

Measures of Human Resource Management Systems
Updated on 9/2/2016
by Kaifeng Jiang

Instructions:

This document includes the measures of human resource management (HRM) systems that were used in articles published in top-tier management journals such as *Academy of Management Journal*, *Journal of Applied Psychology*, *Personnel Psychology*, and *Journal of Management*. It is created to facilitate researchers who want to conduct research on strategic HRM and look for valid measures of HRM systems. If you notice any other important articles including measures of HRM systems but not included in this list, please feel free to contact **Kaifeng Jiang** via kjiang@nd.edu. Many thanks to **Justin Cohen** for helping create this document.

1. Arthur (1994)

Article Citation: Arthur, J. B. 1994. Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal*, 37(3): 670-687.

Name of HRM Systems:

- High-performance work systems
- High-commitment HRM systems or commitment-oriented HRM systems
- High-involvement HRM systems
- High-investment HRM systems
- Not mentioned
- Other names (insert the name here)

Type of the measurement:

- Descriptive 1 (Whether a practice is provided, e.g., Yes/No)
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- Perceptive (The extent to which, e.g., Likert scales)

Items:

1. Degree to which nonsupervisory employees monitor data on quality, costs, productivity, and scrap
2. Degree to which nonsupervisory employees determine work flow or order of tasks
3. Degree to which nonsupervisory employees invest in new equipment and technology
4. Degree to which nonsupervisory employees develop new products
5. Percentage of mill employees who received training in group problem solving
6. Percentage of mill employees who meet on a regular basis in small groups to discuss production or quality problems
7. Percentage of mill employees who are involved in joint union-management or employee-management committees
8. Part of general training and development activities for production and maintenance employees accounted for by seminars, classes, training not directly related to employees' immediate work area
9. Part of general training and development activities for production and maintenance employees accounted for by general skills training not directly related to employees' current job
10. Part of general training and development activities for production and maintenance employees accounted for by people skills training such as communication or group problem solving
11. Number of maintenance and craft workers as a percentage of all mill employees
12. Number of production workers per supervisor
13. Number of times per year management organizes social gathering for employees, such as company picnics and bowling
14. Percentage of total employee complaints or grievances that are handled through formal grievance procedures involving several steps, up to and including binding third-party arbitration
15. Average total employment cost per production and maintenance worker, including wage rate, benefits, bonus or incentive payments, and taxes
16. Percentage of total average employment cost accounted for by employee benefits
17. Percentage of total average employment cost accounted for by bonus or incentive payments
18. Percentage unionized

2. Bae & Lawler (2000)

Article Citation: Bae, J. & Lawler, J. J. 2000. Organizational and HRM strategies in Korea: Impact on firm performance in an emerging economy. *Academy of Management Journal*, 43(3): 502-517.

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Items:

Extensive training

1. Amount of money spent on training
2. Opportunity for training
3. Availability of different kinds of training
4. Systematically structured training process
5. High priority on training
6. Extensive training for general skills

Empowerment

7. Minimum status differentials for egalitarianism
8. Engagement in problem-solving and decisions
9. Extensive transference of tasks and responsibilities
10. Providing chances to use personal initiative
11. Permitting enough discretion in doing work
12. Participation in very wide range of issues
13. Very cooperative and trustful climate

Highly selective staffing

14. Very extensive selection efforts
15. Great amount of money spent selection
16. Hire people with general rather than specific skills
17. Great effort to select right person
18. High selection criteria in firm
19. Great importance is placed on staffing process
20. Provides job security
21. Focus on long-run employee potential

Performance-based pay

22. Seniority-based rewards practices (R)
23. Wide range in pay within same job grade
24. Close tie of pay to individual/group performance

Broad job design

25. Mostly simple and repetitive job designs (R)
26. Clearly defined jobs and duties for long time (R)

27. Broadly designed jobs requiring a variety of skills

Note. "R" after an item number stands for a reversed scale.

3. Batt (2002)

Article Citation: Batt, R. 2002. Managing Customer Services: Human Resource Practices, Quit Rates, and Sales Growth. *Academy of Management Journal*, 45(3): 587-597.

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Items:

Skill index

1. The number of years of formal education of the typical (median) core employee
2. The number of years of formal and on-the-job training needed for a new employee to become proficient.

Work design index

3. Discretion over tasks, tools, work methods, pace of work, schedules, vacations, and technology design
4. Discretion over handling non-routine requests and the pace of serving customers
5. The percentage of employees that participated in regular off-line problem-solving groups
6. The percentage of employees that participated in self-directed teams.

HR incentives

7. The number of weeks of training a typical core employee received each year
8. The natural logarithm of the median annual base pay of the core workforce
9. The percentage of the core workforce that was permanent and full-time, as opposed to part-time or contingent
10. the percentage of the work performance of the typical employee that was electronically monitored (reverse-coded)

4. Cappelli & Neumark (2001)

Article Citation: Cappelli P. & Neumark D. 2001. Do "High-Performance" Work Practices Improve Establishment-Level Outcomes?. *Industrial and Labor Relations Review*, 54(4): 737-775.

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Items:

1. What percentage of your managers and supervisors use computers in their jobs?
2. What percentage of your production and non-supervisory employees use computers in their jobs?
3. Has your establishment participated in any benchmarking programs that compare practices and performances with other organizations?
4. What percentage of non-managerial and non-supervisory workers are involved in regularly scheduled meetings to discuss work-related problems?
5. What percentage of non-managerial and non-supervisor employees are currently involved in job rotation?
6. What percentage of non-managerial and non-supervisory employees are currently involved in self-managed teams?
7. Has your establishment adopted a formal Total Quality Management program?
8. Does your establishment pay for or provide cross-training?
9. Does your establishment pay for or provide teamwork or problem-solving training?
10. What percentage of your employees receive pay for skill or pay for knowledge?
11. Does your company have a profit-sharing, bonus, or gain-sharing plan for any of the following categories or workers? Technical/technical support, office/clerical/sales/customer service, or production?

5. Chang, Gong, Way, & Liangding (2013)

Article Citation: Chang, S., Gong, Y., Way, S. A., & Liangding, J. 2012. Flexibility-Oriented HRM Systems, Absorptive Capacity, and Market Responsiveness and Firm Innovativeness. *Journal of Management*, 39(7): 1924-1951.

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- Not mentioned
- Other names (Flexibility-oriented HRM system)

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Items:

1. Keeps and regularly updates core knowledge employee information in an information system to enable effective and speedy redeployment of these employees.
2. Informs core knowledge employees of important information to enable the effective and speedy redeployment of these employees.
3. Uses an organization-based pay system to enable the effective and speedy redeployment of core knowledge employees.
4. Elicits and acts on suggestions and feedback from core knowledge employees to enable the effective and speedy redeployment of these employees.
5. Uses a group-based pay system to enable the effective and speedy coordination of core knowledge employees.
6. Uses the performance assessment process to enable effective and speedy coordination among core knowledge employees.
7. Provides various training courses to enable core knowledge employees to obtain skills to perform multiple jobs.
8. Provides training not directly related to core knowledge employees' current jobs to enable them to obtain a variety of skills.
9. Provides core knowledge employees with job rotation opportunities to enable them to obtain a variety of skills.
10. Uses broadly designed jobs to enable core knowledge employees to obtain a variety of skills.
11. Hire core knowledge employees based on their skill and experience variety to enable them to be used for alternative purposes.

6. Chuang, Jackson, & Jiang (2016)

Article Citation: Chuang, C., Jackson, S. E., & Jiang, Y. 2016. Can Knowledge-Intensive Teamwork Be Managed? Examining the Roles of HRM Systems, Leadership, and Tacit Knowledge. *Journal of Management*, 42: 524-554.

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- High-performance work systems
- High-commitment HRM systems or commitment-oriented HRM systems
- High-involvement HRM systems
- High-investment HRM systems
- Not mentioned
- Other names (HRM systems for knowledge-intensive teamwork)

Type of the measurement:

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Items:

Items to assess HRM systems for knowledge-intensive teamwork

1. The selection of knowledge workers emphasizes their overall fit to the company (personality, values, etc.).
2. The selection of knowledge workers focuses on their potential to learn and grow.
3. If a team member has good technical skills, his/her interpersonal skills are NOT very important. (reverse coded)
4. When new team members are being selected for my team, their teamwork ability is weighted heavily in the decision.
5. When new team members are being selected for my team, their adaptability to the environment and self-adjustment is weighted heavily in the decision.
6. When new team members are being selected for my team, their interpersonal relationships within the company are weighted heavily in the decision.
7. When new team members are being selected for my team, their interpersonal relationships with people outside the company (e.g., suppliers, customers, other professionals) are weighted heavily in the decision.
8. The company invests considerable time and resources in training for knowledge workers.
9. The company provides an orientation program for new knowledge workers to learn the history, culture, and values of the company.
10. The company has a mentoring program (individually or as a group) aimed at employee development.
11. The company uses mentoring assignments as a way to encourage employees to learn from each other.
12. The company provides training that improves my team employees' ability to learn from each other.
13. The company provides training to improve the interpersonal skills of employees in my team.
14. The company provides training to help my team employees develop and update their technological know-how.
15. The employees in my team have attended training designed to improve their teamwork skills.

7. Chuang & Liao (2010)

Article Citation: Chuang, C. & Liao, H. 2010. Strategic Human Resource Management in Service Context: Taking Care of Business by Taking Care of Employees and Customers. *Personnel Psychology*, 63: 153-196.

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Items:

Staffing

1. The store selects the best all around candidates when recruiting employees.
2. The store places priority on candidates' potential to learn when recruiting employees.
3. Recruitment emphasizes traits and abilities required for providing high quality of customer services.
4. Internal candidates have the priority for job openings.
5. Qualified employees have good opportunities for promotion.

Training

6. The store provides an orientation program for newcomers to learn about the company.
7. The store continuously provides training programs.
8. The store invests considerable time and money in training.
9. Training is comprehensive, not limited to skill training.
10. High quality of customer services is emphasized in training.

Involvement & Participation

11. If a decision made might affect employees, the store asks them for opinions in advance.
12. Employees are often asked to participate in work-related decisions.
13. Employees have discretion in handling customers' additional requests.
14. Employees have discretion in settling customer complaints without reporting to a supervisor or other specialists.
15. Employees are allowed to make necessary changes in the way they perform their work.
16. The store fully supports employees with necessary equipment and resources for providing high quality of customer services.
17. The store does not share information with employees (e.g., store operation, sales, etc.). (R)

Performance Appraisals

18. Performance appraisals provide employees feedback for personal development.
19. Performance appraisals are based on multiple sources (self, coworkers, supervisors, customers, etc.).
20. Performance appraisals are based on objective, quantifiable results.
21. Supervisors do not get together with employees to set their personal goals. (R)
22. Satisfying customers is the most important work guideline.

23. Meeting customers' needs is emphasized in performance appraisals.

Compensation/Rewards

24. On average the pay level (including incentives) of our employees is higher than that of our competitors.

25. Employee salaries and rewards are determined by their performance.

26. The store rewards employees for new ideas for improving customer services.

27. The store provides a variety of benefits.

28. The store does not attach importance to the fairness of compensation/rewards. (R)

29. Employees receive monetary or nonmonetary rewards for great effort and good performance.

30. The store gives special rewards to employees who are excellent in serving customers.

Caring

31. The store considers employee off-work situations (family, school, etc.) when making schedules.

32. The store cares about work safety and health of employees.

33. The store cares about work–life balance of employees.

34. The store has its ways or methods to help employees alleviate work stress.

35. The store has formal grievance procedures to take care of employee complaints or appeals.

Note. R indicates reverse-coded items

8. Collins & Smith (2006)

Article Citation: Collins, C. J. & Smith, K. G. 2006. Knowledge Exchange and Combination: The Role of Human Resource Practices in the Performance of High-Technology Firms. *Academy of Management Journal*, 49(3): 544-560.

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Items:

Items Measuring a Commitment-Based Approach to HR

Selection Policies

1. Internal candidates are given consideration over external candidates for job openings.
2. We select employees based on an overall fit to the company.
3. Our selection system focuses on the potential of the candidate to learn and grow with the organization.
4. We ensure that all employees in these positions are made aware of internal promotion opportunities.

Incentive Policies

5. Employee bonuses or incentive plans are based primarily on the performance of the organization.
6. Salaries for employees in these positions are higher than those of our competitors.
7. Shares of stock are available to all core employees through stock purchase plans

9. Delery & Doty (1996)

Article Citation: Delery, J. E. & , Doty, D. H. 1996. Modes of Theorizing in Strategic Human Resource Management: Tests of Universalistic, Contingency, and Configurational Performance Prediction. Academy of Management Journal, 39(4): 802-835.

Name of HRM Systems:

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- Other names (Strategic Human Resource Management System)

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Items:

Internal career opportunities

1. Individuals in this job have clear career paths within the organization.
2. Individuals in this job have very little future within this organization (reverse-coded).
3. Employees' career aspirations within the company are known by their immediate supervisors.
4. Employees in this job who desire promotion have more than one potential position they could be promoted to.

Training

5. Extensive training programs are provided for individuals in this job.
6. Employees in this job will normally go through training programs every few years.
7. There are formal training programs to teach new hires the skills they need to perform their jobs.
8. Formal training programs are offered to employees in order to increase their promotability in this organization.

Results-oriented appraisals:

Performance is more often measured with objective quantifiable results.

Performance appraisals are based on objective, quantifiable results.

Employment security

9. Employees in this job can expect to stay in the organizations for as long as they wish.
10. It is very difficult to dismiss an employee in this job.
11. Job security is almost guaranteed to employees in this job.
12. If the bank were facing economic problems, employees in this job would be the last to get cut.

Participation

13. Employees in this job are allowed to make many decisions.
14. Employees in this job are often asked by their supervisor to participate in decisions.
15. Employees are provided the opportunity to suggest improvements in the way things are done.
16. Superiors keep open communications with employees in this job.

Job descriptions

17. The duties of this job are clearly defined.
18. This job has an up-to-date job description.
19. The job description for this job contains all of the duties performed by individual employees.

20. The actual job duties are shaped more by the employee than by a specific job description (reverse-coded).

Profit sharing

21. Individuals in this job receive bonuses based on the profit of the organization.

10. Hartog, Boon, Verburg, & Croon (2013)

Article Citation: Hartog, D. N. D., Boon, C., Verburg, R. M. & Croon, M. A. 2013. HRM, Communication, Satisfaction, and Perceived Performance: A Cross-Level Test. *Journal of Management*, 39: 1637-1665.

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Items:

1. Training (at different stations) is provided regularly to me.
2. My job and tasks offer opportunities to learn new things.
3. Managers take my career ambitions and goals into account here.
4. I have opportunities for development within this organization.
5. Managers offer equal opportunities to everyone here regardless of gender, ethnicity, nationality, sexual orientation, or religion.
6. I can determine and make changes in the way in which I perform my work.
7. I have room to make decisions in issues relating to my work.
8. In my work I am part of a team.
9. The work demands I am appraised on for my job are clear to me.
10. I know how the managers rate my performance on my work tasks

11. Gardner, Wright, & Moynihan (2011)

Article Citation: Gardner, T. M., Wright, P. M. & Moynihan L. M. 2011. The Impact of Motivation, Empowerment, and Skill-Enhancing Practices on Aggregate Voluntary Turnover: The Mediating Effect of Collective Affective Commitment. *Personnel Psychology*, 64: 315-350.

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Items:

Skill-enhancing HR practices

1. Applicants undergo structured interviews (job-related questions, same questions asked of all applicants, rating scales) before being hired.
2. Applicants for this job take formal tests (paper and pencil or work sample) before being hired.
3. On average how many hours of formal training do employees in this job receive each year?
4. The results of the performance evaluation process are used to determine the training needs for employees in this job.
5. Employees in this job have the opportunity to receive tuition reimbursement for completing college classes.

Motivation-enhancing HR practices

6. Employees in this job regularly (at least once a year) receive a formal evaluation of their performance.
7. Pay raises for employees in this job are based on job performance.
8. Employees in this job have the opportunity to earn individual bonuses (or commissions) for productivity, performance, or other individual-performance outcomes.
9. Employees in this job have the opportunity to earn group bonuses (or commissions) for productivity, performance, or other group-performance outcomes.
10. Employees in this job have the opportunity to earn company-wide bonuses (or commissions) for productivity, performance, or other operating company-performance outcomes.
11. Qualified employees have the opportunity to be promoted to positions of greater pay and/or responsibility within the company.

Empowerment-enhancing HR practices

12. Employees in this job have a reasonable and fair complaint process.
13. Employees in this job are involved in formal participation processes such as quality-improvement groups, problem-solving groups, roundtable discussions, or suggestion systems.
14. Employees in this job communicate with people in other departments to solve problems and meet deadlines.
15. How often do employees in this job receive formal company communication regarding: Company goals (objectives, actions, and so on)? Operating performance (productivity, quality, customer satisfaction,

and so on)? Financial performance (profitability, stock price, and so on)? Competitive performance (market share, competitor strategies, and so on)?

12. Gong, Law, Chang, & Xin (2009)

Article Citation: Gong, Y., Law, K. S., Chang, S. & Xin, K. R. 2009. Human Resources Management and Firm Performance: The Differential Role of Managerial Affective and Continuance Commitment. Journal of Applied Psychology, 94(1): 263-275.

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Items:

Employment Security

1. Managers in our firm can expect to stay for as long as they wish.
2. Our firm tries to avoid dismissing managers.
3. Job security is almost guaranteed to managers in our firm.
4. If our firm were facing economic problems, managers would be the last to get cut.
5. Our firm has offered managers a pledge of employment security.
6. Compared to our close competitors, our firm offers higher employment security to managers.

Reduction of Status Distinction

7. In our firm, managers at different levels share the same cafeteria.
8. In our firm, managers at different levels have a common uniform.
9. In our firm, managers at different levels use the same company vehicles for business purposes.
10. In our firm, managers at different levels stay in hotels of similar standards on business trips.
11. The rights of managers at different levels are equally respected in our firm.
12. Compared to our close competitors, our firm respects more the equal rights of managers at different levels.

Selective Hiring

13. For the five managerial positions that our firm hires most frequently, we have many qualified applicants per position.
14. All newly hired managers in our firm had been selected based primarily on the results of validated selection tests.
15. All managers are administered many assessment tools-including personality, aptitude, and skill tests-prior to employment in our firm.
16. A strict selection procedure was used in our firm to hire new managers.
17. It is difficult to pass our managerial selection process.
18. Compared to our close competitors, our firm is more selective in hiring managers.

Participation in Decision Making Through Teams

19. A majority of managers participate in highly decentralized work groups in our firm.
20. A majority of managers in our firm are involved in formal or informal management committees or other related problem-solving activities.

21. A majority of managers receive training in group problem solving.
22. Managers in our firm meet on a regular basis in management committees to discuss critical company matters.
23. Management committees in our firm can exert significant influence on major company decisions.
24. Compared to our close competitors, our firm relies more heavily on decentralized management committees to make major decisions.

Comparatively High Pay Contingent on Performance

25. Compensation for managers in our firm is above the market average.
26. A large proportion of our managers' total compensation is accounted for by cash plus deferred bonuses.
27. Managers are eligible for annual deferred incentive plans, profit-sharing plans, and/or gain-sharing plans in our firm
28. Managers own a large amount of the shares of our firm.
29. The incentive pay of our managers in our firm matches well with our firm's financial performance.
30. Compared to our close competitors, the average total employment cost per manager is larger in our firm.

Extensive Training

31. New managers in their first year of employment typically receive long hours of training in our firm.
32. Experienced managers (i.e., those employed more than one year) typically receive long hours of training per year in our firm.
33. A large proportion of managers in our firm are qualified to perform more than one job through training or job rotation.
34. Managers often participate in cross-functional training or job rotation in our firm.
35. Managers in our firm often receive training outside their own functional areas.
36. Compared to our close competitors, our firm offers more extensive training to managers.

Career Planning and Advancement

37. Many managerial positions in our firm are filled from within.
38. Managers are promoted based on merit rather than seniority in our firm.
39. Managers have clear career paths within our firm.
40. Managers have a very bright future within our firm.
41. Managers' career aspirations within our firm are known by their superiors.
42. Compared to our close competitors, managers in our firm have better career prospects within the firm.

Performance Appraisal

43. Managers regularly receive formal performance appraisals in our firm.
44. Managers' performance appraisals are based on objective, quantifiable results in our firm.
45. Managers often receive development-focused appraisals in our firm.
46. Managers often receive appraisals for pay purposes.
47. Managers often receive appraisals for promotion purposes.
48. Compared to our close competitors, our firm has a better-designed performance appraisal system.

13. Huselid (1995)

Article Citation: Huselid, M. A. 1995. The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance. *Academy of Management Journal*, 38(3): 635-672.

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Items:

Employee Skills and Organizational Structures

1. What is the proportion of the workforce who are included in a formal information sharing program (e.g., a newsletter)?
2. What is the proportion of the workforce whose job has been subjected to a formal job analysis?
3. What proportion of non-entry level jobs have been filled from within in recent years?
4. What is the proportion of the workforce who are administered attitude surveys on a regular basis?
5. What is the proportion of the workforce who participate in Quality of Work Life (QWL) programs, Quality Circles (QC), and/or labor-management participation teams?
6. What is the proportion of the workforce who have access to company incentive plans, profit-sharing plans, and/or gain-sharing plans?
7. What is the average number of hours of training received by a typical employee over the last 12 months?
8. What is the proportion of the workforce who have access to a formal grievance procedure and/or complaint resolution system?
9. What proportion of the workforce is administered an employment test prior to hiring?

Employee motivation

10. What is the proportion of the workforce whose performance appraisals are used to determine their compensation?
11. What proportion of the workforce receives formal performance appraisals?
12. Which of the following promotion decision rules do you use most often? (a) merit or performance rating alone; (b) seniority only if merit is equal; (c) seniority among employees who meet a minimum merit requirement; (d) seniority.
13. For the five positions that your firm hires most frequently. How many qualified applicants do you have per position (on average)?

14. Ichniowski & Shaw

Article Citation: Ichniowski, C. & Shaw, K. 1999. The Effects of Human Resource Management Systems on Economic Performance: An International Comparison of U.S. and Japanese Plants. *Management Science*, 45(5):704-721.

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- Not mentioned
- Other names (Innovative HRM systems)

Type of the measurement:

- Descriptive 1 (Whether a practice is provided, e.g., Yes/No)
- Descriptive 2 (Numbers or percentage of employees covered by a practice)
- Perceptive (The extent to which, e.g., Likert scales)

Items:

Incentive Pay

1. Multi-attribute incentive pay
2. Extensive profit sharing

Recruiting

3. Very extensive screening
4. Lengthy orientation period

Teamwork

5. High % in problem solving teams
6. Workers in multiple teams
7. Some teamwork practice

Employment Security

8. Employment security pledge

Job Flexibility

9. Job rotation

Training

10. Off-site training, all workers
11. Off-site training, some workers

Labor Management Communication

12. Information Sharing
13. Regular meetings with workers

15. Ichniowski, Shaw, & Prennushi (1997)

Article Citation: Ichniowski, C., Shaw, K. & Prennushi, G. 1997. The Effects of Human Resource Management Practices on Productivity: A Study of Steel Finishing Lines. The American Economic Review, 87(3): 291-313.

Name of HRM Systems:

- High-performance work systems
- High-commitment HRM systems or commitment-oriented HRM systems
- High-involvement HRM systems
- High-investment HRM systems
- Not mentioned
- Other names (Innovative HRM systems)

Type of the measurement:

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Items:

1. Is there a company profit-sharing plan covering the line workers?
2. Are operators covered by a "nontraditional" incentive pay plan which applies across shifts of workers and which is sensitive to quality as well as quantity aspects of output?
3. Was an extensive selection procedure used to hire new workers, including tests for personality traits needed for cooperative team environments and efforts to set clear expectations about required work behaviors of the new workers?
4. Are a majority of operators involved in formal or informal work teams or other related problem-solving activities?
5. Do operators participate in more than one problem-solving team?
6. Are operators organized into formal work teams either on the line or for the purposes of problem-solving activities according to an established policy with at least some operators involved in team activities?
7. Has the company committed to a goal of long-term employment security and offered employees a pledge of employment security?
8. Do operators rotate across jobs or tasks on the line?
9. Have all operators on the line received off-the-job training?
10. Have at least some operators received off-the-job training?
11. Are operators and union representatives, if any, provided with financial information on a regular basis?
12. Do line managers meet off-line with operators to discuss issues of concern, including issues related to performance and quality?
13. Do union representatives and managers meet often to discuss concerns and cooperate in finding solutions to issues?
14. Is the line a unionized operation?
15. Is the grievance filing rate less than 12 per year?

16. Kehoe & Wright (2013)

Article Citation: Kehoe, R. R. & Wright, P. M. 2013. The Impact of High-Performance Human Resource Practices on Employees' Attitudes and Behaviors. *Journal of Management*, 39(2):366-391.

Name of HRM Systems:

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- Other names (Innovative HRM systems)

Type of the measurement:

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- Descriptive 2 (Numbers or percentage of employees covered by a practice)
- Perceptive (The extent to which, e.g., Likert scales)

Items:

1. Applicants for this job take formal tests (paper and pencil or work sample) before being hired.
2. Applicants for this job undergo structured interviews (job related questions, same questions asked for all applicants) before being hired.
3. Associates in this job are involved in formal participation processes such as quality improvement groups, problem solving groups, or roundtable discussions.
4. Associates in this job have a reasonable and fair complaint process.
5. Associates in this job have the opportunity to earn group bonuses for productivity, performance, or other group performance outcomes.
6. Associates in this job have the opportunity to earn individual bonuses (or commissions) for productivity, performance, or other individual performance outcomes.
7. At least once a year associates in this job receive a formal evaluation of their performance.
8. Associates in this job regularly receive formal communication regarding company goals and objectives.
9. In the last 4 months, the company has made a change in how work is completed in my department based on the suggestion(s) of an associate or group of associates.
10. Pay raises for associates in this job are based on job performance.
11. Qualified associates in this job have the opportunity to be promoted to positions of greater pay and/or responsibility within the company.
12. Associates in this job are allowed to make important work related decisions such as how the work is done or implement new ideas.
13. The company hires only the very best people for this job.
14. Total pay for this job is the highest for the type of work in the area.
15. On average, how many hours of formal training do associates in this job receive each year?

17. Lawler, Chen, Wu, Bae & Bai (2011)

Article Citation: Lawler, J. J., Chen, S., Wu, P., Bae, J. & Bai, B. 2011. High-performance work systems in foreign subsidiaries of American multinationals: an institutional model. *Journal of International Business Studies*, 42: 200-220.

Name of HRM Systems:

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- High-involvement HRM systems
- High-investment HRM systems
- Not mentioned
- Other names (Innovative HRM systems)

Type of the measurement:

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- Perceptive (The extent to which, e.g., Likert scales)

Items:

Training and development

1. This subsidiary offers training to improve the interpersonal skills of employees.
2. New employees undergo extensive orientation training in order to learn the values and culture of this subsidiary and/or its American parent company.
3. Many of this subsidiary's employees are moved through a series of different job assignments in order to prepare them for future assignments.
4. This subsidiary devotes considerable resources to manager training and development.
5. We do a great deal of cross-training, so that managers are familiar with different jobs and can fill in for others when necessary

Staffing

6. The employee selection process is very rigorous in this subsidiary (e.g., use of tests, aptitude test, interviews, etc.).
7. There is advance planning as to which of this subsidiary's current employees will be transferred or promoted when there is a job vacancy.

Appraisal and compensation

8. An employee's job performance is appraised, to a significant extent, on how well he or she follows orders and company procedures and rules.
9. We strive to keep a large salary difference between high and low performers in the same position.
10. An employee's pay is closely tied to individual or group performance in this subsidiary.

Employee involvement

11. Employees often work in self-directed teams.
12. This subsidiary extensively shares its financial and/or performance data with its employees.

18. Lepak & Snell (2002)

Article Citation: Lepak, D. P. & Snell, S. A. 2002. Examining the Human Resource Architecture: The Relationships Among Human Capital, Employment, and Human Resource Configurations. *Journal of Management*, 28(4): 517-543.

Name of HRM Systems:

- High-performance work systems
- High-commitment HRM systems or commitment-oriented HRM systems
- High-involvement HRM systems
- High-investment HRM systems
- Not mentioned
- Other names (Commitment-based, productivity-based, compliance-based, and collaborative)

Type of the measurement:

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- Perceptive (The extent to which, e.g., Likert scales)

Items:

These employees perform jobs that

- ...allow them to routinely make changes in the way they perform their jobs
- ...are designed around their individual skills
- ...are extremely simple
- ...are standardized throughout industry
- ...are well-defined
- ...empower them to make decisions
- ...have a high degree of job security
- ...include a wide variety of tasks
- ...involve job rotation
- ...require them to participate in cross-functional teams and networks

The recruitment/selection process for these employees

- ...assesses their industry knowledge and experience
- ...emphasizes promotion from within
- ...emphasizes their ability to collaborate and work in teams
- ...focuses on selecting the best all around candidate, regardless of the specific job
- ...focuses on their ability to contribute to our strategic objectives
- ...involves screening many job candidates
- ...is comprehensive (uses interviews, tests, etc.)
- ...places priority on their potential to learn (e.g., aptitude)
- ...uses many different recruiting sources (agencies, universities, etc.)

Our training activities for these employees

- ...are comprehensive
- ...are continuous
- ...emphasize improving current job performance
- ...emphasize on the job experiences
- ...focus on compliance with rules, regulations, and procedures

- ...focus on team building and interpersonal relations
- ...require extensive investments of time/money
- ...seek to increase short-term productivity
- ...strive to develop firm-specific skills/knowledge

Performance appraisals for these employees are based on input from multiple sources (peers, subordinates, etc.)

- ...are based on objective, quantifiable results
- ...are based on team performance
- ...assess compliance with preset behaviors, procedures, and standards
- ...assess quality of output
- ...assess quantity of output
- ...emphasize employee learning
- ...focus on their ability to work with others
- ...focus on their contribution to our strategic objectives
- ...include developmental feedback
- ...measure productivity and efficiency

Compensation/rewards for these employees

- ...are based on hourly pay
- ...are based on straight salary
- ...are based on the market wage (going rate)
- ...are designed to ensure equity with peers
- ...focus primarily on their short-term performance
- ...have a group-based incentive component (gainsharing, etc.)
- ...have an individual incentive/bonus component
- ...include an extensive benefits package
- ...include employee stock ownership programs (ESOP, etc.)
- ...place a premium on their industry experience
- ...provide incentives for new ideas
- ...value seniority

19. MacDuffie (1995)

Article Citation: MacDuffie J. P. 1995. Human Resource Bundles and Manufacturing Performance: Organizational Logic and Flexible Production Systems in the World of Auto Industry. *Industrial and Labor Relations Review*, 48(2): 197-221.

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Items:

Work system

1. The percentage of the work force involved in formal work teams.
2. The percentage of the work force involved in employee involvement groups.
3. The number of production-related suggestions received per employee.
4. The percentage of production-related suggestions implemented.
5. The extent of job rotation within and across teams
6. The degree to which production workers carry out quality tasks.

HRM policies

7. The hiring criteria used to select employees in three categories: production workers, first line supervisors, and engineers.
8. The extent to which the compensation system is contingent on performance.
9. The extent to which status barriers between managers and workers are present.
10. The level of training provided to newly hired production workers, supervisors, and engineers in the first six months of employment.
11. The level of ongoing training provided to experienced production workers, supervisors, and engineers.

20. Patel, Messersmith & Lepak (2013)

Article Citation: Patel, P. C., Messersmith, J. G. & Lepak, D. P. 2013. Walking the Tightrope: An Assessment of the Relationship Between High Performance Work Systems and Organizational Ambidexterity. *Academy of Management Journal*, 56(5): 1420-1442.

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Type of the measurement:

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- Perceptive (The extent to which, e.g., Likert scales)

Items:

Participation

1. Employees in our firm are often asked to participate in decisions.
2. Employees are allowed to make decisions.
3. Employees are provided the opportunity to suggest improvements in the way things are done.
4. We keep open communications with employees.

Mobility

5. Employees have few opportunities for upward mobility. (reverse-coded)
6. Employees do not have any future in this organization. (reverse-coded)
7. Promotion in this organization is based on seniority. (reverse-coded)
8. Employees have clear career paths in this organization.
9. Employees who desire promotion have more than one potential position they could be promoted to.

Training

10. Extensive training programs are provided to employees.
11. Employees will normally go through training programs every few years.
12. There are formal training programs to teach new hires the skills they need to perform their job.
13. Formal training programs are offered to employees in order to increase their promotability in this organization.

Staffing

14. Great effort is taken to select the right person.
15. Long-term employee potential is emphasized.
16. Considerable importance is placed on the staffing process.
17. Very extensive efforts are made in selection.

Job description

18. The duties in this job are clearly defined.
19. This job has an up-to-date description.

20. The job description for a position accurately describes all of the duties performed by individual employees.

Appraisal

21. Performance is more often measured with objective quantifiable results.

22. Performance appraisals are based on objective quantifiable results.

23. Employee appraisals emphasize long term and group-based achievement.

21. Piening, Balking & Salgen (2013)

Article Citation: Piening, E. P., Baluch, A. M. & Salge, T. O. 2013. The Relationship between Employees' Perception of Human Resource Systems and Organizational Performance: Examining Mediating Mechanisms and Temporal Dynamics. *Journal of Applied Psychology*, 98: 926-947.

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Items:

1. I am involved in deciding on the changes introduced that affect my work area.
2. Managers here try to involve staff in important decisions.
3. Communication between management and staff is effective.
4. On the whole, the different parts of the trust communicate effectively with each other.
5. Percent of staff having received supervised on-the-job training within previous 12 months.
6. Percent of staff having received mentoring within previous 12 months.
7. Percent of staff having shadowed someone within previous 12 months.
8. Percent of staff appraised within previous 12 months.
9. Percent of staff with effective appraisal within previous 12 months.
10. Percent of staff appraised with personal development plans within previous 12 months.
11. My immediate manager is supportive in a personal crisis.
12. My immediate manager can be counted on to help me with a difficult task at work.
13. My immediate manager helps me find a good work–life balance.
14. My immediate manager encourages those who work for her/him to work as a team.
15. I cannot meet all the conflicting demands on my time at work. (reverse-coded)
16. I do not have time to carry out all my work. (reverse-coded)
17. I often have trouble working out whether I am doing well or poorly in this job. (reverse-coded)
18. I always know what my responsibilities are.

22. Shaw, Delery, Jenkins & Gupta (1998)

Article Citation: Shaw, J. D., Delery, J. E., Jenkins, G. D. Jr. & Gupta, N. 1998. An Organizational-Level Analysis of Voluntary and Involuntary Turnover. *Academy of Management Journal*, 41(5): 511-525.

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- Perceptive (The extent to which, e.g., Likert scales)

Items:

Human Resource Practices

Average pay

1. On average, how much does a typical driver earn per year?

Benefits

2. Our drivers have a better benefits package than other drivers in the industry.
3. Our drivers could get a better benefits package in another trucking company.
4. Our benefits package helps us attract good drivers.

Job stability

5. We guarantee drivers a certain amount of pay every pay period.
6. We guarantee drivers a certain amount of work every pay period.

Training

7. How many hours of formal training does a typical driver receive in a year?

Procedural justice

8. We rule on disputes only after we investigate all sides of the issue thoroughly.
9. Drivers have a chance to answer any complaints made against them.
10. Our company has formal procedures to ensure that drivers are treated fairly.

Electronic monitoring

11. The percentage of trucks in drivers' fleets with onboard computers
12. The percentage of trucks in drivers' fleets with satellite tracking
13. The percentage of trucks in drivers' fleets with onboard systems to communicate with dispatchers

Performance appraisal

14. The number of times per year the company conducted formal performance appraisals for drivers.

Time on the road

15. The reverse of the number of times drivers were typically routed home each month.

Selection ratio

16. The number of drivers hired during the past year divided by the number of individuals who had applied for driving jobs in the past year.

Selection procedures

17. The inclusion of eight valid selection procedures: structured interviews, mental ability tests, physical ability tests, technical knowledge tests, performance or job sample tests, personality tests, honesty or integrity tests, and biographical information questionnaires.

23. Sun, Aryee, Law (2007)

Article Citation: Sun, L., Aryee, S. & Law, K. S. 2007. High-Performance Human Resource Practices, Citizenship Behavior, and Organizational Performance: A Relational Perspective. *Academy of Management Journal*, 50(3): 558-577.

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Type of the measurement:

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- Descriptive 2 (Numbers or percentage of employees covered by a practice)
- Perceptive (The extent to which, e.g., Likert scales)

Items:

Selective Staffing

1. Great effort is taken to select the right person.
2. Long-term employee potential is emphasized.
3. Considerable importance is placed on the staffing process.
4. Very extensive efforts are made in selection.

Extensive Training

5. Extensive training programs are provided for individuals in customer contact or front-line jobs.
6. Employees in customer contact jobs will normally go through training programs every few years.
7. There are formal training programs to teach new hires the skills they need to perform their job.
8. Formal training programs are offered to employees in order to increase their promotability in this organization.

Internal Mobility

9. Employees have few opportunities for upward mobility.
10. Employees do not have any future in this organization.
11. Promotion in this organization is based on seniority.
12. Employees have clear career paths in this organization.
13. Employees in customer contact jobs who desire promotion have more than one potential position they could be promoted to.

Employment Security

14. Employees in this job can be expected to stay with this organization for as long as they wish.
15. Job security is almost guaranteed to employees in this job.

Clear Job Description

16. The duties in this job are clearly defined.
17. This job has an up-to-date description.
18. The job description for a position accurately describes all of the duties performed by individual employees.

Results-Oriented Appraisal

19. Performance is more often measured with objective quantifiable results.
20. Performance appraisals are based on objective quantifiable results.
21. Employee appraisals emphasize long term and group-based achievement.
22. Individuals in this job receive bonuses based on the profit of the organization.
23. Close tie or matching of pay to individual/group performance.

Participation

24. Employees in this job are often asked by their supervisor to participate in decisions.
25. Individuals in this job are allowed to make decisions.
26. Employees are provided the opportunity to suggest improvements in the way things are done.
27. Supervisors keep open communications with employees in this job.

24. Takeuchi, Lepak, Wang, & Takeuchi (2007)

Article Citation: Takeuchi, R., Lepak, D. P., Wang, H. & Takeuchi K. 2007. An Empirical Examination of the Mechanisms Mediating Between High-Performance Work Systems and the Performance of Japanese Organizations. *Journal of Applied Psychology*, 92(4): 1069-1083.

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Type of the measurement:

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- Perceptive (The extent to which, e.g., Likert scales)

Items:

1. Employees are involved in job rotation.
2. Employees are empowered to make decisions.
3. Jobs are designed around their individual skills and capabilities.
4. Selection is comprehensive (uses interviews, tests, etc.).
5. Selection emphasizes their ability to collaborate and work in teams.
6. Selection involves screening many job candidates.
7. Selection focuses on selecting the best all-around candidate, regardless of the specific job.
8. Selection emphasizes promotion from within.
9. Selection places priority on their potential to learn (e.g., aptitude).
10. Training is continuous.
11. Training programs are comprehensive.
12. Training programs strive to develop firm-specific skills and knowledge.
13. The training programs emphasize on-the-job experiences.
14. Performance is based on objective, quantifiable results. 15. Performance appraisals include management by objective with mutual goal setting.
16. Performance appraisals include developmental feedback.
17. Incentives are based on team performance.
18. Compensation packages include an extensive benefits package.
19. Our compensations include high wages.
20. The incentive system is tied to skill-based pay.
21. Our compensation is contingent on performance.

25. Way (2002)

Article Citation: Way, S. A. 2002. High Performance Work Systems and Intermediate Indicators of Firm Performance Within the US Small Business Sector. *Journal of Management*, 28(6): 765-785.

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- Perceptive (The extent to which, e.g., Likert scales)

Items:

Extensiveness of staffing

An additive score of the extent that the five selection devices are used to evaluate candidates for front-line jobs; each of the selection devices are on a 5-point scale (“never” to “always”).

Score = (interviews + tests + work samples + drug/alcohol screens + references from previous employers)/25. Maximum score = 1

Group-based performance pay

Establishment contributes to employee stock options or profit sharing: Yes = 1; No = 0

Pay level

Average pay of front-line employees/60,000 (the maximum average front-line pay in sample). Maximum score = 1

Job rotation

Percent of non-managerial and non-supervisory employees involved in job rotation. Maximum score = 1

Self-directed teams

Percent of non-managerial and non-supervisory employees involved in self-managed teams. Maximum score = 1

Formal training

In the past year, percent of front-line employees who received formal training. Maximum score = 1

Involvement in meetings discussing work-related issues

Percent of non-managerial and non-supervisory employees involved in regularly scheduled meetings to discuss work-related issues. Maximum score = 1

26. Wright, Gardner, Moynihan & Allen

Article Citation: Wright, P. M., Gardner, T. M., Moynihan, L. M. & Allen, M. R. 2005. The Relationship Between HR Practices and Firm Performance: Examining Causal Order. *Personnel Psychology*, 58: 409-446.

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- Not mentioned
- Other names (Commitment-based, productivity-based, compliance-based, and collaborative)

Type of the measurement:

- Descriptive 1 (Whether a practice is provided, e.g., Yes/No)
- Descriptive 2 (Numbers or percentage of employees covered by a practice)
- Perceptive (The extent to which, e.g., Likert scales)

Items:

Selection

1. Applicants undergo structured interviews (job related questions, same questions asked of all applicants, rating scales) before being hired.
2. Qualified employees have the opportunity to be promoted to positions of greater pay and/or responsibility within the company.
3. Applicants for this job take formal tests (paper and pencil or work sample) before being hired.

Training

4. On average how many hours of formal training do employees in this job receive each year?
Pay for Performance and Performance Evaluation
5. Employees in this job regularly (at least once a year) receive a formal evaluation of their performance.
6. Pay raises for employees in this job are based on job performance.
7. Employees in this job have the opportunity to earn individual bonuses (or commissions) for productivity, performance, or other individual performance outcomes.

Participation

8. Employees in this job are involved in formal participation processes such as quality improvement groups, problem-solving groups, roundtable discussions, or suggestion systems.
9. Employees in this job have a reasonable and fair complaint process.

27. Youndt, Snell, Dean & Lepak (1996)

Article Citation: Youndt, M. A., Snell, S. A., Dean, J. W. Jr. & Lepak, D. P. 1996. Human Resource Management, Manufacturing Strategy, and Firm Performance. *Academy of Management Journal*, 39(4): 836-866.

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- High-performance work systems
- High-commitment HRM systems or commitment-oriented HRM systems
- High-involvement HRM systems
- High-investment HRM systems
- Not mentioned
- Other names (Human Capital-Enhancing HRM system, Administrative HRM system)

Type of the measurement:

- Descriptive 1 (Whether a practice is provided, e.g., Yes/No)
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- Perceptive (The extent to which, e.g., Likert scales)

Items:

Staffing

1. Selectivity in hiring
2. Selection for manual and physical skills
3. Selection for technical skills
4. Selection for problem-solving skills

Training

5. Comprehensiveness
6. Policies and procedural training
7. Training for technical skills
8. Training for problem solving skills

Performance Appraisal

9. Developmental focus
10. Results-based appraisal
11. Behavior-based appraisal

Compensation Systems

12. Hourly pay
13. Salary
14. Skill-based pay
15. Individual incentives
16. Group incentives
17. Individual equity
18. External equity

28. Zacharatos (2001)

Article Citation: Zacharatos, A. 2001. An organization and employee level investigation of the relationship between high performance work systems and workplace safety. 1-225

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Type of the measurement:

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- Perceptive (The extent to which, e.g., Likert scales)

Items:

Employment security

1. Providing employment security to our employees is a priority in this organization.
2. If an employee were to lose his/her job, this organization would try very hard to find him/her another position elsewhere in the organization.
3. What percentage of non-entry level jobs have been filled with internal candidates in recent (i.e., over the last three) years?
4. What percentage of the workforce could work in this organization as long as they want to?
5. What percentage of this organization's workforce has been laid off in the last 2 years? (5)
6. What percentage of this organization's work force has employment security?
7. How many rounds of layoffs has your organization undergone in the last 2 years? (R)

Selective hiring

1. The values and beliefs of this organization are discussed in interviews with potential employees.
2. Only the best people are hired to work in this organization.
3. Employees of this organization are involved in the hiring of their peers.
4. What percentage of job applicants does your firm eventually hire? (R)
5. What percentage of job applicants undergo more than one interview before being hired?
6. What percentage of job applicants undergo more than two interviews before being hired?

Training

1. Providing employees with training beyond that mandated by government regulations is a priority in this organization.
2. This organization subsidizes, assists or reimburses employees for training or courses taken outside of the workplace.
3. Employees in this organization receive additional compensation for training they get outside the organization.
4. What percentage of this organization's front-line employees received training beyond that mandated by government regulations in the last 12 months?

5. What percentage of your organization's supervisory or managerial employees received training beyond that mandated by government regulations in the last 12 months?
6. What is the average number of hours of training beyond that mandated by government regulations received by a front-line employee in the last 12 months?
7. What is the average number of hours of training beyond that mandated by government regulations received by a supervisory or managerial employee in the last 12 months?

Team working and decentralized decision-making

1. The development of teams is an important element of this organization's corporate strategy.
2. This organization supports team development and training.
3. Employee suggestions are implemented in full or in part within this organization.
4. Decision-making by non-managerial employees is encouraged in this organization.
5. What percentage of employees in your organization work in semi-autonomous groups (i.e., groups with a high level of responsibility)?
6. What percentage of employees in your organization work in problem-solving teams (i.e., teams with responsibility over a narrow range of issues)?

Reduced status distinctions

1. The use of formal titles within this organization is enforced. (R)
2. Employees at different levels within this organization are encouraged to interact.
3. Some members of this organization have privileges that are unavailable to other members (e.g.: reserved parking and dining facilities). (R)
4. What percentage of the workforce is invited to company wide social events?
5. What is the highest annual salary (including bonuses) paid to a full-time employee in your organization?
6. What is the lowest annual salary (including bonuses) paid to a full-time employee in your organization?

Information sharing

1. The findings from employee surveys are communicated to members of this organization.
2. This organization keeps secrets from employees. (R)
3. Our competitors know more about this organization than our employees themselves do. (R)
4. Information about how well the organization is performing financially is shared with employees.
5. What percentage of the workforce is included in a formal information sharing program (e.g., a newsletter, emails)?
6. What percentage of the workforce is formally notified about how the organization is performing?

Contingent compensation

1. This organization pays above market wages.
2. The way in which employees in this organization are compensated encourages them to adopt a long-term focus.
3. What percentage of the workforce has access to company incentive plans, profit-sharing plans, and/or gain-sharing plans?
4. What percentage of the workforce is compensated (at least in part) based on their individual performance? (R)
5. What percentage of the workforce is compensated (at least in part) based on their performance within a group?

Transformational leadership

1. Leaders in this organization are focused on doing the right thing as well as on getting results.
2. Leaders in this organization encourage employees to look at problems and come up with their own solutions and suggestions.
3. Leaders in this organization listen to the concerns of employees.
4. Leaders in this organization express their confidence that the organization will achieve its goals.
5. Leaders in this organization encourage employees to express their ideas and opinions.
6. Leaders in this organization provide employees with continuous encouragement.

Job quality

1. Fostering involvement in decision-making at all levels of this organization is an important element of the corporate strategy.
2. Many employees in this organization perform simple and repetitive tasks as part of their work. (R)
3. Providing employees with high quality jobs (i.e., jobs that are challenging, fulfilling, etc.) is a priority in this organization.
4. Employees of this organization are given lots of opportunity to decide how to do their work.
5. What percentage of the workforce works overtime hours? (R)
6. What percentage of non-supervisory employees make decisions regarding how they do their work?
7. What percentage of front-line employees in your organization make decisions regarding how they do their work (e.g.: decisions about workflow, scheduling)?

Measurement of variables critical to organizational success

1. The measurement of an employee's performance on the job is a priority in this organization.
2. The measurement of occupational safety is a priority in this organization.
3. This organization makes a point of keeping track of factors that it considers critical for success.
4. The measurement of turnover and absenteeism is a priority in this organization.
5. What percentage of the workforce completes attitude surveys on a regular basis?
6. What percentage of the workforce receives formal performance appraisals?
7. What percentage of the workforce completes surveys measuring employee morale (i.e., satisfaction, trust in management, loyalty)?

(R) denotes a reverse-keyed item