International Differences in Subjective Performance Evaluation, Compensation and Career Dynamics in a Global Company*

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In this paper, we use confidential personnel records from a large multinational firm to study the differences in subjective performance evaluation and their consequences across countries. We focus our analysis on three different sets of countries: Europe (where the headquarter is established), U.S. and Asia (Japan and China). We try to understand why performance evaluation is distributed differently across countries, and how these differences affect wage growth, the size of the bonus and promotion decisions. We find that evaluations tend to be better on average at the headquarter, but also that wages, bonuses and promotion decisions are less sensitive to performance, therefore diminishing the strength of the incentive mechanism behind performance evaluation. We document how learning about managerial ability occurs through repeated observations. We then discuss the long run implications of these differences on career dynamics and the policy implications for the firm if it wants to implement a consistent human resource policy across countries.

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1 Introduction

Firms often find it challenging to provide incentives to their workers and retain their best elements. Pay for performance is generally considered as a useful tool to achieve these goals. In theory, the principal would like to set performance criteria based on objective measures. However, this desirable feature has been shown to be difficult to achieve in practice, as such objective performance measures are not always available or extremely difficult to define. As a consequence, firms often have to resort to subjective performance evaluation (SPE). Managers observe workers' actions over the year and provide their assessment of their job at the end of the calendar year. This translates into future career development, wage raises and bonus determination. Such an evaluation system based on subjective assessments will work only if managers truthfully report their achievements and if workers trust their managers to do so.

In this paper, we study the causes and consequences of subjective performance evaluation. We try to assess how objective is subjective performance evaluation by relating these ratings to objective variables such as human capital variables or other performance metrics. By doing this, we try to distinguish between true economic (such as learning or human capital acquisition) and more behavioral explanations. In a second stage, we relate SPE ratings to wage growth, bonus size and promotion patterns.

Our main hypothesis is that the determinants of SPE affect the way incentives are provided and therefore compensation, turnover and career paths within the firm. It therefore affects the efficiency of the firm to motivate, retain and attract top individuals.

At the same time, firms are becoming more and more international. This represents yet another challenge, as what (subjective) performance means might be different in different countries. This might be due to cultural differences, different understanding of fairness, but also to differences in the quality of the workforce, different job composition, external and competitive environment, and ultimately how the firm's policy tries to balance the respective advantages and disadvantages of local flexibility-autonomy vs. common policy.

We start by comparing performance evaluations between countries and look at the differences in the determinants of SPE in different countries (human capital, gender, job level); and also at department and manager characteristics. We then analyze the differences in how SPE ratings translate into wages, bonuses and promotions by looking at different sensitivities to performance

We find that subjective performance ratings reflect to some extent basic human capital (tenure, age and education) as well as hierarchical levels. In addition, ratings vary substantially between countries. Asian countries have on average lower figures, and especially in Japan, SPEs are not as sensitive to human capital variables. SPE ratings also have strong consequences on wage growth, bonus size and promotion probabilities. This can be seen as the logical application of internal company rules. However, the sensitivity of compensation and promotion probability to SPE varies by country as well, suggesting different incentives provision and career dynamics.

When we relate the characteristics of the rated and those of the rater, we find that manager's performance and age are strongly correlated with

the ratings they provide to their subordinates. This could suggest either that good managers are allocated to good workers, or that they share similar norms, or it could also be that the rating received psychologically influences the rating provided. The strength of the correlation varies by country as well.

When we look at the long run effect of performance evaluation on turnover and promotion, we find that poor performers are indeed more likely to exit the firm and those who perform consistently above average climb up the ladder faster. However, we also detect evidence of cross-country variation: the sensitivity of performance on the turnover decision is much higher in the US, while consistently achieving high performance is more likely to result in better career prospects at the headquarters. These results suggest that long run career concerns are more important at home, while short term incentives are more used away.

Our analysis relates to a large economic literature studying careers, both theoretically (see e.g. Gibbons and Waldman, 1999a,b; Waldman, forthcoming) and empirically (e.g. Baker, Gibbs and Holmström, 1994). However, the analysis of career development and performance evaluation in an international setting is, to the best of our knowledge, unexplored in economics.

Section 2 describes our dataset obtained through close collaboration with one large global company. Section 3 introduces our methodology and shows our results. Section 4 summarizes our main findings and discusses their implications.

2 Data

We received confidential performance data from one large EU "high tech" manufacturing firm producing in various countries around the globe and selling its products in almost every country. The data were collected in four waves in the spring following the calendar years 2006 to 2009. The data quality is especially high for the domestic country and for the US, but has improved for most countries (especially Japan and China) over the last two calendar years. While the firm initially focused its attention on their top managers, the collection of the ratings have been extended to almost all white-collar workers and integrated in the ERP. The total number of ratings increased from 1,867 for the calendar year 2006 (mostly domestic and US workers) to 10,882 performance ratings (out of 27,241 employees in December 2008) for the calendar year 2008 and 15,916 for 2009 (out of 29,959 employees in March 2010), with a more global distribution (in particular China and Japan).

The firms uses a 5-scale evaluation rating:

- 5: outstanding

- 4: exceeds expectations and goals

- 3: meets expectations and goals

- 2: approaches expectations and goals

- 1: does not meet expectations

Figure 1 shows the distribution of these ratings in four different countries for the latest year available. We observe that the distribution varies sub-

stantially. The shares of outstanding and above expectations performance are twice as high in the domestic country compared to Japan. This finding could have various explanations. First, there could be objective factors behind these differences: either the labor force is of lower quality in Japan, or the organizational structure is different; second, these differences could be related to cultural differences or different ways to evaluate individuals. Below, we will try to distinguish between these explanations.

This information is then combined with confidential monthly personnel records for all workers since January 2003 (January 1997 for domestic workers) until November 2010. These data are extracted from the company's ERP and contain many variables in four different files: hire date (this allows us to compute firm tenure), age, salary, bonus, job, job level, nationality, gender, education level, but also information about the chain of command (global). For each individual, we know the name of the team leader, manager, VP, CVP, SVP and EVP, as well as the name of the department, the name of the company and the geographical area where it operates.

Until recently, the firm was organized in 5 hierarchical layers:

- non managerial employees (job level 0)

- lower management (job level 1) - manager

- middle management (job level 2) - VP

- upper management (job level 3) - SVP

- top management (job level 4) - EVP

In addition, the firm had also put in place a dual career ladder to provide incentives and a career path for its specialists

To cope with explosive growth, the firm has recently introduced two new layers:

- Team leaders (assistant manager)

- Corporate vice presidents - CVP (above VP and below SVP)

The firm uses a global chain of command and is trying to introduce some homogenization in terms of practices, although local units have substantial flexibility to locally manage their internal organization.

Over the period that we analyze, the firm has almost doubled its size (see Figure 2), although most of the new jobs have been created in emerging economics.

3   Results

We divide our analysis in three parts: in the first one we look at some cross-section correlations for each wave of performance evaluation and for each country. We look at both the determinants and the consequences of SPE. In the second part, we use the panel information and try to detect some behavioral effects. In the third part, we look at the long run effect of performance evaluation on career dynamics.

3.1   Repeated cross-sections

3.1.1   Determinants of performance

Result 1: performance is positively related to various measure of human capital

We start by relating performance to tenure, tenure squared, age, age squared and educational dummies:

$$Perf_{it} = \alpha_0 + \alpha_1 Tenure_{it} + \alpha_2 Tenure_{it}^2 + \alpha_3 Age_{it} + \alpha_4 Age_{it}^2 + \alpha_5 Education_i + \epsilon_{it}$$

The first four columns of table 1 shows the results of our ordered probit estimation for two cross sections. We see that objective measures of human capital such as age, firm tenure and education are all positively correlated with performance. This might either reflect the fact that subjective performance evaluation reflects objective factors, or that managers use these variables as signals to establish their ratings.

Result 2: performance increases with the job level

We then extend specification (1) by adding the hierarchical level (JL):

$$Perf_{it} = \alpha_0 + \alpha_1 Tenure_{it} + \alpha_2 Tenure_{it}^2 + \alpha_3 Age_{it} + \alpha_4 Age_{it}^2 + \alpha_5 Education_i + \alpha_6 JL_{it} + \epsilon_{it}$$

In the last two columns of table 1, we can observe that performance is estimated at a higher level the higher the hierarchical level. If the relative difficulty of the task was considered in the assessment, we should not expect this. This suggests that other factors come into play: either that managers are evaluated on an absolute scale, and therefore superior performance simply reflects the efficiency of the selection process; or that it becomes psychologically more difficult to provide bad ratings to individuals at the higher levels.

Result 3: the sensitivity of performance to human capital and job level varies by country

As a next step, we run specification (2) separately for three additional countries: US, China and Japan. The main findings of table 1 can be extended to an international setting (table 2), although the magnitude of the

coefficients varies a lot.

Result 4: controlling for observable characteristics, performance evaluation is very different across countries

We then consider all four countries in a single specification and add country dummies to verify if, controlling for all previous factors, performance evaluation varies by country. While the US and China variables are not significant once controlling for human capital and hierarchical level, we can see that performance evaluation in Japan is significantly lower (table 3). We should stress that Japan has been relatively less successful than the other areas during the period of analysis.

3.1.2 The consequences of performance

In this subsection, we look at how performance affects wage growth, bonus determination and promotion decisions in the short run and how the sensitivity differs by country.

Result 5: performance is positively related to wage growth

We define wage growth as the log of the wage in April minus the log of the wage in December, i.e. after the evaluation process is translated into the formal compensation system. We then relate it to the performance evaluation received in December and other individual characteristics:

$$dlogW_{it} = \beta_0 + \beta_1 Perf_{it} + \beta_2 X_{it} + \epsilon_{it}$$

As expected, higher evaluation is positively related to higher wage growth, but the sensitivity is much higher outside Europe (Table 4).

Result 6: performance is positively related to the size of the bonus

We run a similar exercise for bonus decisions. We define the bonus rate as the ratio of the bonus received over the salary in December.

$$Bonus_{it} = \beta_0 + \beta_1 Perf_{it} + \beta_2 X_{it} + \epsilon_{it}$$

Once again, we notice that higher performance is associated with higher bonus, but the sensitivity is different between countries (table 5). Interestingly, the sensitivity has diminished quite a lot in the US, while is has increased in the domestic country.

Result 7: performance is positively related to the probability of promotion

We then run a simple probit regression to analyze the effect of performance on the probability to be promoted:

$$Promotion_{it} = \beta_0 + \beta_1 Perf_{it} + \beta_2 X_{it} + \epsilon_{it}$$

We can observe that high performance is indeed positively correlated with promotion decision to manager (table 6) but the sensitivity is much larger in the US.

Result 8: performance is negatively related to turnover

Another desirable effect of performance evaluation is to be able to identify and retain the most able individuals. We should therefore expect a negative relationship between turnover and performance evaluation:

$$Exit_{it} = \beta_0 + \beta_1 Perf_{it} + \beta_2 X_{it} + \epsilon_{it}$$

We observe that poor performance is indeed positively related to exit probability in the short run (table 7). Not meeting expecttions is associated with a 51% higher probability of turnover in the domestic country and 67% in the US.

In the next subsection, we look more carefully at the long run effect of performance evaluation on career dynamics.

3.2 Panel analysis

The previous subsection only used the data as repeated cross sections. We now want to determine how persistent is individual performance, how the characteristics of the supervisor affect the ratings they provide to their subordinates, and, ultimately, how learning occurs about managerial ability through repeated observations.

Result 9: performance is highly persistent

$$Perf_{it} = \alpha_0 + \alpha_1 Perf_{i(t-1)} + \epsilon_{it}$$

We observe that performance is indeed very persistent (table 8).

Result 10: the characteristics of the manager affect SPE

Focusing our analysis on regular workers, we go back to our first specification and add some characteristics of the manager as additional controls:

$$Perf_{it} = \alpha_0 + \alpha_1 Tenure_{it} + \alpha_2 Tenure_{it}^2 + \alpha_3 Age_{it} + \alpha_4 Age_{it}^2 + \alpha_5 Education_i$$

$$+ \beta_1 Perf Manager_{it} + \beta_2 Age Manager_{it} + \beta_3 Gender Manager_{it} + \epsilon_{it}$$

We observe that the characteristics of the manager rating individuals are very important as well: the performance of the manager, the age and the gender (table 9).

3.3 Career dynamics and performance evaluation

In this subsection, we analyze the long run effect of changes in performance evaluation. There are at least two issues that teh firm should care

about. First, does performance evaluation lead to a natural selection of those performing bellow average. Second, is performance evaluation leading to the right assignment of workers. We also want to verify if individuals are more likely to leave the firm if their evaluation declines. For this purpose, we design a series of empirical tests using various sequences of performance evaluation.

3.3.1 Two-period analysis

We run a simple probit equation where we regress the probability to exit the company following two successive evaluations (conditional on having been observed two years in a row):

$$Exit_{it} = \beta_0 + \beta_1 Perf_{it,(t-1)} + \beta_2 X_{it} + \epsilon_{it}$$

We observe that poor successive evaluations are indeed related to exit, and that once again the sensitivity is higher in the US (table 10).

3.3.2 Four-period analysis

Consider now individuals who were assessed during all four periods that we observe in our dataset. Controlling for their initial job, we ask how their current position is affected by how well they performed over the last three years. We run an ordered probit regression:

$$JobLevel_{it} = \beta_0 + \beta_1 Perf_{i(t-3),(t-2),(t-1)} + \beta_2 X_{i(t-3)} + \epsilon_{it}$$

Individuals who consistently overperform are indeed more likely to climb the ladder in the medium/long run, while those with average performance are likely to stay put (table 11). This suggests that SPE acts as a useful tool for the assignment of workers in the corporate hierarchy. It also appears

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that moving up in the hierarchy is more sensitive to performance at the headquarters, suggesting that reaching the higher levels at the company is easier at home.

4   Conclusion

In this note, we studied subjective performance evaluation in a global company. We documented substantial differences in ratings across countries and discussed their consequences on incentives, selection, retention and career dynamics. In future work, we plan to elaborate these ideas in a structural model of learning and career dynamics in organizations.

References

[1] Baker, G., Gibbs, M. and Holmström, B. (1994), The Internal Economics of the Firm: Evidence from Personnel Data, Quarterly Journal of Economics, 109, 881-919.

[2] Gibbons, R. and Waldman, M. (1999), , A Theory of Wage and Promotion Dynamics Inside Firms, Quarterly Journal of Economics, 114, 1321-1358.

[3] Waldman, M. (forthcoming), Theory and Evidence in Internal Labor Markets, Handbook of Organizational Economics.

Table I: Determinants of Individual Performance - Headquarter

	2009-2010		2008-2009		2009-2010		2008-2009		2009-2010		2008-2009	
	Coef.	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*
Age	0.037**	0.016	0.043**	0.017	0.036**	0.018	0.051***	0.019	0.018	0.018	0.028	0.020
Age²	-0.065***	0.018	-0.001***	0.000	-0.064***	0.020	-0.001***	0.000	-0.049*	0.020	-0.001**	0.000
Tenure	0.035***	0.006	0.039***	0.007	0.039***	0.006	0.042***	0.007	0.026***	0.007	0.031***	0.008
Tenure²	-6.189***	0.1957	-0.001***	0.000	-6.600***	2.096	-0.001***	0.000	-4.011*	2.122	-0.001***	0.000
BA/BSc					0.252***	0.092	0.279***	0.106	0.169*	0.093	0.183*	0.106
MSc/PhD					0.408***	0.087	0.377***	0.100	0.237***	0.089	0.194*	0.103
Specialist									0.235***	0.051	0.192***	0.070
Team leader									0.087	0.068	0.232***	0.055
Manager									0.389***	0.064	0.484***	0.067
Senior Specialist									0.474***	0.164	0.437***	0.0161
Vice President									0.540***	0.131	0.692***	0.138
Corporate Vice President									1.032***	0.131	1.101***	0.136
Senior Vice President									2.049***	0.318	1.753***	0.304
N	5175		4478		4,546		3,863		4546		3863	
Log Pseudo Likelihood	-5,175.8		-4,470.6		-4,478.6		-3,764.5		-4,405.5		-3,676.7	

All specifications are ordered probit estimations.

Table IIa: Determinants of Individual Performance - By Country (2008-2009)

	United States				China				Japan			
	Coef.	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*
Age	0.025	0.019	0.006	0.019	0.096	0.068	0.197***	0.078	0.018	0.038	0.013	0.038
Age²	-0.000	0.001	-0.000	0.001	-0.001	0.001	-0.002**	0.001	-0.000	0.001	-0.000	0.001
Tenure	0.079***	0.014	0.070***	0.014	0.329***	0.051	0.325***	0.052	0.013	0.024	0.016	0.024
Tenure²	-0.003***	0.001	-0.002***	0.001	-0.025***	0.005	-0.025***	0.048	-0.000	0.001	-0.001	0.001
Specialist			0.354***	0.087			-0.035	0.807			-0.189	0.383
Team leader			-0.180	0.644			-0.241	0.536				
Manager			0.420***	0.058			0.522***	0.149			0.244*	0.135
General manager											0.438**	0.180
Vice President			1.014***	0.384			1.930***	0.692			1.501***	0.498
N	2,934		2,934		1111		1111		789		789	
Log Pseudo Likelihood	-3,152		-3,116		-875.3		-866.2		-854.4		-846.2	

All specifications are ordered Probit estimations.

Table IIb: Determinants of Individual Performance - By Country (2009-20010)

	United States				China				Japan			
	Coef.	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*
Age	0.013	0.018	-0.007	0.019	0.124***	0.041	0.169***	0.043	-0.005	0.042	0.007	0.042
Age²/100	-0.019	0.022	-0.0005	0.022	-0.130**	0.061	-0.216***	0.066	-0.024	0.052	-0.053	0.052
Tenure	0.049***	0.012	0.040***	0.012	0.262***	0.028	0.264***	0.029	0.063***	0.024	0.061**	0.024
Tenure²/100	-0.002***	0.0006	-0.0017***	0.0007	-0.019***	0.003	-0.020***	0.033	-0.003**	0.001	-0.002**	0.001
Specialist			0.259***	0.063			0.104	0.446			0.108	0.516
Manager			0.517***	0.056			0.546***	0.135			0.159	0.137
General manager											0.789***	0.184
Vice President			0.812**	0.345			1.759***	0.635			2.039*	1.084
N	3,328		3,328		2,047		2,047		797		797	
Log Pseudo Likelihood	-3,385.60		-3,337.75		-1,669.89		-1,658.64		-903.46		-892.80	

All specifications are ordered probit estimations.

Table III: Differences in Performance Evaluation by Country

	2008-2009				2009-2010			
	No Individual Differences		With Individual Differences		No Individual Differences		With Individual Differences	
	Coef.	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*
United States	-0.069***	(0.025)	0.035	(0.029)	-0.108***	(0.025)	-0.044	(0.028)
China	-0.161***	(0.036)	-0.020	(0.042)	-0.133***	(0.029)	-0.024	(0.044)
Japan	-0.692***	(0.041)	-0.719***	(0.044)	-0.688***	(0.043)	-0.736***	(0.046)
Age			0.041***	(0.01)			0.048***	(0.010)
Age²			-0.001***	(0.0001)			-0.001***	(0.0001)
Tenure			0.039***	(0.005)			0.032***	(0.005)
Tenure²			-0.001***	(0.0002)			-0.001***	(0.0002)
Team leader			0.082	(0.062)			0.063	(0.058)
Specialist			0.237**	(0.041)			0.263***	(0.036)
Senior Specialist			0.240**	(0.147)			0.520**	(0.157)
Manager			0.440***	(0.031)			0.447***	(0.037)
General manager			0.388***	(0.128)			0.687***	(0.174)
Vice President			0.690***	(0.082)			0.661***	(0.112)
Corporate Vice President							1.686***	(0.584)
Senior Vice President			1.415**	(0.183)			1.754***	(0.267)
N	10,393		10,393		11,346		11,346	
Log Pseudo Likelihood	-10,774.01		-10,512.20		-11,400.36		-11,174.41	

All specifications are ordered probit estimations.

Table IV: Impact of Individual Performance on Wage Growth - by Country (April 2009 - December 2008)

$\Delta \log w$	Headquarter		United States		China*		Japan	
	Coef.	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*
Outstanding	0.034***	(0.003)	0.068***	-0.003	0.094***	(0.008)	0.074***	(0.021)
Exceeds	0.023***	(0.003)	0.048***	-0.003	0.091***	(0.007)	0.048***	(0.010)
Meets	0.015***	(0.003)	0.028***	-0.003	0.071***	(0.007)	0.023***	(0.009)
Age	-0.002***	(0.000)	-0.004***	(0.001)	-0.003*	(0.002)	0.013***	(0.003)
Age²	0.000***	(0.000)	0.000***	(0.000)	0.000	(0.001)	-0.000***	(0.000)
Tenure	-0.001**	(0.000)	-0.000	(0.001)	0.003**	(0.001)	0.002	(0.002)
Tenure²	0.000	(0.001)	-0.000	(0.001)	-0.000	(0.001)	-0.000	(0.001)
Female	-0.002**	(0.001)	-0.001	(0.001)	0.001	(0.002)	-0.012	(0.007)
Team leader	0.009***	(0.002)	-0.010	(0.020)	-0.038***	(0.011)		
Manager	0.002	(0.002)	0.003*	(0.002)	-0.001	(0.004)	-0.006	(0.010)
Vice President	0.004	(0.003)	-0.002	(0.001)	-0.045***	(0.013)	-0.011	(0.039)
N	4,493		2,919		1,002		783	
R²	0.078		0.188		0.241		0.122	

Table V: Impact of Individual Performance on Bonus Share - by Country (April 2009 - December 2008)

Ratio Bonus to Wage	Headquarter		United States	
	Coef.	*SE*	*Coef.*	*SE*
Outstanding	0.974***	(0.027)	0.765***	-0.098
Exceeds	0.710***	(0.023)	0.616***	-0.081
Meets	0.416***	(0.023)	0.327***	-0.078
Age	0.007*	(0.004)	-0.067***	(0.017)
Age²	-0.000**	(0.000)	0.001***	(0.000)
Tenure	-0.002	(0.002)	0.029**	(0.012)
Tenure²	0.000	(0.001)	-0.001	(0.001)
Team leader	0.239***	(0.015)	0.868	(0.557)
Specialist	0.239***	(0.011)	1.589***	(0.073)
Senior Specialist	0.538***	(0.036)		
Manager	0.340***	(0.014)	1.262***	(0.052)
Vice President	0.675***	(0.031)	5.800***	(0.343)
Corporate Vice President	1.004***	(0.030)		
Senior Vice President			7.406***	(0.964)
N	4,494		2,919	
R²	0.575		0.388	

Table VI: Impact of Individual Performance on Promotion - by Country (marginal change)

Promotion Probability	Headquarter				United States			
	2008		2009		2008		2009	
	dF/dX	SE	dF/dX	SE	dF/dX	SE	dF/dX	SE
Outstanding	0.024***	(0.045)	0.007*	(0.010)	0.059**	(0.052)	0.017*	(0.015)
Exceeds	0.001**	(0.002)	0.002*	(0.002)	0.026**	(0.017)	0.022***	(0.007)
Age	0.000	(0.001)	0.001	(0.001)	0.013**	(0.006)	0.002	(0.002)
Age²	-0.000	(0.001)	-0.000	(0.001)	-0.000**	(0.000)	-0.000	(0.001)
Tenure	-0.000	(0.001)	-0.000	(0.001)	0.009**	(0.004)	0.004***	(0.001)
Tenure²	-0.000	(0.001)	0.000	(0.001)	-0.001*	(0.000)	-0.000	(0.001)
N	1,352		2,653		535		2,086	
Log Pseudo Likelihood	-55.5		-43.1		-91.1		-142.3	

Table VII: Impact of Individual Performance on Exit - by Country (panel 2008-2010) - marginal changes

Exit Probability	Headquarter				United States			
	dF/dX	SE	dF/dX	SE	dF/dX	SE	dF/dX	SE
Does not meet expectations	0.517***	(0.089)	0.515***	(0.090)	0.699***	(0.211)	0.678***	(0.218)
Approaches expectations	0.146***	(0.020)	0.140***	(0.019)	0.164***	(0.022)	0.160***	(0.022)
Age			-0.006***	(0.003)			-0.004	(0.003)
Age²			0.008***	(0.002)			0.0001	(0.0001)
Tenure			-0.005***	(0.0005)			-0.006***	(0.002)
Tenure²			0.0001**	(0.00002)			0.0001	(0.0001)
N	13,932		13,932		8,079		8,079	
Log Pseudo Likelihood	-2,418.99		-2,364.92		-1,902.7		-1886.2	

Table VIIIA: Persistence of Individual Performance - First period

Rating in t	Headquarter		United States	
	Coef.	*SE*	*Coef.*	*SE*
Rating in t-1	0.477***	(0.020)	0.394***	-0.032
N	2,352		884	
R²	0.201		0.149	

Table VIIIB: Persistence of Individual Performance - Second period

Rating in t	Headquarter		United States		China*		Japan	
	Coef.	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*
Rating in t-1	0.475***	(0.016)	0.258***	(0.018)	0.250***	(0.030)	0.419***	(0.039)
N	3,369		2,756		923		716	
R²	0.212		0.069		0.058		0.142	

Table VIIIA: Transition Matrix of Individual Performance - 2008-2009

	Headquarter						United States					
	1	2	3	4	5	N	1	2	3	4	5	N
1	0	5	5	0	0	10	0	1	1	0	0	2
2	2	13	61	8	1	85	0	29	105	18	2	154
3	0	56	1,071	456	26	1,609	1	80	794	430	86	1,391
4	0	5	492	765	137	1,399	0	25	435	448	113	1,021
5	0	1	28	158	79	266	0	0	70	86	32	188
N	2	75	1,652	1,387	243	3,369	1	134	1404	982	233	2,756

Table VIIIB: Transition Matrix of Individual Performance - 2007-2008

	Headquarter						United States					
	1	2	3	4	5	N	1	2	3	4	5	N
1	0	2	2	0	0	4	0	0	0	0	0	0
2	0	8	49	8	0	65	0	2	17	0	0	19
3	0	29	673	334	18	1,054	0	5	267	109	9	390
4	0	4	324	597	83	1,008	0	2	163	186	50	401
5	0	0	20	105	58	183	0	0	11	50	13	74
N	0	43	1,068	1,044	159	2,314	0	9	458	345	72	884

Table IX: Worker and Manager Performance - Year 2009

Worker Performance	Headquarter				United States			
	Coef.	*SE*	*Coef.*	*SE*	*Coef.*	*SE*	*Coef.*	*SE*
Manager Performance	0.122***	(0.036)	0.124***	(0.039)	0.387***	(0.037)	0.380***	(0.041)
Manager Age	0.007**	(0.003)	0.008**	(0.004)	0.009**	(0.005)	0.009*	(0.005)
Female	0.066	(0.061)	0.053	(0.066)	0.095	(0.058)	0.076	(0.063)
Female Manager	-0.031	(0.077)	-0.075	(0.084)	0.163**	(0.082)	0.160*	(0.087)
Female*Female Manager	-0.106	(0.096)	-0.073	(0.103)	-0.068	(0.105)	-0.035	(0.114)
Age	0.014	(0.022)	0.019	(0.024)	-0.009	(0.023)	-0.009	(0.027)
Age²	-0.000*	(0.000)	-0.001*	(0.000)	0.000	(0.001)	0.000	(0.001)
Tenure	0.023***	(0.008)	0.024***	(0.009)	0.038**	(0.016)	0.046**	(0.019)
Tenure²	-0.034	(0.027)	-0.035	(0.029)	-0.174*	(0.103)	-0.185	(0.130)
N	2,613		2,258		2,236		1,936	
Log Pseudo Likelihood	-2,484.3		-2,123.7		-2,169.0		-1,829.7	

Table X: Impact of Past Performance on Exit - Year 2009

Exit in 2009	Headquarter		United States	
	Coef.	*SE*	*Coef.*	*SE*
AE, AE	0.216**	(0.166)	0.628**	(0.327)
ME, AE	0.056	(0.053)	0.637***	(0.209)
AE, ME	0.060**	(0.042)	0.327***	(0.134)
ME, ME	-0.009	(0.009)	0.057**	(0.031)
ME, EE	-0.007	(0.010)	0.065*	(0.047)
EE, EE	-0.018*	(0.008)	0.033	(0.035)
EE, O	-0.010	(0.015)	-0.020	(0.039)
O, EE	-0.010	(0.013)	0.016	(0.051)
O, O	0.029	(0.032)	0.081	(0.121)
Age	-0.002	(0.005)	-0.014*	(0.007)
Age²	0.000	(0.001)	0.000**	(0.000)
Tenure	-0.004**	(0.001)	-0.005	(0.008)
Tenure²	0.000**	(0.000)	-0.000	(0.001)
N	2,242		854	
Log Pseudo Likelihood	-307.7		-198.2	

Table XI: Impact of Individual Performances on Job Level

Job Level*	Headquarter		United States	
	Coef.	*SE*	*Coef.*	*SE*
OOO	1.590***	(0.349)	-0.074	(0.649)
OOE	1.298***	(0.264)	0.172	(0.803)
EEO	0.518	(0.376)	0.973**	(0.474)
OEE	0.366	(0.266)	0.550*	(0.318)
EMM	0.195	(0.186)	0.010	(0.215)
MEE	-0.068	(0.189)	-0.767***	(0.255)
EEM	-0.356**	(0.160)	-0.411**	(0.214)
MME	-0.431*	(0.256)	-0.425	(0.293)
MMM	-0.434***	(0.138)	-0.632***	(0.198)
Job Level Dummies	Yes		Yes	
N	672		420	
Log Pseudo Likelihood	-595.9		-319.7	

* EEE is the omitted variable