive signs, but are statistically significant only in the regression without the earnings variable. In contrast, education and the location dummy for Wujin have negative signs, and are statistically significant only when the earnings variable is introduced. These results indicate that shareholders, managerial personnel, male employees, and employees in bigger firms and in Penglai reported greater satisfaction as they enjoyed higher earnings. However, for a given level of income, employees with better education or in Wujin were less satisfied, again perhaps because their expectations were higher. In both regressions for income and benefits, the estimates of the age variables are statistically significant, showing a U-shaped relationship between age and satisfaction; that is, the satisfaction of employees decreases in age in their early years of employment, and rises as they approach to retirement. This pattern is consistent with the findings of other empirical studies on employee satisfaction (Clark, 1996). The estimates of the satisfaction regression for the other areas are qualitatively similar to those of the regressions for income and benefits.

The estimates of the shareholder dummy show that employee share ownership has a significant positive effect on reported satisfaction with income and benefits, job security, working condition, social status, and opportunity to participate in decision-making within the enterprise. Our results also indicate that employees in non-privatized TVEs reported greater satisfaction with income and benefits, social status, treatment by co-workers, and employee participation than their counterparts in privatized enterprises. These results suggest that both employee share ownership and collective ownership have a positive impact on employees' attitudes in Chinese rural industries.

4.2 Perceived Participation

We now examine how employee share ownership affected employees' perceived influence over decision-making within the enterprises. The regression results are reported in Table 5. Starting with the average participation score, the OLS estimates indicate that share ownership is positively related to the perception of participation in the firm and is significant at the 5% level. Higher ranked employees report higher degrees of participation, but more educated employees report less participation as do employees in Penglai and Wujin.

Turning to the disaggregated analysis, Table 5 shows that, as expected, managerial personnel report a higher degree of influence over decision-making than other employees in all nine areas, and this positive effect is significant at the 1% level. However, surprisingly, our results show no significant gender gap in participation in any area. Also surprisingly, except for technological innovation, years of schooling is negatively related to perceived influence in decision-making in all areas, and the negative effect of education is significant in the areas of welfare and benefits, bonus distribution, firing and hiring, internal job change and appointment of enterprise manager. Also, seniority is found to have a significant negative effect on bonus distribution, promotion and internal job changes. As for the estimates of education for satisfaction, a possible explanation for the negative impact of education and seniority on participation may be that an employee's assessment of his/her influence over decision-making is relative to his/her expectation of participation. That is, employees with more education or with more work experience in the enterprise may have higher expectations about the degree of influence that they would have in decision-making. Our results also show that, in most of the runs, the degree of reported participation increases with firm size, and that the effect of firm size is significant in the areas of safety, technological innovation, welfare and benefits, bonus distribution and promotion. Moreover, employees in Yanzhou consistently reported higher degrees of participation in enterprise decisions than elsewhere, indicating that there are regional variations in employee participation in decision-making.

Having controlled for the other observable explanatory variables for reported participation, the regressions in Table 5 show that employees who own shares consistently

reported higher degrees of participation in decision-making than non-shareholders. The shareholding effect is significant at the 10% level or higher in all the nine areas except for safety. Our results also show that there is no significant difference in the reported participation between all employees (that is, shareholders and non-shareholders combined) in privatized and non-privatized TVEs in all the nine areas except for safety and welfare and benefits. Thus, *ceteris paribus*, employees with shares perceived they were more involved in enterprise decision-making than employees with no shares in both privatized and non-privatized TVEs in seven of the nine areas and less involvement than employees in the non-privatized TVEs in two areas (safety and welfare and benefits). This result indicates that share ownership is a significant determinant of perceived “voice” in the enterprise.

4.3 Organizational Commitment

We now examine the impacts of employee ownership on employees’ organizational commitment (and thus loyalty to the firm). The employee ownership literature suggests that employee ownership enhances employees’ organization commitment through both intrinsic and instrumental mechanisms. It is argued that ownership per se increases employees’ commitment to the enterprise because employee ownership creates a common interest among employees and increases employees’ satisfaction and identification with the enterprise (Long, 1978). It is also argued in the context of Hirschman’s exit-voice dichotomy that employee ownership reduces exit behavior by enabling employees to voice their concerns through their participation in the decision-making process of the enterprise (Stein, 1976). Given the positive effects of share ownership on satisfaction and participation reported in Tables 4 and 5, it is hypothesized that employee share ownership increases employees’ commitment to the enterprise. We tested this hypothesis with the ordered probit regressions for turnover intentions in which employee ownership is measured first by the shareholding dummy and then by the percentage of shares held by the employees in an enterprise. In addition to the effects of employee share ownership, we also examine the impacts of managerial ownership concentration on employees’ organizational commitment

by replacing the employee ownership variable with the percentage of the shares held by the manager and other board members of the enterprise. Following the arguments for employee ownership introduced above, managerial ownership concentration is expected to have a negative effect on employees' organizational commitment and loyalty to the firm. This is because the higher the percentage of shares held by managers, the fewer the shares distributed to the employees, consequently, the lower the employee satisfaction, and the weaker the "voice" of employees. The regression results are reported in Table 6.

The first regression reported in Table 6 is an estimate of the effect of employee share ownership, the second regression is an estimate of the effect of managerial ownership concentration, and the third regression is an estimate of the impact of the percentage of shares held by the employees. As can be seen from Table 6, other things being equal, the turnover intention of a shareholder is lower than that of a non-shareholder at the 5% level of significance. Moreover, the likelihood that an employee will actively look for a new job increases with the degree of managerial share concentration and decreases with the percentage of shares held by employees. The estimates of both of these ownership structure variables are significant at the 10% level. The estimates of other variables are consistent with economic intuition. As expected, the turnover intention of an employee decreases with log earnings and seniority and increases with the employee's perceived possibility of finding a new job, and these effects are significant at the 1% level in all runs. Moreover, turnover intention appears higher among male employees than female employees, but the gender effect is significant at the 10% level only in the first regression. Turnover intentions are lower in non-privatized enterprises than in privatized enterprises, with the non-privatized effect significant at the 5% level or higher in the first and the third regressions.¹³ Employee share ownership evidently lowers exit intentions (and, by inference, increases loyalty to the firm) and increasing managerial ownership concentration raises turnover intentions. Clearly, share ownership matters.

4.4 Support for privatization

Table 7 presents the regression results for the effect of employee ownership on the perceived impact of privatization on employees. Again, looking at the average score first, the results show that shareholders view privatization more positively than non-shareholders and that this is significant at the 1 % level. Mid-ranked managerial staff also view privatization more positively as do employees in larger firms. Regional effects are again important.

The disaggregated estimates in that table show that the assessment of shareholders is more positive than non-shareholders in each of the nine areas with the shareholding effect significant at the 5% level or higher in five areas (income and benefits, job security, opportunity to participate in decision-making, opportunity to develop skills and ability, and willingness to continue to work for the enterprise). This result is consistent with the findings from the regressions for employee satisfaction, participation and turnover intention, which reported higher satisfaction with income and benefits, job security, and participation, higher degrees of perceived participation and lower levels of turnover intention among shareholders than non-shareholders in the privatized enterprises.

As for the other explanatory variables, the assessment of managerial personnel on the impacts of privatization is, as expected, more positive than other types of employees, and this position dummy is significant at the 5% level or higher for all runs except for the area of treatment by co-workers. The gender effect is significant in three areas with male employees being more negative than female employees regarding the impacts of privatization on income and benefits and working conditions, but more positive about the impact on the treatment by co-workers. Education appears to have no effect on employees' assessment in any of the areas except for the treatment by co-workers, where the satisfaction with privatization is negatively correlated with years of schooling at the 5% level of significance. Seniority has a significant negative effect on the employees' assessment on the impacts of privatization regarding income and benefits, job security, and working conditions.

5. Conclusions

One of the central questions concerning privatization is the extent to which employee shareholding should be encouraged. In the privatization of China's rural industries, employees were included in the distribution of shares but only in a limited way and on terms determined by firm managers and local government officials. This paper has examined the extent to which shareholding by employees affects four important areas, namely, in employee job satisfaction, employees' perceptions of their participation in decision-making within the enterprise, their commitment to the firm, and their view of how they were affected by privatization. We found strong evidence that employee share ownership has had a significant impact in each of these areas, despite the seemingly employee-unfriendly way in which the privatization process was designed. Specifically, employee shareholders reported greater job satisfaction, perceived a greater "voice" in the enterprise, expressed a lower rate of exit intentions and viewed more positively the impact of privatization than did non-shareholder employees in privatized firms. Our results also indicate that shareholders reported a higher degree of participation in most areas of decision-making within the enterprise than did employees in the non-privatized firms.

A number of other results also stand out from our findings. Firstly, those with higher levels of education consistently reported lower levels of job satisfaction and perceived participation in firm decision-making. This may be due, as we have suggested above, to the greater gap between expectations and perceived reality experienced by more educated workers. Secondly, we consistently find that regional effects are important suggesting that institutional path dependence may play a significant role in determining employee responses to privatization. Thirdly, our results show that employees in the non-privatized firms perceived a greater voice in enterprise decision-making than non-shareholder employees in privatized firms, and also reported greater satisfaction with a number of job aspects and expressed lower exit intentions than employees in privatized firms. It is clear from this result that, from the point of view of workers, collective ownership has some advantages. Furthermore, the fact that non-shareholders are generally less positive about many aspects of their employment than either shareholders or employees in non-privatized firms suggests that privatization may be a

Janus-faced process; shareholding employees are generally more positive about their work environment than before but non-shareholders are generally more negative than before. This last point is conjectural, but all three issues identified here suggest areas where further research may be worthwhile.

It is not clear, however, that such further research will find a good testing ground in rural China. This is because, as noted in Section 2, the primary impetus behind the rural privatization drive was the desire to make enterprise managers solely responsible for the assets of the enterprises. Indeed, many local leaders regard employee share ownership as an “incomplete” form of privatization; interviews with local officials suggest that the dynamic of the privatization process since its inception has been a consolidation of shareholding by managers. This has been achieved by managers repurchasing shares from workers (mostly at the original prices but in the cases of some exceptionally successful enterprises at a premium of up to 6.5 times the original price) and by the sale to managers of the remaining shares held by local governments. Thus, the trend in rural China is for higher levels of managerial share ownership; the results of our study indicate that this is likely to have negative impacts on employee attitudes and behavior.

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2. Freeman (1978) and Akerlof et al. (1988) are examples of studies of labor market outcomes using job satisfaction responses. For a survey of the empirical studies on the ownership impacts on employee attitudes and behavior in U.S. companies, see Sesil, Kruse and Blasi (2001).
3. The economic and political dynamics of this process are discussed only in brief here. For a detailed analysis see Ho, Bowles and Dong (2002).
4. Jiangsu and Shandong accounted, respectively, for about 20 and 14% of the total revenues generated by China's TVEs in the early 1990s (*China Statistical Yearbook*, 1993).
5. The average annual net income of peasants in Wujin was 5,034 *yuan* per person in 1998 (compared to a provincial average of 3,377 *yuan* in Jiangsu and a national average of 2,162 *yuan*) (*Statistical Yearbook of Jiangsu Province 1999* and *Statistical Yearbook of Wujin 1999*). The average annual net income of peasants was 3,308 *yuan* in Penglai and 3,222 *yuan* in Yanzhou (compared to a provincial average of 2,453 *yuan* in Shandong) (see *Statistical Yearbook of Shandong Province 1999*).
6. The determinants of share purchase by employees therefore included not only personal preferences with respect to risk and individual wealth constraints but also institutional constraints arising from the ways in which managers and local governments structured the privatization process. These determinants are modeled more formally, and analysed more extensively in Dong, Bowles and Ho (2002).
7. The enterprises were selected from a list of medium and large enterprises provided to us by the local Bureau of Township-Village Enterprises as it is not possible to survey TVEs without the approval and cooperation of the local government. A number of highly

profitable enterprises were excluded to ensure the representativeness of the sample. However, a few of the enterprises selected had to be replaced when it became apparent that they were unwilling to cooperate with the survey. Thus, although we had some control over which enterprises were included in the survey, our sample cannot be said to be random as it relied on the voluntary cooperation of the units concerned.

8. The manager of an enterprise of which the employees held 74% of the shares told us that the enterprise had raised about 1 million *yuan* (needed to purchase a new production line) from its employees within a short period of two weeks. The workers told him that they purchased shares because they trusted him and would regard their investment as a contribution to the enterprise even if the enterprise failed to make sufficient money to pay dividends.
9. The 20 to 25 employees in each enterprise were selected randomly from the payroll list subject to the following constraints: (1) five of the selected employees must be mid-ranked managerial or technical personnel, and (2) all of the selected employees must have worked at the enterprise both before and after ownership reform. Because the questionnaires were administered at the enterprise, the response rate was 100 %.
10. For a detailed discussion of this technique, see Barnow, Cain, and Goldberger (1981). To control for self-selection bias, we applied the method of two-stage least squares using the predicted probability of positive shareholdings from the regression of shareholdings determination as the instrumental variable based on the sample of privatized TVEs. The results of the two types of approaches did not differ substantially. We also estimated the employees' attitudes with the control for the difference in shareholding effects between the shareholders in the enterprises with majority employee ownership and those in the rest of the privatized enterprises. The estimates of the shareholder dummy interacted with the dummy for the enterprise with majority employee ownership having a positive sign in the regressions for satisfaction, participation and perceived impacts of

privatization in most of the runs, but none of them were statistically significant.

11. Results using the actual value of shareholdings were similar in substance to those reported here using a shareholding dummy variable. This is consistent with other studies surveyed by Sesil *et al.* (2001: 16) who find that “while several studies find improved attitudes under employee ownership, this is almost always due to the status of being an employee owner, rather than to the size of one’s ownership stake.” We also tested the effects of managerial share ownership concentration by replacing the shareholding dummy with the percentage of shares held by the manager and other board members of the enterprise. The regression results show that managerial ownership concentration has no effect on employee satisfaction, but a negative effect on employee participation in enterprise decision-making in the areas of bonus distribution, firing and hiring decisions, working conditions, promotion and internal job change, and a positive effect on employee turnover intention. We also find that the employees’ evaluation of the impact of TVE privatization is negatively related to the degree of managerial ownership concentration with respect to income and benefits, job security, and employees’ willingness to continue to work in the enterprise. To streamline the exposition, the regression results for managerial ownership concentration are reported only for the turnover analysis.
12. Income generation is, in fact, an important attribute of share ownership. By controlling for variation in earnings, we estimate the intrinsic effects of share ownership. The regressions for satisfaction and turnover intention were estimated with and without the earnings variable, although we only report here the two sets of results for the regression on satisfaction with income and benefits. The estimates of the remainder of the regressions omitting the earnings variable indicate stronger effects of share ownership than the regressions reported here which include earnings as an independent variable.
13. Interestingly, employees in the non-privatized firms report higher levels of job satisfaction and lower turnover intentions than all employees in privatized firms even though the

former do not report higher levels of participation in enterprise decision-making. Clearly, hypothesized links between exit and voice need to be interpreted carefully in the case of government owned enterprises.

Bibliography

- Akerlof, George A., Rose, Andrew K., and Yellen, Janet L., "Job Switching and Job Satisfaction in the U.S. Labor Market." *Brookings Papers on Economic Activity*, **2**: 496-582, October 1988.
- Barnow, Burt S., Cain, Glen G., and Goldberger Arthur, "Selection on Observables," *Evaluation Studies Review Annual*, **5**:43-59, 1981.
- Bonin, John, P., Jones, Derek, C., and Putterman, Louis, "Theoretical and Empirical Studies of Producer Cooperatives: Will Ever the Twain Meet?" *Journal of Economic Literature*, **31**(3): 1290-1320, September 1993.
- Bowles, Paul, and Dong, Xiao-yuan, "Enterprise Ownership, Enterprise Organization, and Worker Attitudes in Chinese Rural Industry: Some New Evidence." *Cambridge Journal of Economics*, **23**, 1:1-20, January 1999.
- Cotton, D.R. and Tuttle, J., "Employee Turnover: A Meta-Analysis and Review with Implications for Research." *Academy of Management Review*, **11**: 55-70, 1986.
- Clark, Andrew E., "Job Satisfaction in Britain." *British Journal of Industrial Relations*, **34**, 2:189-217, June 1996.
- Dong, Xiao-yuan, Bowles, Paul, and Ho, Samuel, "The Determination of Employee Share Ownership in China's Rural Industry: Evidence from Jiangsu and Shandong." forthcoming *Journal of Comparative Economics*, June 2002.
- Earle, John, S., Frydman, Roman, and Rapaczynski, Andrezej, "Introduction: Privatization Policies in Eastern Europe: Diverse Routes to a Market Economy." in Earle, John, S., Frydman, Roman, and Rapaczynski, Andrezej, Eds., *Privatization in the Transition to a Market Economy*, pp. 1-16. London: Pinter Publishers, 1993.
- Estrin, Saul, "Economic Transition and Privatization: The Issues." in Estrin, Saul, Ed., *Privatization in Central and Eastern Europe*, pp. 3-30. London: Longman, 1994.
- Freeman, Richard B., "Job Satisfaction as an Economic Variable." *American Economic Review*, **68**: 135-141, May 1978.

- Ho, Samuel, Bowles, Paul, and Dong, Xiao-Yuan, “Letting Go of the Small: An Analysis of the Privatization of Rural Enterprises in Shandong and Jiangsu.” forthcoming in *Journal of Development Studies*, 2002.
- Kruse, Douglas and Joseph Blasi, “Employee Ownership, Employee Attitudes, and Firm Performance.” NBER, *Working Paper 5277*, 1995.
- Long, Richard J., “The Effects of Employee Ownership on Organizational Identification, Employee Job Attitudes, and Organizational Performance: A Tentative Framework and Empirical Findings.” *Human Relations*, **31**: 29-48, January 1978.
- Mowday, Richard, Steers, Richard and Porter, Lyman, “The Measurement of Organizational Commitment.” *Journal of Vocational Behavior*, **14**: 224-247, 1979.
- National Bureau of Statistics, *China Statistical Yearbook*, various issues, Beijing: China Statistics Press (*Zhongguo Tongji Chubanshe*), 1994 to 1999.
- National Bureau of Statistics, *Statistical Yearbook of Jiangsu Province (Jiangsu Tongji Nianjian)*, Beijing: China Statistics Press (*Zhongguo Tongji Chubanshe*), 1999.
- National Bureau of Statistics, *Statistical Yearbook of Shandong Province (Shandong Tongji Nianjian)*, Beijing: China Statistics Press (*Zhongguo Tongji Chubanshe*), 1999.
- Sesil, James C., Kruse, Douglas L., and Blasi, Joseph R., ‘Share Ownership via Employee Stock Ownership.’ *WIDER Discussion Paper No. 2001/25*, 2001.
- Stein, Barry A., “Collective Ownership, Property Rights, and Control of the Corporation.” *Journal of Economic Issues*, **10**: 298-313, June 1976.
- Yuan, Peng, “Xiangzhengqiye de tizhiyujiiegoutiaozheng” [Institutional Innovation and Structural Adjustment in TVEs], in Rural Development Research Institute of China’s Academy of Social Sciences and Rural Social and Economic Survey Team of the State Statistical Bureau, *1999-2000 nian: zhongguonongcunxingshifenyuyuce [The Analysis and Forecast of China’s Rural Economic Situation: 1999-2000]*, pp. 97-121. Beijing: Social Sciences Documentation Publication House, 2000.

Table 1: Descriptive Statistics and Ownership Structure of the Enterprise Sample

	All	Privatized TVEs	Non-privatized TVEs	
No.of enterprises	45	39	6	
Employment (employees)	262.9 (172.9)	241.8 (135.2)	422.5 (296.1)	
Assets (10,000 <i>yuan</i>)	1,450.8 (1,675.6)	1,374.6 (1,590.8)	2,149.3 (2,268.0)	
% of shares held by				
Managers	-----	52.6	0.0	
Other board members	-----	-----	24.9	0.0
Employees	-----	17.9	0.0	
Local government	-----	2.9	100.0	
Others	-----	1.7	0.0	

Notes: Figures in parentheses are standard deviations.

Table 2: Summary Statistics of the Employee Sample

	Total	Privatized TVEs		Non-privatized TVEs
		Shareholder	Non-shareholder	
Shareholder	0.28 (0.47)	1.00	0.0	0.0
Value of shares (yuan/employee)	-----	11,649.0 (28,912.1)	0.0	0.0
Total earnings (yuan/year)	6,863.5 (5,215.6)	7,050.4 (5,060.6)	7,119.2 (6,301.8)	5,868.4 (2,366.1)
Male	0.57 (0.50)	0.69 (0.46)	0.52 (0.50)	0.55 (0.50)
Mid-ranked	0.17	0.20	0.16	0.18
Managerial staff	(0.38)	(0.40)	(0.36)	(0.39)
Education (year)	9.22 (2.17)	9.09 (2.09)	9.08 (2.25)	9.41 (2.12)
Seniority (year)	9.01 (5.65)	11.31 (6.59)	7.74 (4.87)	9.64 (5.31)
Observations	1,033	291	591	151

Note: The statistics presented in this table are derived from the employee survey.

Table 3: Summary Statistics of Employee Attitudes

1. Employees' satisfaction on the following subjects with 1= very dissatisfied and 5 = very satisfied:

	Mean		Mean
Income & benefits	3.436 (0.973)	Opportunity for advancement	3.469 (0.759)
Skill matching	3.721 (0.749)	Job security	3.754 (0.743)
Pace of work	3.654 (0.793)	Social status	3.753 (0.645)
Manager-worker Relation	3.885 (0.983)	Treatment by co-workers	3.965 (0.624)
Participation in Decision-making	3.430 (0.759)	Skill development	3.676 (0.754)
Average score	3.681 (0.511)	Observations	1,033

T-statistics for the difference in average score
 between shareholders and non-shareholder in privatized enterprises: 4.864*
 between shareholders and employees in non-privatized enterprises: -0.526
 between non-shareholders and employees in non-privatized enterprises: -4.393*

1. Employees' assessment of their influence in the following areas with 1=none, 2=some, and 3=a lot:

	Mean		Mean
Work safety	2.504 (0.660)	Technological innovation	2.339 (0.659)
Welfare and benefits	1.875 (0.750)	Bonus distribution	1.711 (0.769)
Firing/hiring decision	1.601 (0.767)	Pace of work	1.838 (0.752)
Promotion	1.605 (0.729)	Internal job change	1.681 (0.710)
Appointment of manager	1.761 (0.811)		
Average score	1.878 (0.540)	Observations	1,033

T-statistics for the difference in over score
 between shareholders and non-shareholder in privatized enterprises: 5.634*
 between shareholders and employees in non-privatized enterprises: 1.830***
 between non-shareholders and employees in non-privatized enterprises: -2.558*

Table 3: Summary Statistics of Employee Attitudes (Cont'd)

1. Turnover intentions

How likely is it that you will actively look for a new job in the next year? 1= not likely, 2 = likely, and 3 = very likely

Mean
1.296
(0.495)

T-statistics for the difference in over score

between shareholders and non-shareholder in privatized enterprises: -2.591*
between shareholders and employees in non-privatized enterprises: 2.401**
between non-shareholders and employees in non-privatized enterprises: 5.192*

1. Perceived impacts of privatization on the respondent in the following areas with 1 = negative effect, 2= no effect, and 3=positive effect

	Mean		Mean
Income and benefits	2.523 (0.648)	Job security	2.262 (0.643)
Working condition	2.436 (0.582)	Social Status	2.326 (0.511)
Treatment by manager	2.461 (0.869)	Treatment by co-workers	2.291 (0.459)
Participation	2.219 (0.565)	Skill development	2.375 (0.564)
Willingness to continue to work for this enterprise	2.540 (0.546)		
Average score	2.412 (0.385)	Observations	883

T-test for difference in overall score

between shareholders and non-shareholders: 4.88*

Notes: The table presents the mean scores of a worker's response with standard deviations reported in parentheses. Average score is the average of the scores for all the aspects of the subject. *,**, *** indicate significance at 1, 5 and 10%, respectively.

Table 4: Regression Estimates of Job Satisfaction

	Average scores	Income & benefits		Opportunity for advancement	Skill matching	Job security
		(1)	(2)			
Shareholder	0.070 (1.646)***	0.092 (0.995)	0.193 (2.111)**	0.072 (0.790)	-0.043 (-0.457)	0.218 (2.240)*
Non-privatized enterprise	0.088 (1.672)***	0.183 (1.517)	0.225 (1.879)***	0.110 (0.926)	0.158 (1.290)	0.169 (1.351)
Log earnings	0.237 (4.866)*	0.770 (8.020)*	---	0.409 (4.414)*	0.333 (3.496)*	0.310 (3.179)*
Mid-ranked managerial staff	0.910 (2.222)*	0.135 (1.420)	0.327 (3.581)*	0.196 (2.094)**	0.211 (2.168)**	0.165
(1.668)*** Male	-0.067 (-1.966)**	-0.053 (-0.725)	0.140 (1.8820)***	0.01 (0.896)	-0.158 (-1.978)**	-0.158 (-)
1.933)***						
Age	-0.011 (-0.951)	-0.053 (-2.009)**	-0.053 (-2.003)**	-0.011 (-0.428)	0.044 (1.639)	-0.053 (-1.906)***
Age2	0.0002 (1.046)	0.001 (1.767)***	0.001 (1.781)***	0.002 (0.438)	-0.0004 (-1.110)	0.0007
(1.911)***						
Education	-0.20 (-2.632)*	-0.051 (-3.029)*	-0.026 (-1.583)	-0.032 (-1.904)***	-0.017 (-1.022)	-0.047 (-2.667)*
Firm size	0.032 (1.136)	0.001 (0.009)	0.144 (2.435)*	0.026 (0.439)	0.136 (2.144)**	0.132 (2.040)**
Penglai	-0.059 (-1.315)	-0.067 (-0.687)	0.182 (1.984)**	-0.148 (-1.543)	-0.137 (-1.384)	0.061 (0.597)
Wujin	-0.249 (-4.036)*	-0.578 (-4.772)*	-0.093 (-0.887)	-0.466 (-3.895)*	-0.486 (-3.947)*	-0.304 (-2.411)**
MU3	---	1.103 (14.970)*	1.070 (14.855)*	0.889 (9.321)*	0.819 (8.180)*	1.100 (8.687)*
MU4	---	1.518 (19.631)*	1.467 (19.437)*	2.104 (20.217)*	1.669 (15.388)*	1.690 (12.930)*
MU5	---	3.671 (35.369)*	3.529 (35.645)	4.101 (32.461)*	3.821 (31.023)*	3.986 (27.769)*
Constant	1.880 (4.455)*	-3.132 (-3.657)*	2.047 (3.654)*	-0.674 (-1.035)	-1.878 (-2.163)**	0.467 (0.526)
LR test on zero slopes		121.939	56.539	61.285	79.071	64.428
P-value		[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
F-test on zero slopes	9.357					
P-value	[0.000]	----	----	----	----	----
Log Likelihood function:	-707.12	-1,144.35	-1,177.05	-1,110.91	-1,016.84	-955.56
Scaled						
R-squared	---	0.114	0.054	0.058	0.075	0.062
Adjusted						
R-squared	0.085	----	----	----	----	----
Observations	1,012	1,034	1,034	1,029	1,032	1,007

Table 4: Ordered Probit Estimates of Job Satisfaction (Cont'd)

	Working Conditions	Social status	Manager-worker relations	Treatment by co-workers making	Participation decision- ment	Skill Develop-
Shareholder	0.135 (1.640)***	0.202 (2.139)**	0.027 (0.288)	0.139 (1.441)	0.146 (1.641)***	-0.061 (-0.653)
Non-privatized enterprises	0.010 0.082	0.221 (1.791)***	0.018 (0.149)	0.317 (2.517)*	0.254 (2.162)**	0.083 (0.675)
Log earnings	0.364 (3.782)*	0.223 (2.331)**	0.451 (4.654)*	0.209 (2.144)**	0.270 (2.954)*	0.332 (3.495)*
Mid-ranked Managerial staff	0.212 (2.186)**	0.101 (1.059)	0.015 (0.153)	-0.054 (-0.557)	0.309 (3.334)*	0.221 (2.294)**
Male	-0.069 (-0.861)	-0.220 (-2.738)*	-0.109 (-1.365)	-0.136 (-1.656)***	-0.053 (-0.686)	0.044 (0.548)
Age	-0.058 (-2.132)**	-0.051 (-1.869)***	-0.036 (-1.343)	-0.041 (-1.475)	-0.029 (-1.112)	-0.023 (-0.835)
Age2	0.0007 (1.979)**	0.0008 (2.067)**	0.0005 (1.297)	0.0004 (1.133)	0.0005 (1.507)	0.0003 (0.794)
Education	-0.034 (-1.98)**	-0.019 (-1.098)	-0.003 (-0.197)	-0.005 (-0.265)	-0.049 (-2.926)*	-0.058 (-3.296)*
Firm size	0.010 (1.154)	0.035 (0.558)	0.046 (0.726)	0.100 (1.544)	0.037 (0.609)	0.048 (0.767)
Penglai	-0.024 (-0.251)	-0.122 (-1.229)	0.111 (1.122)	-0.407 (-3.984)*	-0.087 (-0.924)	-0.271 (-2.727)*
Wujin	-0.352 (-2.852)*	-0.599 (-4.826)*	-0.460 (-3.700)*	-0.533 (-4.171)*	-0.325 (-2.728)*	-0.723 (-5.814)*
MU3	1.233 (9.562)*	0.957 (5.824)*	0.589 (6.463)*	0.338 (3.371)*	0.876 (9.203)*	0.887 (8.578)*
MU4	1.890 (14.383)*	1.225 (12.919)*	1.390 (13.371)*	1.477 (11.286)*	2.224 (21.239)*	1.762 (15.916)*
MU5	4.100 (28.175)*	4.336 (23.798)*	3.463 (29.910)*	3.644 (25.988)*	4.067 (32.537)*	3.913 (31.013)*
Constant	0.699 (0.800)	1.846 (2.104)**	-1.050 (-1.206)	1.379 (1.546)	0.482 (0.577)	0.380 (0.440)
LR test on zero slopes	48.391	82.497	64.913	79.246	70.671	81.813
P-value	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Log Likelihood function:	-1,082.40	-963.317	-990.95	-933.776	-1,166.05	-1,086.29
Scaled R-squared	0.046	0.078	0.060	0.076	0.067	0.078
Observations	1,031	1,031	1,029	1,031	1,028	1,032

Notes: The first columns presents the OLS estimates and the rest of columns report the estimates of the ordered probit regressions. T-statistics are reported in parentheses. *, **, *** indicate significance at 1, 5 and 10%, respectively. MU3, MU4, and MU5 are the means of the higher effective boundary values for the ordered probit regressions. .

Table 5: Ordered Probit Estimates of Employee Participation

	Average score	Safety	Technical Innovation	Welfare & benefits	Bonus distribution
Shareholder	0.125 (2.911)*	0.108 (1.109)	0.190 (2.017)**	0.179 (1.966)**	0.247 (2.672)*
Non-privatized enterprise	-0.001 (-0.017)	0.272 (2.096)**	-0.057 (-0.468)	0.281 (2.392)**	0.105 (0.887)
Mid-ranked managerial personnel	0.199 (4.625)*	0.247 (2.515)*	0.319 (3.361)*	0.360 (3.960)*	0.359 (3.860)*
Male	0.013 (0.368)	0.074 (0.940)	-0.042 (-0.546)	-0.018 (-0.235)	0.019 (0.243)
Education	-0.020 (-2.527)*	-0.014 (-0.808)	0.021 (1.227)	-0.042 (-2.497)*	-0.043 (-2.488)*
Seniority	-0.003 (-1.123)	-0.004 (-0.708)	0.002 (0.392)	0.001 (0.223)	-0.007 (-6.34)*
Firm size	0.039 (1.371)	0.175 (2.754)*	0.181 (2.945)*	0.154 (2.558)*	0.126 (2.021)**
Penglai	-0.131 (-2.994)*	-0.250 (-2.581)*	-0.278 (-2.979)*	-0.157 (-1.740)***	-0.262 (-2.850)*
Wujin	-0.218 (-4.499)*	-0.136 (-1.215)	-0.214 (-1.995)**	-0.373 (-3.570)*	-0.503 (-4.687)*
MU3	----	1.499 (22.077)*	1.448 (25.144)*	1.185 (24.517)*	0.962 (20.955)*
Constant	1.909 (10.447)*	0.854 (2.193)**	0.178 (0.470)	-0.042 (-0.115)	-0.112 (-0.293)
LR test on zero slopes	----	40.848	51.694	76.494	81.347
P-value		[0.000]	[0.000]	[0.000]	[0.000]
F test on zero slopes	9.909	----	----	----	----
P-value	[0.000]				
Log Likelihood function:	-763.34	-852.19	-953.58	-1,054.52	-1,018.38
Scaled R-squared	----	0.039	0.050	0.073	0.078
Adjusted R-squared	0.067	----	----	----	----
Observations	1,002	1,029	1,027	1,023	1,023

Table 5: Regression Estimates of Employee Participation (Cont'd)

	Firing/hiring	Pace of work	Promotion	Internal job change	Appointment of manager
Shareholder	0.266 (2.781)*	0.230 (2.538)*	0.245 (2.610)*	0.162 (1.761)***	0.199 (2.142)**
Non-privatized enterprise	-0.018 (-0.145)	-0.162 (-1.368)	0.012 (0.096)	-0.147 (-1.226)	-0.161 (-1.335)
Mid-ranked managerial personnel	0.374 (3.968)*	0.242 (2.658)*	0.391 (4.180)*	0.298 (3.248)*	0.340 (3.682)*
Male	-0.019 (-0.236)	0.033 (0.434)	0.106 (1.353)	0.088 (1.164)	-0.065 (-0.846)
Education	-0.038 (-2.166)**	-0.021 (-1.248)	-0.026 (-1.454)	-0.051 (-2.981)*	-0.057 (-3.284)**
Seniority	-0.09 (-1.611)	-0.004 (-0.763)	-0.009 (-1.664)***	-0.013 (-2.483)*	-0.001 (-0.128)
Firm size	-0.025 (-0.396)	-0.002 (-0.041)	0.110 (1.740)***	0.007 (0.122)	-0.010 (-0.164)
Penglai	-0.107 (-1.143)	-0.258 (-2.850)*	-0.155 (-1.651)***	-0.130 (-1.417)	-0.207 (-2.234)**
Wujin	-0.360 (-3.281)*	-0.407 (-3.890)*	-0.258 (-2.380)**	-0.231 (-2.186)**	-0.338 (-3.150)*
MU3	0.950 (19.885)*	1.138 (24.015)*	0.982 (20.376)*	1.190 (23.488)*	0.829 (19.805)*
Constant	0.468 (1.199)	0.689 (1.848)***	-0.431 (-1.112)	0.677 (1.802)***	0.768 (2.009)*
LR test on zero slopes	48.454	45.833	51.408	35.610	44.226
P-value	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Log Likelihood function:	-964.713	-1,059.29	-972.563	-1,012.40	-
1,052.71					
Scaled R-squared	0.047	0.045	0.050	0.034	0.043
Observations	1,018	1,017	1,021	1,027	1,021

Notes: The first column presents the OLS estimates and the rest of columns report the estimates of ordered probit regressions. T-statistics are reported in parentheses. *, **, *** indicate significance at 1, 5 and 10%, respectively. MU3 is the mean of the higher effective boundary value for each ordered probit regression.

Table 6: Ordered Probit Estimates of Employees' Turnover Intention

	Turnover Intention	Turnover intention	Turnover intention
Shareholder	-0.281 (-2.355)**		
% of shares held by managers		0.003 (1.672)***	
% of shares held by employees			-0.004 (-1.803)***
Non-privatized enterprise	-0.473 (-2.118)*	-0.095 (-0.496)	-0.405 (-2.509)*
Log earnings	-0.338 (-2.672)*	-0.389 (-3.184)*	-0.386 (-3.152)*
Perceived possibility of finding a new job	1.066 (11.684)*	1.050 (11.921)*	1.046 (11.858)*
Male	0.194 (1.887)***	0.139 (1.403)	0.143 (1.441)
Seniority	-0.021 (-3.045)*	-0.017 (-2.636)*	-0.018 (-2.727)*
Education	-0.010 (-0.455)	0.005 (0.216)	0.003 (0.146)
Mid-ranked managerial personnel	-0.0003 (-0.002)	0.011 (0.091)	0.012 (0.103)
Firm size	-0.081 (-1.001)	-0.079 (-1.004)	-0.088 (-1.129)
Penglai	-0.135 (-1.052)	-0.130 (-1.065)	-0.127 (-1.044)
Wujin	-0.092 (-0.622)	-0.065 (-0.442)	-0.074 (-0.504)
MU3	2.101 (15.075)*	2.100 (15.301)*	2.100 (15.295)*
Constant	1.390 (1.364)	1.349 (1.352)	1.715 (1.743)***
LR test on zero slopes			
P-value	230.269 [0.000]	236.588 [0.000]	237.058 [0.000]
Log Likelihood function:			
Scaled R-squared	-499.161	-535.487	-535.252
Observations	1,027	1,027	1,027

Notes: The table presents the estimates of the ordered probit regressions with t-statistics reported in parentheses. *, **, *** indicate significance at 1, 5 and 10%, respectively. MU3 is the mean of the highest effective boundary value.

Table 7: Regression Estimates of the Impacts of Privatization Perceived by Employees

	Average score	Income & benefits	Job security	Participation in decision-making	Skill & ability development
Shareholder	0.085 (2.821)*	0.386 (3.871)*	0.196 (2.092)**	0.377 (3.851)*	0.216 (2.204)**
Mid-ranked Managerial personnel	0.135 (4.228)*	0.311 (2.923)*	0.272 (2.725)*	0.469 (4.495)*	0.414 (3.933)*
Male	-0.033 (-1.247)	-0.163 (-1.903)***	-0.089 (-1.099)	0.063 (0.740)	0.007 (0.083)
Education	-0.004 (-0.058)	0.016 (0.837)	-0.019 (-1.044)	0.005 (0.288)	0.004 (0.189)
Seniority	-0.003 (-1.545)	-0.013 (-2.164)**	-0.012 (-2.124)**	-0.004 (-0.673)	0.0006 (0.108)
Firm size	0.106 (4.622)*	0.232 (3.339)*	0.080 (1.207)	0.162 (2.318)**	0.125 (1.79)***
Penglai	-0.0891 (-2.500)**	-0.066 (-0.605)	-0.132 (-1.284)	-0.307 (-2.865)*	-0.309 (-2.861)*
Wujin	-0.082 (-2.143)**	0.061 (0.534)	-0.048 (-0.437)	-0.369 (-3.245)*	-0.431 (-3.765)*
MU3	----	1.190 (18.804)*	1.572 (25.535)*	2.109 (28.084)*	2.006 (24.427)*
Constant	1.902 (13.330)*	0.125 (0.300)	1.122 (2.772)*	0.643 (1.522)	1.185 (2.790)*
LR test on zero slopes	----	48.318	20.218	84.618	59.121
P-value		[0.000]	[0.010]	[0.000]	[0.000]
F test on zero slopes	10.137	----	----	----	----
P-value	[0.000]				
Log Likelihood function:	-363.878	-750.042		-825.654	-696.670
	-700.285				
Scaled R-squared	----	0.054	0.023	0.094	0.066
Adjusted R-squared	0.078	----	----	----	----
Observations	868	878	878	878	879

Table 7: Regression Estimates of the Impacts of Privatization Perceived by Employees (Cont'd)

	Commitment to enterprises	Work intensity & conditions	Social status	Treatment by managers	Treatment by co-workers
Shareholder	0.237 (2.340)**	0.056 (0.581)	0.131 (1.298)	0.040 (0.408)	0.898 (0.836)
Mid-ranked managerial personnel	0.380 (3.452)*	0.244 (2.347)**	0.287 (2.678)*	0.198 (1.901)***	0.172 (1.489)
Male	-0.120 (-1.375)	-0.194 (-2.298)*	-0.139 (-1.581)	-0.029 (-0.340)	0.221 (2.311)**
Education	-0.011 (-0.565)	-0.578 (-0.305)	-0.132 (-0.672)	0.021 (1.113)	-0.048 (-2.228)**
Seniority	-0.001 (-0.179)	-0.013 (-2.220)**	-0.004 (-0.586)	-0.006 (-1.042)	-0.008 (-1.173)
Firm size	0.307 (4.279)*	0.205 (2.976)*	0.170 (2.334)*	0.281 (4.052)*	0.154 (1.951)***
Penglai	0.001 (0.009)	-0.261 (-2.449)**	-0.289 (-2.615)*	-0.240 (-2.229)**	-0.180 (-1.552)
Wujin	-0.139 (-1.198)	-0.037 (-0.329)	-0.307 (-2.615)*	-0.354 (-3.106)*	-0.362 (-2.860)*
MU3	1.862 (19.665)*	1.767 (22.637)*	2.498 (23.989)*	1.891 (22.495)*	3.509 (14.687)*
Constant	0.475 (1.093)	0.975 (2.329)**	1.538 (3.459)*	0.395 (0.940)	2.670 (5.056)*
LR test on zero slopes	52.359	31.583	32.863	49.063	36.043
P-value	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Log Likelihood function:	-660.338	-730.730		-629.386	-712.845
	-525.026				
Scaled R-squared	0.059	0.036	0.037	0.055	0.041
Observations	879	879	878	880	877

Notes: The first column presents the OLS estimates and the rest of columns report the estimates of ordered probit regressions. T-statistics are reported in parentheses. *, **, *** indicate significance at 1, 5 and 10%, respectively. MU3 is the mean of the higher effective boundary value for each ordered probit regression.