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HRM POLICIES AND PRACTICES OF U.S. AND
JAPANESE FIRMS OPERATING IN THE U.S.

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HRM POLICIES AND PRACTICES OF U.S. AND JAPANESE FIRMS OPERATING IN THE U.S.

A voluminous literature on Japanese management practices, especially human resource management (HRM) practices, has emerged in recent years (Yang, 1991). From one perspective, Japanese firms practice a form of "high commitment-type" work-employment systems featuring job stability, flexible job design, work teams, relatively flat pay structures, substantial variable compensation, and on-the-job training, among other characteristics (Lawler, 1986; Taira, 1988). Some researchers have concluded that this high commitment or "salaried worker" model has been successfully transported across national boundaries, including to the U.S. (Osterman, 1988; Shimada and MacDuffie, 1987). Other researchers emphasize the limitations of such HRM crossnational transferability (Yang, 1991), and still others emphasize the convergence of U.S. and Japanese HRM policies and practices (Jacoby, 1991).

This paper addresses the question of whether there is in fact a single (high commitment/salaried worker or other) model of Japanese HRM practices in the U.S., and does so by analyzing two survey-based data sets recently obtained from samples of Japanese and U.S. firms operating in the U.S. (Yang, 1990; Delaney, Lewin, and Ichniowski, 1989). To preview the main findings and conclusions of this research, it appears that there is not a single model of HRM

practices operating in the U.S., either among Japanese or U.S. firms. Rather, the data support the conclusion that dual (and perhaps multiple) systems of HRM practices are prevalent in the U.S., both among Japanese and U.S. firms. Some of the characteristics of these systems and some of their determinants are identified below. The paper also briefly considers the relationships between HRM practices and firm performance.

HRM Policies of Japanese and U.S. Firms

Data by which to assess the HRM policies and practices of firms operating in the U.S. are sorely lacking. While the U.S. Bureau of Labor Statistics regularly collects data on earnings, collective bargaining settlements, unionism, labor turnover, and unemployment, it does not regularly collect data on the areas of human resource policy and practice which are of central interest to this paper (U.S. Bureau of Labor Statistics, 1990). Thus, we rely on data obtained through special surveys of samples of Japanese and U.S. firms operating in the U.S. These surveys were conducted in 1989 and 1987, respectively, and the reader is referred to Yang (1990) and Delaney, Lewin, and Ichniowski (1989) for further details about research designs, sampling methods, questionnaire content, response rates, and variable construction. These surveys yielded HRM data for 107 Japanese-owned firms and 438 U.S.-owned firms operating in the U.S. during the late 1980s.

Nine specific areas of HRM policy and practice were common to the

two aforementioned surveys; these are listed in Table 1, together with the percentage of Japanese and U.S. firms reporting that they followed these policies and practices. In each case, Japanese firms were more likely than U.S. firms to have the specific policy or practice in place. Also observe that, with one exception (flexible work rules), a majority of Japanese firms had each HRM policy/practice in place, while in only five of nine cases did a majority of U.S. firms have these specific HRM policies and practices in place. Thus, at first glance it appears that Japanese firms operating in the U.S. are more likely than U.S. firms operating in the U.S. to follow HRM policies and practices associated with high commitment-type work-employment systems.

However, the primary economic sector in which a firm operates apparently is an important determinant of both Japanese and U.S. firms' adherence to a so-called high-commitment-type work system. In particular, and as shown in Table 2, firms in the manufacturing sector are more likely than firms in the service sector to have written human resource plans, employee training programs, formal job analysis programs, flexible work rules, nonfinancial participation programs, information-sharing programs, financial participation programs, and grievance/complaint procedures; in most cases, these differences are statistically significant. Only in the area of performance appraisal are service firms more likely than manufacturing firms to have adopted formal systems.

Determinants of HRM Policy and Practice

To more systematically identify the determinants of HRM policies and practices in Japanese and U.S. firms operating in the U.S., a series of logistic regression analyses were performed in which each of the nine human resource policies and practices listed in Tables 1 and 2 served as the respective dependent variables, and the following served as independent variables: firm size (measured by assets), firm age (measured by years since founding), unionization (measured by a dummy union present-union absent variable), region (measured by a four-category dummy variable), industry (measured by an eight-category dummy variable), and HRM values (measured by a three-item continuous variable based on scaled questions about management's prioritization of human resource issues in the firm, management's valuation of human resources in relation to financial resources, and management's beliefs about the contribution of HRM policies and practices to firm performance). A summary of the main regression results is presented in Table 3.

These findings suggest that firm size is positively associated with the presence of written human resource plans, employee training programs, formal job analysis programs, information-sharing programs, formal performance appraisal systems, and grievance/complaint procedures among Japanese firms and U.S. firms operating in the U.S. Younger (newer) firms are more likely than older firms to have written human resource plans, formal job

analysis programs, nonfinancial participation programs, and information-sharing programs. In both Japanese and U.S. firms operating in the U.S., employee unionism is negatively associated with the presence of employee training programs, formal job analysis programs, and performance appraisal systems, and positively associated with the presence of information-sharing programs and grievance/complaint procedures.

Few significant regional differences with respect to firm-level HRM policies and practices are evident from the findings presented in Table 3, although firms located in the Northern region of the U.S. are somewhat more likely than firms located elsewhere to follow "high-commitment-type" HRM policies and practices. Manufacturing firms are considerably more likely than firms in other major industries to follow high-commitment-type HRM policies and practices, although there are occasional other positive and negative industry effects on the incidence of such policies and practices. The positive effects include those of construction on the incidence of employee training programs and those of transportation, communications, and public utilities on the incidence of written human resource plans. The negative effects include those of construction on the incidence of flexible work rules, performance appraisal systems, and financial participation programs; those of finance, insurance, and real estate on the incidence of employee training and information-sharing programs; and those of services on the incidence of written human resource

plans and grievance/complaint procedures. Perhaps most notable, human resource values of senior executives in Japanese and U.S. firms operating in the U.S. are significantly positively associated with the presence of written human resource plans, employee training programs, flexible work rules, and nonfinancial and financial participation programs in these firms.

HRM Policy-Practice and Firm Performance

The extent to which high-commitment-type and other types of HRM policies and practices contribute to the performance of the firm is an issue which has recently attracted the attention of scholars from several disciplines (see Kleiner, Block, Roomkin, and Salsburg, 1987; Blinder, 1990; Ichniowski, 1990). Certain popular writings as well as some academic works unequivocally claim that firm performance is enhanced through the use of high-commitment-type HRM policies and practices (Peters and Waterman, 1982; Kanter, 1983; Simmons and Maris, 1985; Lawler, 1986), and there is little doubt that senior human resource management executives are increasingly being held to account for the contributions of HRM to firm performance (Walker and Moorhead, 1987; Freedman, 1990). Moreover, certain well-documented case or "best practice" examples, the most notable of which is NUMMI (the General Motors-Toyota joint venture), strongly underscore the contribution of high-commitment-type HRM policies and practices to firm performance (Gershenfeld, 1987; Cutcher-Gershenfeld, 1988; Brown and Reich, 1989; Childs, 1989).

To shed some more systematic light on this issue, we performed a series of OLS regression analyses in which respondents' perceptions of product quality and productivity improvement during the late 1980s served as dependent variables in the case of Japanese firms, and changes in reported return on investment and productivity (measured by revenue per employee) during the mid-1980s served as dependent variables in the case of U.S. firms. (Further details about the methods used to construct these dependent variable are available from the authors; also see Yang, 1991; Lewin, 1992). Selected results of these regression tests are presented in Table 4.

Generally speaking, few individual HRM-type independent variables are significantly related to measures of firm performance (and changes in firm performance) in Japanese and U.S. firms operating in the U.S.--although, notably, the signs on most of these variables are positive. Observe, however, that (the presence of) both employee financial and nonfinancial participation programs were significantly positively related to productivity (revenue per employee) changes in U.S. firms during the mid-1980s. This finding is consistent with those reported in an earlier study of the same data base (Mitchell, Lewin, and Lawler, 1990). As to the control variables, firm age and location within the manufacturing sector are consistently negatively associated with the performance of Japanese and U.S. firms. Unionization is significantly negatively associated with perceived product quality and productivity

improvement among Japanese firms and with (changes in) return on investment among U.S. firms, but is significantly positively associated with (changes in) productivity among U.S. firms. These differential effects of unionism on productivity may be due in part to the use of a perceptual measure of productivity for Japanese firms, in contrast to the use of behavioral measure of productivity for U.S. firms.

To more fully explore these statistical relationships, several interaction variables were constructed and included in the regression analyses. The findings reported in Table 4 indicate the the interaction of the manufacturing sector with several HRM-type variables--training, employee nonfinancial participation, employee financial participation, and senior executive HRM values--are significantly positively associated with business performance and change-in-performance measures among Japanese and U.S. firms operating in the U.S., with the results being relatively more consistent for Japanese firms than for U.S. firms. These findings may be interpreted to support the notion that high-commitment-type work-employment systems can contribute to firm performance--but also that other, often exogenous, factors also influence firm performance. Additionally, these findings underscore the potential importance of further research on the determinants of HRM policy and practice "packages," and on the relationships between firms' choices of HRM packages and firm performance (Fiorito, Lowman, and Nelson, 1987; Kleiner, Block, Roomkin, and Salsburg; Delaney,

Lewin, and Ichniowski, 1989; Ichniowski, 1990).

Conclusions

Survey evidence obtained from samples of Japanese and U.S. firms operating in the U.S. during the late 1980s suggests that the former do not follow a single high-commitment/salaried worker model of HRM policies and practices which distinguishes them from the latter. While Japanese firms operating in the U.S. are more likely than U.S. firms operating in the U.S. to have written human resource plans, employee training programs, job analysis programs, flexible work rules, employee financial and nonfinancial participation programs, information-sharing programs, performance appraisal systems, and grievance/complaint systems, the incidence of these practices is significantly moderated by certain exogenous variables, for example, industry and unionization, and by certain endogenous variables, for example, firm size, firm age, and the HRM values of the firm's senior executives. Concerning industry effects on firm-level HRM policies and practices, Japanese and U.S. manufacturing firms are considerably more likely than Japanese and U.S. service firms to adhere to a so-called high commitment/salaried worker model.

With respect to the effects of HRM policies and practices on firm performance, and controlling for such variables as firm size, firm age, industry, and unionization, it does appear that certain high-commitment-type policies and practices are positively associated

with product quality, (changes in) productivity, and, to a lesser extent, (changes in) return on investment. These policies and practices include training programs, financial participation programs, and nonfinancial participation programs. But also of (statistical) importance here is the "value" which senior executives place on HRM, and senior executives of Japanese firms operating in the U. S. appear to place a higher value on HRM than senior executives of U.S. firms operating in the U.S. (Yang, 1990; 1991). The validity of this conclusion and the identification of factors which determine senior executive valuation of HRM, both in Japanese and U.S. firms, merit further theoretical and empirical research.

Table 1

INCIDENCE OF SELECTED HRM POLICIES IN JAPANESE
AND U.S. FIRMS OPERATING IN THE U.S.
(in percent of firms surveyed)

<u>HRM Policy</u>	<u>Japanese Firms</u>	<u>U.S. Firms</u>
Written Human Resource Plan	58.8	51.4
Employee Training Program	62.6	41.2
Formal Job Analysis Program	74.5	56.4
Flexible Work Rules	46.5	11.1
Nonfinancial Participation Program	59.0	38.3
Information Sharing Program	80.8	57.8
Performance Appraisal System	94.2	76.5
Financial Participation Program	52.1	41.2
Grievance/ Complaint Procedure	64.6	61.6
(n =)	(107)	(438)

TABLE 2
INCIDENCE OF HRM POLICIES IN JAPANESE
AND U.S. FIRMS OPERATING IN THE U.S., BY SECTOR
(in percent of firms surveyed)

<u>HRM Policy</u>	<u>Japanese Firms</u>		<u>U.S. Firms</u>	
	<u>Manufacturing</u>	<u>Service</u>	<u>Manufacturing</u>	<u>Service</u>
Written Human Resource Plan	61.4a	48.5a	60.9c	40.2c
Employee Training Program	76.2b	43.2b	51.4d	34.7d
Formal Job Analysis Program	83.6b	56.1b	61.3	51.2
Flexible Work Rules	56.2b	31.8b	12.3	9.7
Nonfinancial Participation Program	71.9b	39.3b	46.8c	29.6c
Information Sharing Program	90.2a	67.5a	68.4d	45.5d
Performance Appraisal System	90.5	99.9	68.2c	71.4c
Financial Participation Program	67.4b	38.3b	52.3d	31.6d
Grievance/ Complaint Procedure	71.1a	55.7a	78.7d	47.1d

(n =) (63) (44) (230) (208)

a = significant difference at $p = < .05$ according to a chi-square test

b = significant difference at $p = < .01$ according to a chi-square test

c = significant difference at $p = < .05$ according to a chi-square test

d = significant difference at $p = < .05$ according to a chi-square test

TABLE 3

LOGISTIC REGRESSION RESULTS FOR SELECTED HRM POLICIES AND PRACTICE
(beta coefficients; chi-square values in parentheses)

<u>Independent Variable</u>	<u>Dependent Variable</u>		
	<u>Written Human Resource Plan</u>	<u>Employee Training Program</u>	<u>Formal Job Analysis Program</u>
Intercept	+0.09 (0-15)	-0.03 (0.11)	+0.23 (2.43) *
Size	+0.52 (2.56) **	+0.41 (2.26) *	+0.63 (2.84) **
Age	-0.35 (2.18) *	+0.16 (1.78)	-0.40 (2.22) *
Union	-0.17 (1.64)	-0.26 (2.30) *	-0.38 (2.44) *
Region			
-East	-0.18 (1.68)	-0.16 (1.52)	-0.19 (1.56)
-West	-0.09 (0.17)	+0.17 (1.46)	-0.08 (0.16)
-South	-0.11 (0.54)	-0.10 (0.43)	-0.07 (0.19)
Industry			
-Agriculture	-0.34 (2.10) *	-0.19 (1.77)	-0.15 (1.38)
-Mining	-0.16 (1.24)	-0.06 (0.44)	-0.14 (1.36)
-Construction	-0.18 (1.61)	+0.41 (2.34) **	-0.20 (1.94)
-Trans., Comm., & Utilities	+0.45 (2.65) **	+0.18 (1.83)	+0.19 (1.60)
-W & R Trade	-0.16 (1.36)	-0.16 (1.42)	-0.13 (1.22)
-FIRE	-0.18 (1.20)	-0.43 (2.35) *	-0.18 (1.78)
-Services	-0.38 (2.22) *	-0.16 (1.48)	-0.11 (1.06)
HRM Values	+0.51 (2.82) **	+0.23 (2.30) *	+0.18 (1.83)
Model chi-square =	52.57	61.43	58.89
(n =)	p=0.03 (545)	p=0.02 (540)	p=0.03 (538)
(yes =)	(233)	(214)	(329)
(no =)	(212)	(226)	(209)

TABLE 3 (continued)

<u>Independent Variable</u>	<u>Dependent Variable</u>		
	<u>Flexible Work Rules</u>	<u>Nonfinancial Participation Program</u>	<u>Information Sharing Program</u>
Intercept	-0.35 (2.06) *	-1.13 (2.61) *	+0.41 (2.34) *
Size	-0.17 (1.70)	+0.75 (1.45)	+0.20 (1.85)
Age	-0.09 (0.25)	+1.15 (4.37) *	+0.35 (2.29) *
Union	-0.19 (1.66)	-0.68 (1.36)	+0.37 (2.33) *
Region			
-East	-0.16 (1.58)	-0.33 (0.78)	+0.16 (1.36)
-West	+0.07 (0.11)	+0.27 (0.55)	+0.02 (0.07)
-South	-0.13 (0.41)	-0.30 (0.69)	-0.07 (0.23)
Industry			
-Agriculture	-0.20 (1.90)	-0.69 (1.34)	-0.18 (1.78)
-Mining	-0.19 (1.88)	-0.61 (1.37)	-0.17 (1.74)
-Construction	-0.37 (2.25) *	-0.71 (1.48)	-0.18 (1.88)
-Trans., Comm., & Utilities	-0.39 (2.32) *	-0.67 (1.31)	+0.11 (1.04)
-W & R Trade	-0.13 (1.23)	-0.51 (1.19)	-0.09 (0.65)
-FIRE	-0.06 (0.16)	-0.66 (1.38)	-0.38 (2.18) *
-Services	-0.09 (0.71)	-0.67 (1.37)	-0.20 (1.85)
HRM Values	+0.37 (2.30) *	+1.23 (4.48) *	+0.21 (1.94)
<hr/>			
Model chi-square =	48.84	47.76	51.04
	p=0.05	p=0.05	p=0.04
(n =)	(527)	(532)	(536)
(yes =)	(134)	(281)	(312)
(no =)	(393)	(351)	(224)

Table 3 (continued)

<u>Independent Variable</u>	<u>Dependent Variable</u>		
	<u>Performance Appraisal System</u>	<u>Financial Participation Program</u>	<u>Grievance/ Complaint Procedure</u>
Intercept	+0.63 (2.86) **	-0.80 (1.87)	+0.62 (1.40)
Size	+0.39 (2.30) *	+0.76 (1.47)	+0.40 (2.37) *
Age	+0.21 (1.98)	+0.67 (1.28)	+0.16 (1.35)
Union	-0.42 (2.51) **	-0.82 (1.69)	+0.37 (2.25) *
Region			
-East	+0.11 (0.22)	+0.63 (1.16)	+0.19 (1.80)
-West	-0.07 (0.19)	+0.52 (0.81)	+0.01 (0.08)
-South	-0.14 (0.32)	-0.76 (1.44)	-0.20 (1.88)
Industry			
-Agriculture	-0.18 (1.71)	-0.67 (1.36)	-0.19 (1.90)
-Mining	-0.17 (1.66)	-0.69 (1.44)	+0.20 (1.95)
-Construction	-0.38 (2.16) *	-1.34 (5.17) *	-0.21 (1.93)
-Trans., Comm., & Utilities	+0.17 (1.65)	-0.64 (1.25)	+0.19 (1.87)
-W & R Trade	-0.19 (1.94)	-0.71 (1.42)	-0.10 (0.56)
-FIRE	-0.20 (1.88)	-0.74 (1.39)	-0.21 (1.98)
-Services	-0.20 (1.92)	+0.65 (1.29)	-0.38 (2.23) *
HRM Values	+0.07 (0.12)	+1.37 (5.84) *	+0.17 (1.78)
Model chi-square =	55.21	49.92	53.75
	p=0.03	p=0.04	p=0.03
(n =)	(541)	(534)	(529)
(yes =)	(427)	(283)	(330)
(n =)	(114)	(251)	(199)

* = significant at $p = < .05$ ** = significant at $p = < .01$

TABLE 4
SELECTED OLS REGRESSION RESULTS FOR JAPANESE
AND U.S. FIRMS OPERATING IN THE U.S.
(t-values in parentheses)

<u>Independent Variable</u>	<u>Dependent Variable</u>			
	<u>Japanese Firms</u>		<u>U.S. Firms</u>	
	<u>Product Quality</u>	<u>Produc- tivity</u>	<u>Return on Investment</u>	<u>Produc- tivity</u>
Intercept	3.13 (4.35)**	5.96 (3.57)**	3.61 (2.96)**	4.07 (2.75)**
Employee Training Program	+0.06 (+0.26)	-0.16 (-0.82)	-0.12 (-0.31)	+0.26 (+0.43)
Flexible Work Rules	+0.09 (+0.47)	-0.06 (-0.70)	+0.13 (+0.28)	+0.41 (+1.27)
Nonfinancial Participation Program (NFP)	+0.08 (+0.31)	-0.11 (-1.32)	+0.37 (+0.69)	+0.43 (+1.99)*
Financial Participation Program (FP)	+0.42 (+0.73)	+0.31 (+0.69)	+0.28 (+0.58)	+0.37 (+2.06)*
HRM Values	-0.16 (-1.09)	-0.02 (-0.07)	+0.04 (+0.11)	+0.10 (+0.17)
Firm Size	-0.04 (-0.19)	+0.67 (+1.47)	-0.32 (-1.55)	-0.35 (-1.64)
Firm Age	-0.32 (-1.92)*	-0.89 (-2.20)**	-0.46 (-1.98)*	-0.41 (-2.06)*
Union	-0.58 (2.45)**	-1.27 (-2.76)**	-0.52 (-2.05)*	+0.43 (+2.02)*
Manufacturing	-1.09 (-1.22)	-6.24 (-3.11)**	+0.38 (+1.04)	+0.26 (+0.86)
Manufacturing x Training	+0.52 (+2.01)*	+0.40 (+1.98)*	+0.43 (+1.61)	+0.39 (+2.02)

TABLE 4 (continued)

<u>Independent Variable</u>	<u>Dependent Variable</u>			
	<u>Japanese Firms</u>		<u>U.S. Firms</u>	
	<u>Product Quality</u>	<u>Productivity</u>	<u>Return on Investment</u>	<u>Productivity</u>
Manufacturing x NFP	+0.62 (+1.97) *	+0.21 (+2.01) *	+0.36 (+1.43)	+0.34 (+2.07) *
Manufacturing x FP	+0.38 (+2.02) *	+0.31 (+2.03) *	+0.57 (+2.17) *	+0.46 (+2.13) *
Manufacturing x HRM values	+0.10 (+2.04) *	+1.17 (+2.63) **	+0.17 (+0.81)	+0.27 (+1.62)
R2	0.36	0.48	0.31	0.42
(N =)	(73)	(73)	(416)	(416)

* = significant at $p = < .05$

** = significant at $p = < .01$

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