

### Research Linking HRM Systems with Firm Performance

Number	Study	Year	Level of Analysis	Sample	HPWS Indicator	Performance Measure	Main Effect?	Interaction	Effect Size
1	Ahmad & Schroeder	2003	Manufacturing plants	107	HRM Practices	operational performance	Weak	NA	NA
2	Allen, Shore & Griffeth	2003	employee (sales and insurance agents)	215 sales; 197 insurance agents	perceived organizational support (HR practices)	voluntary turnover	yes	Yes	
3	Applebaum, Bailey, Berg, & Kalleberg	2000	Plant and individual; 40 plants; 4374 workers	45-3622	HRM Systems	Quality, productivity labor costs; ee outcomes	Yes	NA	NA
4	Appleyard & Brown	2001	Semiconductor firms	23 fabs	Employment System	productivity, defects	Mixed	NA	NA
5	Agarwala	2003	firm (Indian)	7	HR Practices	Org commitment	Yes	Partial	na
6	Bacon & Blyton	2001	Employees (Mfg firms)	401	teaming	attitude to change; job satisfaction	No	NA	NA
7	Bae & Lawler	2000	Firm (Korean)	138	HRM Strategy	Perceived performance	Yes	NA	NA
8	Bailou, Godwin, & Shortridge	2001	Firm (100 best to work for)	110	Quality of work life	Stock Price	Yes	NA	NA
9	Banker, Field, Schroeder, & Sinha	1996	Establishment	328 periods	Team program	Quality, productivity labor costs; ee outcomes	Yes	Yes	NA
10	Banker, Lee, Potter, & Srinivasan	1996	Firm (one retailer)	2618 store months	Incentive pay	sales, profitability, customer satisfaction	Yes	Weak Supp	NA
11	Barnard & Rodgers	2000	Firm (Singapore)	105	Internally oriented HR Practices	Successful implementation of HPWS	Mixed	NA	na
12	Barrette & Ouellette	2000							
13	Bartel	2000	Bank branches	3 branches (63-150 ee's)	HR practices; ee attitudes	Sales growth	Yes	NA	16-26% increase deposits & loans
14	Bartel, Freeman, Ichniowski, & Kleiner	Find this	Find this	Find this	Find this	Find this	Find this	Find this	Find this
15	Batt	1999	1 firm (customer service reps)	202	TQM; self-managed team	Sales	Mixed	Weak	9.3% sales/ee
16	Batt	2002	Service and Sales establishment	270	HR Practices	Sales growth; turnover	Yes	Partial	46% lower TO; 16.3% sales grth
17	Batt, Colvin & Keefe	2002	Telecommunications firms	302	HR practices (emp voice)	Quit rate	Yes	NA	NA
18	Bayo-Moriones & Huerta-Arribas	2002	Manufacturing plants	719	HR Practices	Incentives	Yes	NA	NA
19	Becker & Huselid	1996	Firm	check	HRM Systems	Profitability, stock value	Yes	check	find out
20	Becker & Huselid	1998	Firm	548 - 699	HRM systems	Profitability, stock value	Yes	Yes	\$63K mkt value; \$4752 GRATE
21	Becker & Huselid	1999	Find this	Find this	Find this	Find this	Find this	Find this	Find this
22	Berg, Appelbaum, & Bailey	1996	Firm (apparel)	117-131 ee's (2 firms)	HR Policies	Work team quality	Yes	NA	NA
23	Berman, Wicks, Kotha & Jones	1999	Fortune 100 firms	81	Stakeholder Relations	ROA	Mixed	Yes	NA
24	Bjorkman & Xiucheng	2002	Firm (manufacturing) Chinese/Western joint ventures & subsidiaries	62	HRM Systems	Subjective assessment foreign parent's satisfaction w/performance	Yes	NA	NA
25	Black & Lynch	1997	Establishment	1621	find this	Productivity	Yes	Mixed	If all HPWS, +20% productivity
26	Black & Lynch	2000	Private establishments	1621	HPWS	Productivity	Yes	Yes	NA
27	Black & Lynch	2001	Private establishments	1621	HR Practices	Productivity (Cobb-Douglas Production Function)	yes	NA	NA
28	Boslie, Paauwe & Jansen	2001	Review						
29	Boxall & Steenveld	1999	Professional service firms	6	HR Strategy; HRM practices	Industry leadership	N	NA	NA
30	Brynjolfsson & Hitt	1998	Firm	380	Org Design	Information technology	Yes	Yes	NA
31	Brynjolfsson, Hitt & Yang	find	Firm	1031	Computer capital; work practices	Stock price	Yes	Mixed	+\$1 installed computer capital->+\$5 mkt value
32	Brynjolfsson, Hitt, Yang, Baily & Hall	2002	Firm (large)	1216	Computer investment; work practices	market/book	Yes	NA	+\$1 computer investment=> \$10 mv
33	Burton & O'Reilly	2000	High technology startups	101	HR practices; leadership values	IPO	Yes	Yes	NA
34	Cabrera & Cabrera	2000	Banks	4	HR practices	HR strategy	NA	NA	NA
35	Caligiuri & Stroh	1995	Multinational firms	46	HR Practices	Strategy	Mixed	NA	NA
36	Cappelli & Neumark	1999	Establishment	433; 201; 660	Work practices	Efficiency (labor costs & productivity)	Weak	Yes	NA

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37	Collins, Smith, & Stevens,	2001	High technology firms	78	Hr Practices; knowledge creation	Sales growth	Mixed	Mixed	NA
38	Colvin, Batt & Katz	2001	establishment (telecom)	242	HR Practices	Manager Pay	Yes	NA	NA
39	Conyon & Read	1998	Firm	139	HRM Practices	Productivity	Yes	NA	NA
40	Cormier, Magnan & St-Onge	2001	Bank SBU's	95 - 1148	Profit sharing plans	ROA	Yes	Yes	NA
41	Coyle-Shapiro, Morrow, Richardson & Dunn	2002	employee (Engineering)	141	perception of profit sharing	Org commitment; trust in management	yes	na	na
42	D'Arcimoles	1997	Firms	61	HR Policies	Firm performance	Mixed	NA	NA
43	Das, Handfield, Calantone & Shosh	2000	Manufacturing firms	290	Quality Management	ROA, sales growth	Yes	Mixed	NA
44	Deery & Iverson	1999	Bank branches	460 banks; 1145 ees	IR climate	productivity	Yes	Yes	NA
45	Delaney	1997	find this	find this	find this	find this	find this	find this	find this
46	Delaney & Huselid	1996	Firm (34 industries)	590	HR practices	Perceived performance	Yes	Weak Supp	NA
47	Delery & Doty	1996	Firm (banks)	101	HR practices	Profitability	Yes	Weak Supp	NA
48	Delery, Gupta, Shaw, Jenkins, & Ganster	2000	Trucking Cos	379	HR Practices	Quit rate	Mixed	NA	NA
49	Dunlop & Weil	1996	Business Units	42	Modular production	Lead time, profitability	Weak Support	NA	
50	Eriksson	2001	Firm (Denmark)	1605	Work practices (TQM teams)	Productivity	Yes	Mixed	NA
51	Fernie & Metcalf	1995	find this	find this	find this	find this	find this	find this	find this
52	Fey & Bjorkman	2000	Subsidiaries (in Russia)	101	HRM practices	Performance	Weak	NA	NA
53	Fey, Bjorkman, & Pavlovskaya	2000	Firms (Russia)	101	HRM practices	Performance (subjective)	Yes	NA	NA
54	Freeman, Kleiner, & Ostroff	1997	Firm	260	Employee Involvement	Productivity	Weak Support	NA	NA
55	Fynes & Voss	2001	Manufacturing plants (Ireland)	200	Quality practices	Quality	Yes	NA	NA
56	Gant, Ichniowski, & Shaw	find this	find this	find this	find this	find this	find this	find this	find this
57	Gardner, Moynihan, & Wright	2002	Business Unit	40 (one firm)	HR practices; org citizenship	quality; profitability	Yes	NA	17% incr profitability
58	Gerhart & Milkovich	1990	BU's and firms	219 orgs; 70,684 observations	Human capital	Org performance	Yes	NA	NA
59	Gould-Williams	2003							
60	Guest, Michie, Conway, Trenberth, McDonald	2001	Firm (mfg & service)	237	HR practices; effectiveness	Firm perf; productivity; quality	Yes	NA	NA
61	Guest & Pecci	1997	Partnership Organizations	54	partnership practices	Subjective org perf.	Mixed	NA	NA
62	Guest & Pecci	2001	members of IPA	54	partnership practices	productivity, employee attitudes	yes	na	na
63	Guthrie	2001	Firms	164	HR practices	Productivity; ee retention	Yes	Yes	high HIWP= + \$184K productivity Low HIWP= -\$89K
64	Guthrie	1999	Firms (New Zealand)	164	HIWP	Retention; productivity	Yes	Yes	high HIWP= + \$184K productivity Low HIWP= -\$89K
65	Guthrie, Spell & Nyamori	2002	Firms (New Zealand)	137 - 165	HIWP	performance	Yes	Yes	na
66	Harel & Tzafrir	1999	Firm (Israel)	76	indiv. HR Practices	org perf perception; market performance	Weak Trng only	NA	NA
67	Harel, Tzafrir & Baruch	2003	Firm (Israel)	102	HR practices and fairness in promotion	Org effectiveness	Partial	Yes	na
68	Harris & Ogbonna	2001	Firms (UK)	342	SHRM(mkt. orientation as mediator)	Subjective Performance (sales growth, market share)	Yes	NA	NA
69	Hitt, Bierman, Shimizu, & Kochhar	2001	Law firms	93 (252 observations)	Human capital	Firm performance	Mixed	weak	NA
70	Hoque	1999	Hotels	209	High commitment practices	productivity, quality; perf.	Yes	NA	NA
71	Huang	2000	Firms (Taiwan)	315	HRM Practices	Subjective firm performance	Yes	Mixed	NA
72	Huang	2001	Firms (Taiwan)	315	HRM Practices	Subjective firm performance	Yes	Mixed	NA
73	Hunter & Hitt	Unpub	Retail banks and branches	35 branches (101 bank	Flexibility; commitment	productivity; sales	Yes	Yes	*****
74	Hunter & Lafkas	2003	Bank branches	303	Work practices	Wages	Yes	Weak	NA
75	Huselid	1995	Firm	816	HRM Systems	Turnover, stock value profitability	Yes	Weak Supp	7% TO; \$27K sales \$19K mv; \$4K profits
76	Huselid & Becker	1995	Firm	628	HRM systems	Market value	Yes	NA	\$38K - \$73K market val

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77	Huselid & Becker	1996	Firm	218	HRM Strategy	Profitability, stock value	Yes	NA	+1sd HPWS= +q14% & GRATE + 13-28%
78	Huselid & Becker	1997	Firm	548	HRM Systems	Profitability, stock value	Yes	NA	+1sd HPWS= \$41000
79	Huselid, Jackson, & Schuler	1997	Firms	293	HRM Effectiveness	Firm performance; productivity	Mixed	NA	sales \$44K; MV: \$9K; cash flow \$9673
80	Ichniowski	1990	Business Unit	176	HRM Systems	Productivity, firm value	Yes	NA	NA
81	Ichniowski & Shaw	1999	41 steel productions	2594 monthly periods	HRM Systems	Quality, productivity	Yes	NA	NA
82	Ichniowski, Shaw, & Prensushi	1997	36 steel production lines	2190 line periods	HRM Systems	Quality, productivity	Yes	Yes	NA
83	Ittner & Larcher	1999	individual (customers of telecommunications co.)	2491	customer satisfaction	Financial performance	Mixed	NA	NA
84	Jayaram, Droge & Vickery	1999	First tier suppliers	57	HRM Practices	Subjective mfg. Performance	Yes	NA	NA
85	Katz, Kochan & Gobeille	1983	Automotive plants	18 (176 observations)	IR systems	Quality and efficiency	Mixed	NA	NA
86	Kelly	1996	Establishment (mfg plants)	301-1301	Group participation	Hours per unit of output	Yes	NA	NA
87	Khatri	1999							
88	Khatri	2000	Firm (Singapore)	194	HR Practices	Performance	Modest	Yes	NA
89	Koch & McGrath	1996	Business unit	318-319	HRM Sophistication	Productivity	Yes	Yes	NA
90	Konrad & Mangel	2000	Firm	658 (195 public)	Work life programs	Productivity	Weak	Weak	NA
91	Koys	2001	Restaurant chain	28	EE attitudes & behaviors	Profitability	No	NA	NA
92	Lahteenmaki, Storey, & Vanhala	1998	Firm (Finland)	428	Hr policies; HR bundles	Subjective performance	Weak	Weak	NA
93	Lam & White	1998							
94	Laursen	2001	Firm (Danish)	726	HRM practices	Innovation	Yes	NA	NA
95	Laursen & Foss	2003	Firm (Danish)	1884	HRM Practices	Innovation Performance	Yes	NA	NA
96	Lee & Chess	1996	Mfg firms (Korean)	48	High involvement mgt	Firm performance	No	No	NA
97	Lee & Miller	1999	Firm (Korean manufacturing)	138	Org commitment	Financial performance	Yes	Yes	NA
98	Lepak & Snell	2002	firm	148	Employment modes	HR configurations	Yes	na	NA
99	Lepak, Takeouchi & Snell	In Press	firm	148	Employment modes/ flexibility	Firm performance	Yes	NA	NA
100	Lewin	2002	Firm; BU; plant;field office	249 - 457	HIWP	Performance	Mixed	NA	NA
101	Li	2003	MNEs (China)	296	higher pay, long-term employment policy	turnover, productivity, profitability(ROA, sales/ee)	Mixed		
102	Lieberman, Lau & Williams	1990	Motor vehicle manufacturers	6	Labor utilization	Productivity	Yes	NA	NA
103	Liouville & Bayad	1998	find this	find this	find this	find this	find this	find this	find this
104	Lowe, Delbridge, & Oliver	1997	Plant	71	HR Practices	productivity	Mixed	NA	NA
105	MacDuffie	1995	Establishment (auto assembly)	57	HRM policies	Production	Yes	Yes	NA
106	Martell & Carroll	1995	Business Units	115	Executive HRM practices	Performance	Mixed	NA	NA
107	Martell, K., Gupta, A. & Carroll	1996							
108	McNabb & Whiffield	1997	Establishment	587	flexibility, teamwork	Financial Performance	Yes	mixed	NA
109	McNabb & Whiffield	2001	Establishment	688-703	HR practices	subjective financial performance	yes	Yes	na
110	Mendelson	2000	ROVA	63	Organizational IQ	ROS, ROVA, Growth	Yes	NA	na
111	Meyer & Smith	2000	individual	281	HRM practices	Employee commitment	Mixed	NA	NA
112	Michie & Sheehan	1998	Firm	487	HRM practices	Innovative activities: R&D, new technology	Yes	NA	NA
113	Michie & Sheehan-Quinn	2001							
114	Michie & Sheehan	2003	Manufacturing and service sector firms (UK)	361	HRM Practices, flexible work practices	Innovation activities	Yes	NA	NA
115	Miller & Lee	2001	Firm (Korean)	129	Org commitment	Firm performance	Weak	Yes	NA
116	Montemayor	1996	Find this	Find this	Find this	Find this	Find this	Find this	Find this
117	Moriones & deCerio	Unpub	Factory (Spanish)	965	HRM practices	Efficiency, quality, time	Mixed	NA	NA
118	Morishima	1998	Firm (Japanese)	1054	HRM practices	Performance	Yes	NA	NA
119	Patterson, Wall, & West	find	Firm (manufacturing)	80	Integrated manufacturing	Productivity; performance	Yes	NA	NA
120	Patterson & West	find	Firm (manufacturing)	42 firms (3977 ee's)	Employee attitudes (job sat; org commit, mental health)	Productivity; performance	Yes	Yes	NA
121	Patterson, West, Lawthorne, & Nickell	1997	Firm (manufacturing)	67	HR practices	Productivity; performance	Yes	Yes	NA
122	Richard & Johnson	2001	banks	73	SHRM effectiveness	productivity; turnover	Mixed	mixed	na

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123	Rogg, et al	2001	Small business firms	351	HR practices	Customer satisfaction	Yes	Yes	NA
124	Schuster	find	Canadian and Chinese firm	2 (pilot studies)	Employee-centered mgt (HR Index)	Operating Income	Yes	NA	NA
125	Schuster, Dunning, Morden, Hagan, Baker, & Sesil	1997	Firm	1	Employee-centered mgt (HR Index)	Operating Income	Yes	NA	NA
126	Sesil	1999	Mfg Establishments (UK)	118	ee involvement	ROS, ROA	Yes	NA	NA
127	Shaw, Delery, Jenkins, Jr., & Gupta	1998	Firm (trucking)	141-148	HRM practices	Turnover	Yes	Yes	NA
128	Shaw, Gupta & Delery	2002	Plant; Firm (trucking)	141; 379	Voluntary turnover; HRM investment	Productivity; financial perf	Yes	Yes	NA
129	Sheppeck	1998	Firm	106	HRM practices; mgt support for HRM	Org effectiveness	Yes	mixed	NA
130	Sheppeck & Militello	2000	Theory piece						
131	Snell & Youndt	1995	Firm	102	HRM control systems	ROA, sales growth	Yes	mixed	NA
132	Spell, C.S.	2001	Employees	139	HRM Strategies	Developmental Activities	Limited	NA	NA
133	Storey	2002	Middle sized companies	314	Education, trng, dev	4 economic performances	Weak	NA	NA
134	Takeuchi	2002	Employees	269	Commitment-oriented HR philosophy	Org climate; OCB	Mixed	Yes	NA
135	Teo & Waters	2002	White collar employees	109	HR Practices	Stress	Yes	NA	NA
136	Tier	find	Review	NA	NA	NA	NA	NA	NA
137	Tregaskis	1997	Firm	531 French; 879 U.K.	HR practices; HRM strategy	Employee development	Yes	Yes	NA
138	Vandenberg, Richardson & Eastman	1999	Firm	49 (3579 ee's)	HR practices	Org effectiveness	Yes	NA	NA
139	Varma, Beatty, Schneider, & Ulrich	1999	Firm	39	culture, HR practices	Fin & operational perf	Yes	NA	NA
140	Voos	1987	Bargaining units	343	Profit sharing plans	quality; productivity; labor cost	Yes	NA	NA
141	Way	2002	Firm (small business)	446	HR practices	turnover; productivity	Mixed	NA	NA
142	Welbourne & Andrews	1996	IPO Firms	82	HR "values"	Profitability, IPO price	Weak Support	NA	NA
143	Welbourne & Cyr	1999	IPO Firms	360	Senior HRM executives	Stock price growth	No	Mixed	NA
144	West, Borrill, Dawson, Scully, Carter, Anelay, West & Patterson	2002							
145	West & Patterson	1999	Firm	>100	HRM practices	Productivity, performance	Yes	NA	NA
146	West, Patterson & Dawson	find	Top management teams	42	Team processes	Productivity, performance	Yes	NA	NA
147	West, Patterson, Pillingier, & Nickell	1999	Firm (manufacturing)	81	training	Innovation; firm performance	Yes	NA	NA
148	Whiffield & Poole	1997	Review	NA	NA	NA	NA	NA	NA
149	Whitener	2001	Credit unions	180 (1689 ee's)	HR practices	Org commitment	Yes	Yes	NA
150	Wilkinson, Godfrey & Marchington	1997	establishment	9	HR Practices	TQM	Non-empirical	Find This	Find this
151	Wilmalasiri	1995	1 publishing co.	151 employees	HRM Practices	Work performance	Yes	NA	NA
152	Wood	1999	Review	NA	NA	NA	NA	NA	NA
153	Wright, McMahan, McCormick, & Sherman	1998	Petrochemical factories	86	HR effectiveness	Perceived HR effectiveness	Mixed	No	NA
154	Wright, McMahan, Snell, & Gerhart	1999	Petrochemical factories	38	HR practices	Financial performance	Mixed	Yes	NA
155	Yang	1998	Firms	105	HR practices	Sales/employee	Mixed	Yes	NA
156	Youndt & Snell	1999	Find this	Find this	Find this	Find this	Find this	Find this	Find this
157	Youndt, Snell, Dean & Lepak	1996	Establishment (mfg plants)	97	HR practices	Perceived performance	Mixed	Weak Supp	Find this
158	Zheng	2001	Firm (small and medium)	74 (Chinese)	HRM practices	Firm performance	Mixed	Yes	NA