

International Symposium

The Science of Japanese Personnel Management

– Rethinking employment systems in the era of globalization

Handout



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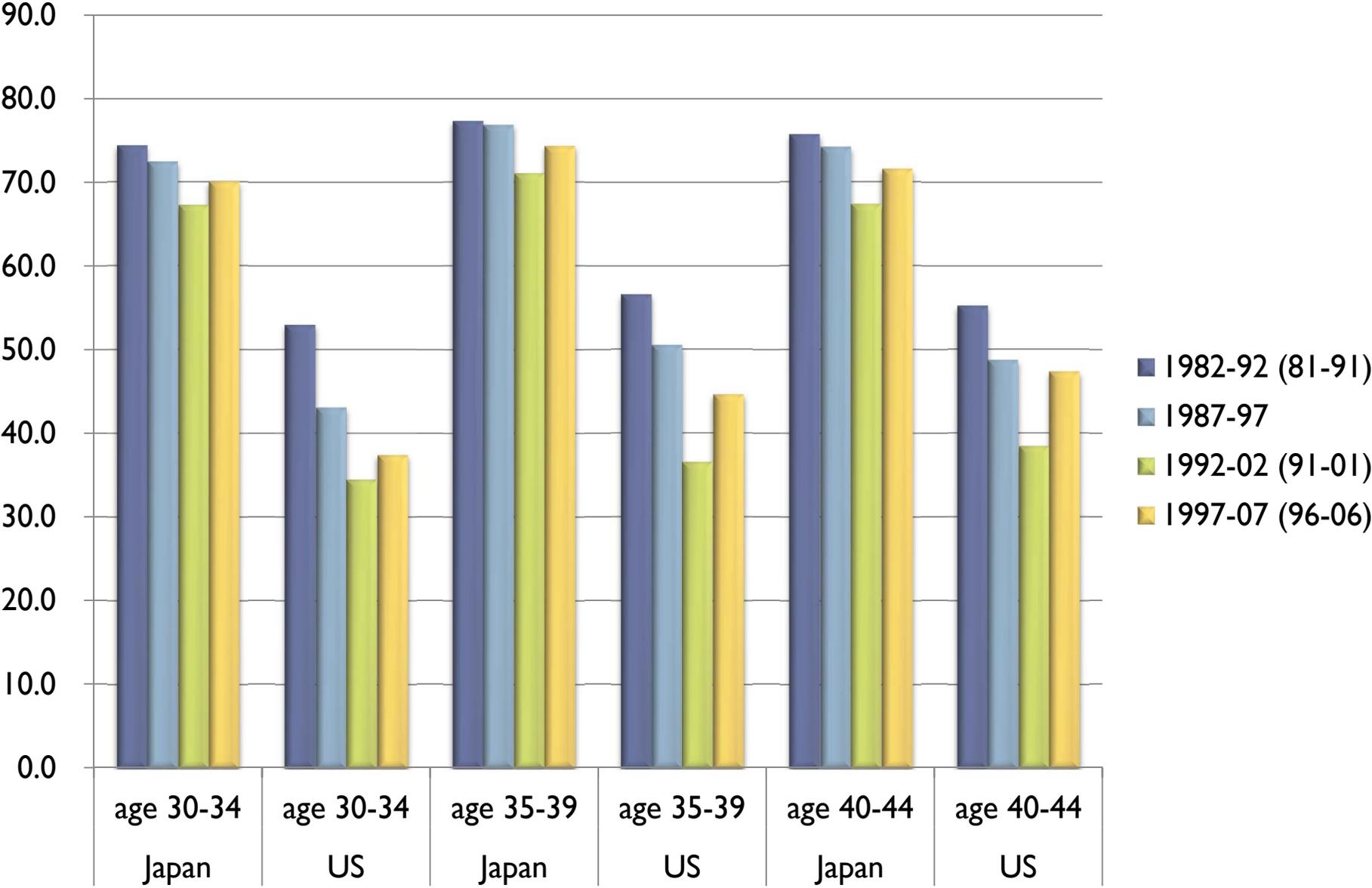
Lessons from the Personnel Data Repository Project

Takao Kato, Colgate University and IZA
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Internal Labor Markets

- ▶ Still pervasive long-term employment and internal labor markets in Japan:
 - ▶ **Employer learning** about worker's ability through observing work performance over time;
 - ▶ **Human capital accumulation** within the firm through OJT and Off-JT.
 - ▶ **Job assignment/reassignment and promotion** based on worker's accumulated human capital and firm's assessment of performance and ability.
 - ▶ **Incentives**
- ▶ The importance of well-functioning internal labor markets for firm's long-term competitiveness

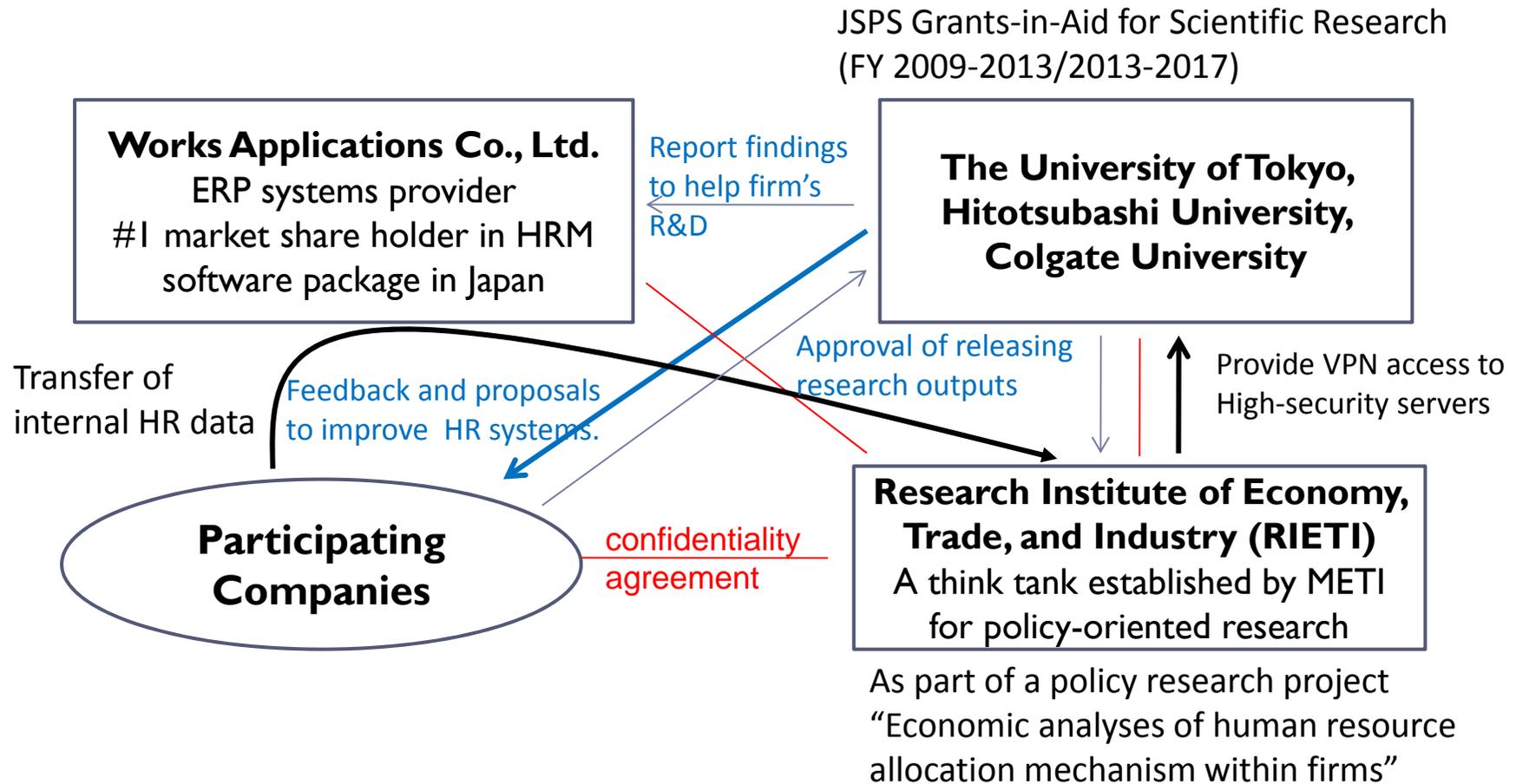
Changes in 10-year Job Retention Rates in Japan and the U.S. 1982-2007:
 All Core Employees (30-44 years old, 5+ years of tenure)



Data Needs

- ▶ To understand deeply the nature, scope and efficacy of internal labor markets, we need data that go far beyond standard wage and employment data.
- ▶ We need personnel data:
 1. Detailed and accurate data on job assignment, promotion, training, and incentives (payment systems) for each individual employee from the beginning of career in the firm to the present.
 2. Detailed biographical data (age, tenure, education, gender, marital status, family structure, and location).

Personnel Data Repository Project



Data : Two manufacturing firms and one retail firm

- ▶ Personnel data from two large manufacturing firms in Japan which agreed to participate in our personnel data repository project thanks to Works Applications.



- ▶ Personnel data combined with sales transaction data from one large auto sales firm in Japan (Prof. Tsuru's research team)



Specifically, we share insights from our analysis of the following five elements of ILM



Issues surrounding Performance Pay

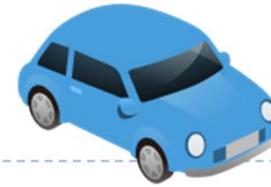
▶ Multitasking Agency problem

- ▶ When performance pay is used for multitasking workers, they tend to spend more time on tasks for which performance is easy to measure, and neglect tasks for which performance is hard to measure.
- ▶ Example 1: what would happen if we applied a piece rate for workers with three tasks: (i) sales; (ii) marketing (gathering information about customer needs); and (iii) customer services?
- ▶ Example 2: individual incentive pay discourages collaboration with team members as well as with other teams. If teamwork is important, group incentive pay should be used.

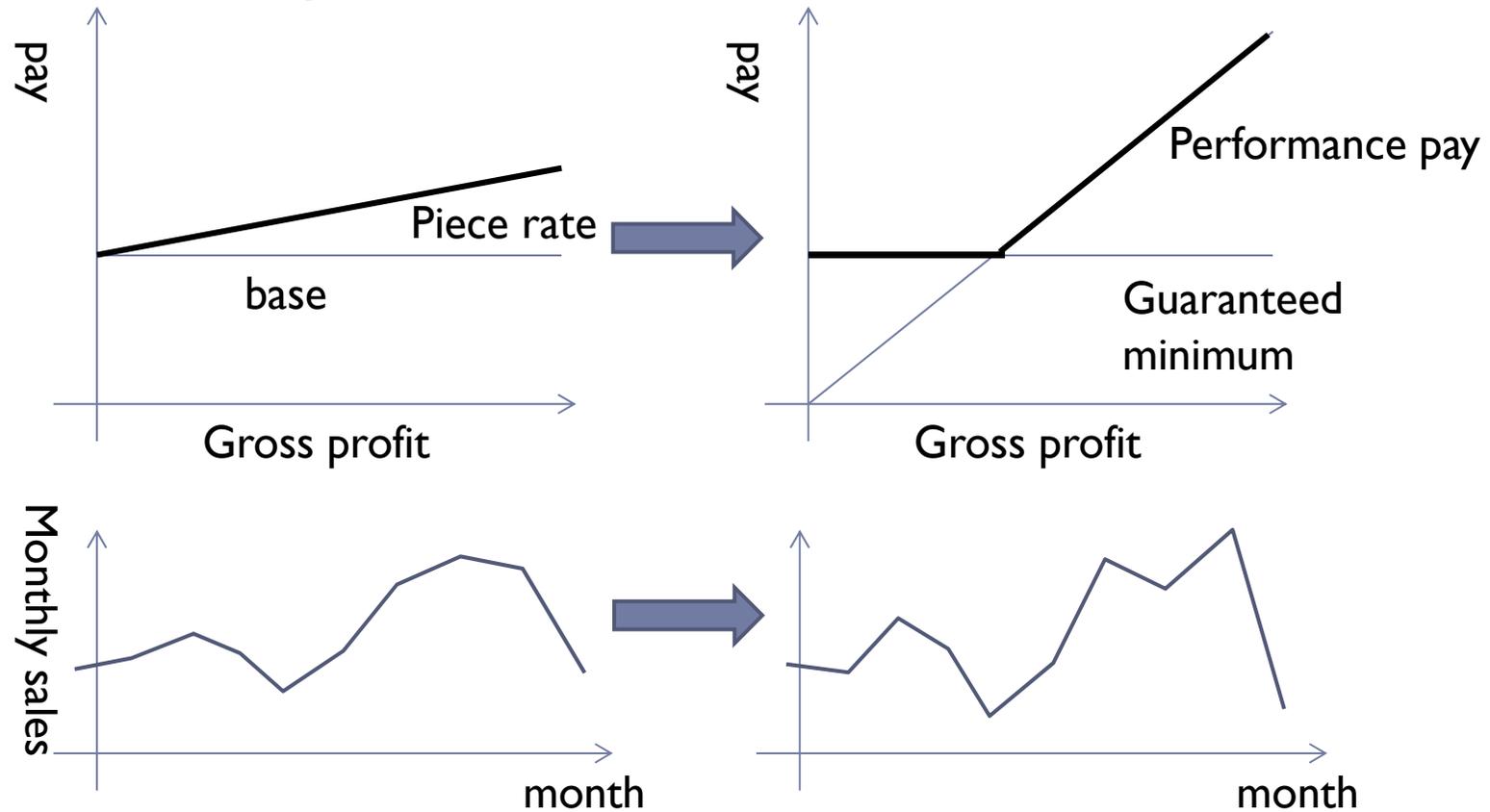
▶ Gaming

- ▶ Incentive to manipulate performance measures (e.g., manipulation of the timing of order and delivery; fictional sales to distributors).

Owan and Tsuru (2011)



► auto dealership A



Implications for management



- ▶ When introducing nonlinear pay system, it is important to mitigate the gaming problem by using complementary mechanisms.
 1. Find a performance measure that cannot be manipulated easily.
 - ▶ The car dealership solved the gaming problem by using two-month moving average as a revised performance measure.
 2. Reduce asymmetric information—information that the worker knows but supervisor does not.
 - ▶ Such asymmetric information tends to lead to gaming.
 - ▶ Create a mechanism through which the worker discloses such information.
 - Timely and frequent activity reports
 - Balanced scorecard
 3. In addition to objective measures, consider subjective evaluations as an overall assessment.

Subjective evaluations: a double-edged sword

- ▶ Subjective evaluations can solve the multitasking and gaming problems, insofar as supervisors can monitor employee behavior effectively.
- ▶ BUT subjective evaluations are prone to produce a variety of biases, and such biases tend to lower worker satisfaction and increase labor turnover.



Takahashi, Owan, Tsuru, and Uehara (2013)

- ▶ Are subjective evaluations used to solve the multitasking problem?
 - ▶ When new-hiree training is added to a car salesperson's tasks, the sensitivity of his evaluations to his own car sales will fall by 20 to 30 percent.
 - ▶ When car sales to businesses (as a percentage of total sales) rise by 10 percent, the sensitivity of evaluations to car sales declines by 10 percent.
- ⇒ When tasks other than sales increase, sales play a less significant role in evaluations.
- ⇒ Implications: subjective evaluations are used to measure overall performance in a way that solves the multitasking problem.

Do Japanese evaluation systems work well?

- ▶ Halse, Smeets, and Warzynski (2011) analyze a multinational pharmaceutical firm based in Scandinavia, and find cross-national differences in the roles of evaluations.
 - ▶ The sensitivity of pay to evaluations is largest for China, while there is little difference among Europe, the U.S. and Japan.
 - ▶ But the sensitivity of promotion to evaluations is largest for the U.S. and smallest for Japan.
- ▶ Our analysis of two large manufacturing firms confirms that the linkage between promotion and evaluations is not strong.
 - ▶ Evaluations affect bonus but are not considered directly for promotion.
- ▶ With the growing importance of global talent management and diverse forms of standard employment, the importance of the evaluation system may rise.

How much bias in evaluations?

Kawaguchi, Takahashi, and Owan (2013)



- ▶ Must control for characteristics of supervisor and supervisees, including both the observable and unobservable (e.g., innate ability of the supervisee, supervisor's evaluation standards, etc).
 - ▶ Need longitudinal data.
- ▶ **Preliminary findings**
 - ▶ Job tenure of supervisors matters: newly appointed supervisors tend to be more generous for high-performers.
 - ▶ Gender matters: women tend not to give high grades to male subordinates.
 - ▶ Marital status matter: married supervisors tend to be lenient.
 - ▶ The bias generally disappears in the upper level tiers of hierarchies where there is more scrutiny of evaluations, but new type of bias emerges for managers.
 - ▶ alma mater effect : managers do not receive low grades when their supervisors graduated from the same schools.

Evaluation bias problem: Reduced worker satisfaction and increased turnover.

Takahashi, Owan, Tsuru, and Uehara (2013)



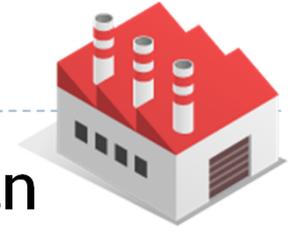
- ▶ We estimate the individual worker's subjective evaluation and calculate the unaccountable evaluations as potential bias.
 - ▶ Estimate as a function of his observable performance measure and branch/supervisor characteristics.
- ▶ Then match the residuals with employee turnover records as well as employee satisfaction survey results.
- ▶ Findings: when there is downward bias in evaluation (B is given when A is predicted from the estimated evaluation equation),
 - ▶ worker satisfaction (fairness of evaluation) falls by 14-17 percentage points.
 - ▶ When there is no evaluation feedback, it falls by 36 percentage points.
 - ▶ the quit rate will rise by 4.4 percentage points for those with two years of tenure, and 2.8 percentage points for those with ten years.
 - ▶ Considering that the average quit rate is 8%, the lack of fairness about evaluations has a large effect on employee turnover.

Implications for Management

- ▶ **Management must:**

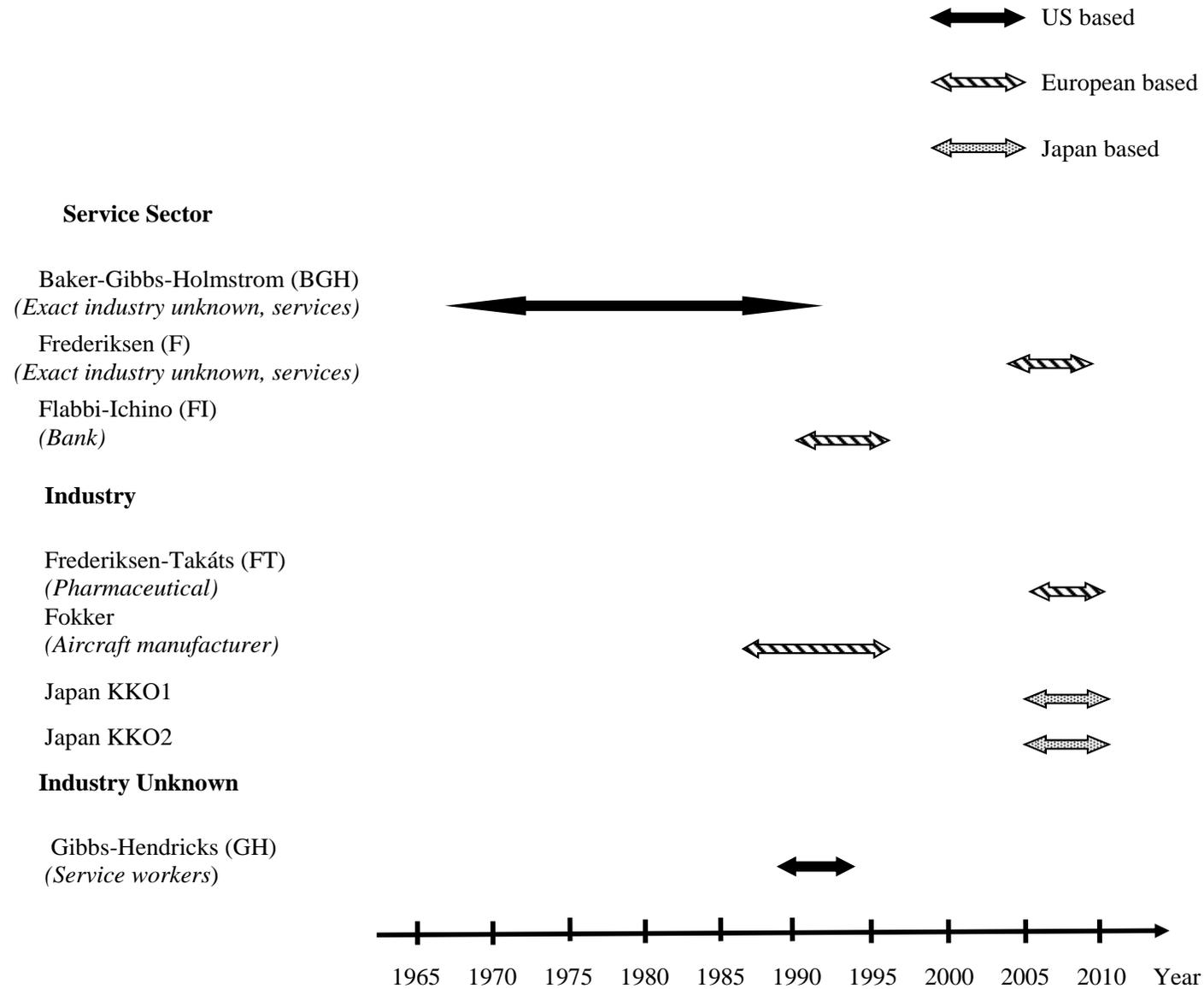
- ▶ Understand what kind of bias will arise in evaluations, and train supervisors accordingly.
- ▶ Make more explicit the relationship between evaluations and promotion/job assignment, as well as the responsibility of supervisors.
- ▶ Tie evaluations to human resource development, and facilitate communication between supervisors and supervisees. Secure adequate feedback, limit bias, and enhance supervisee satisfaction.

Question: How unique is the Japanese evaluation system?

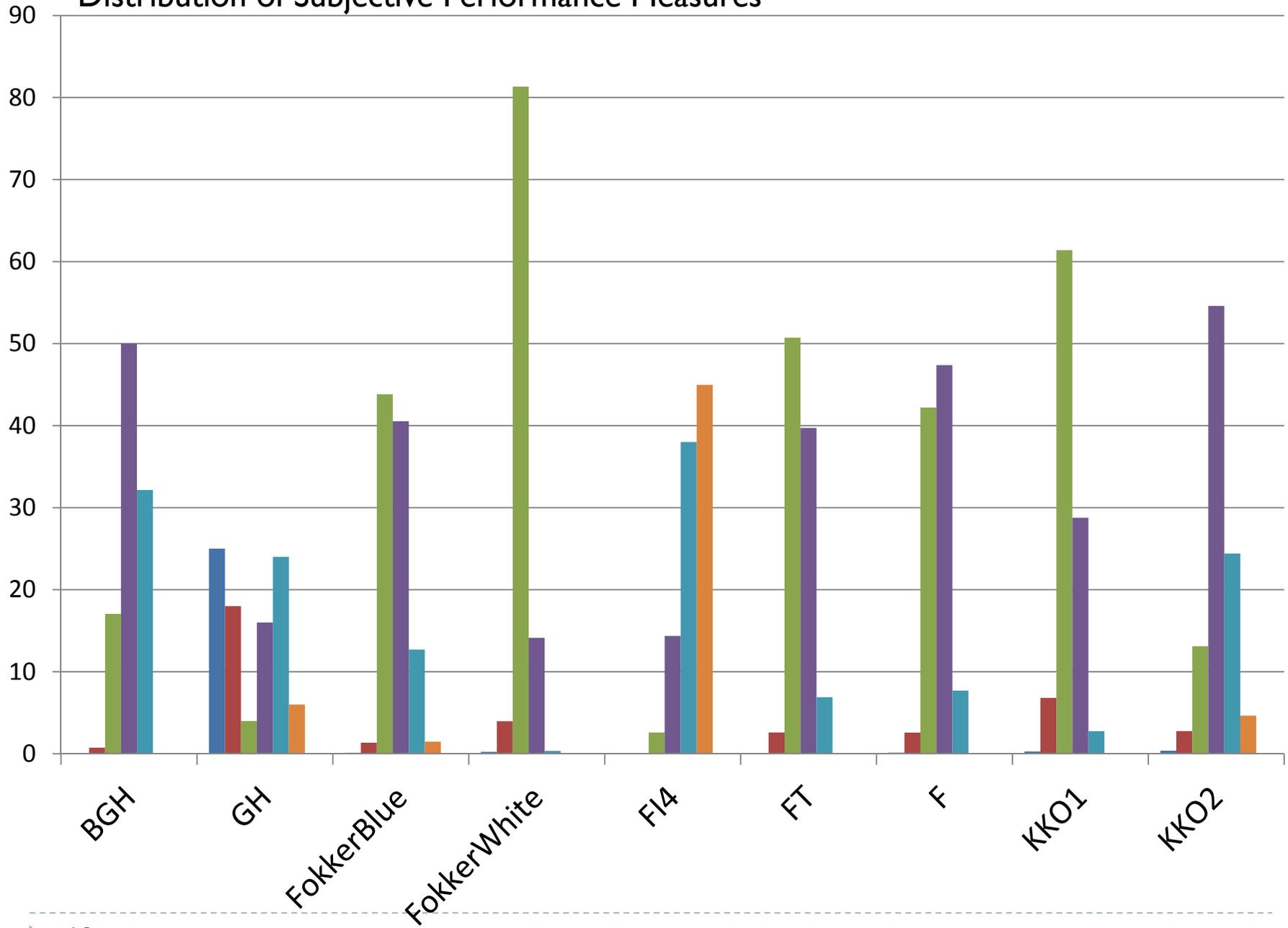


- ▶ We joined forces with American and European researchers
- ▶ Established empirical regularities about the nature, scope and effect of subjective performance evaluations cross-nationally.
- ▶ Analyzed detailed personnel data with subjective evaluations from eight diverse firms in different industries and from different countries.

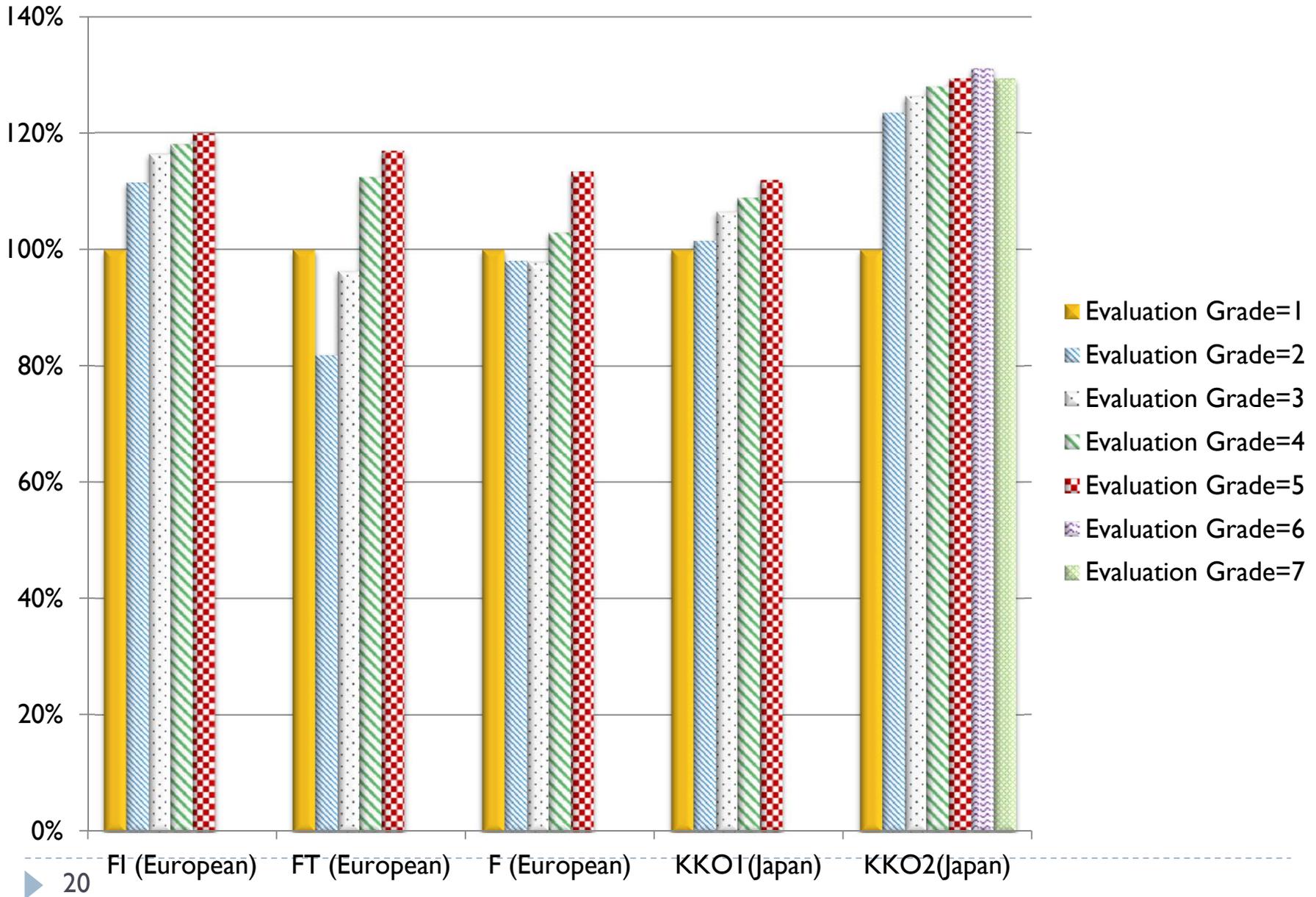
Figure 1. Location, Industry, and Time Period



Distribution of Subjective Performance Measures



Evaluations-Wage Profiles:Age, Tenure, Education, Gender, Race when appropriate,Year, and Job Levels are controlled for.

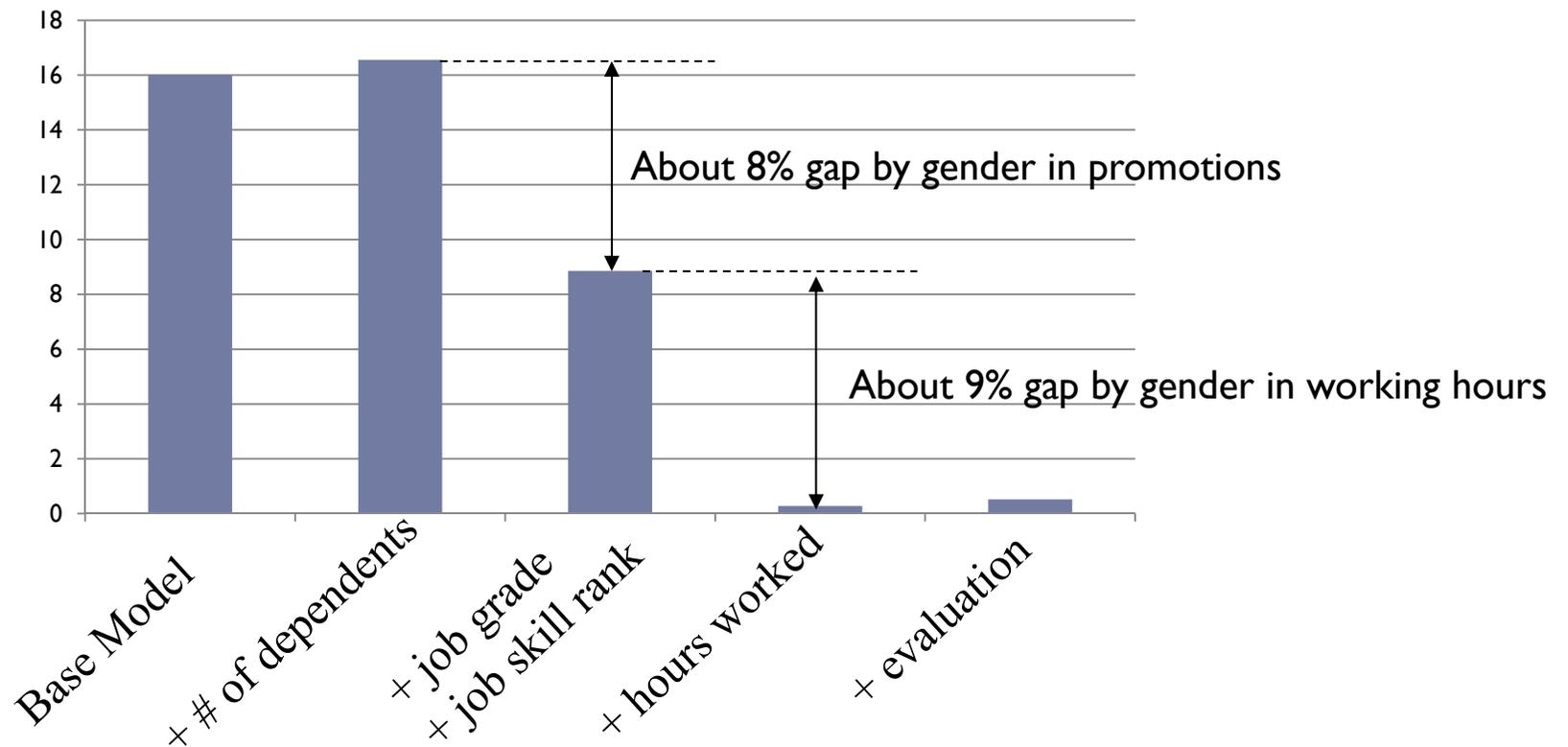


Gender Pay Gaps within the firm

Kato, Kawaguchi, and Owan (2013)



Gender pay gaps: unmarried



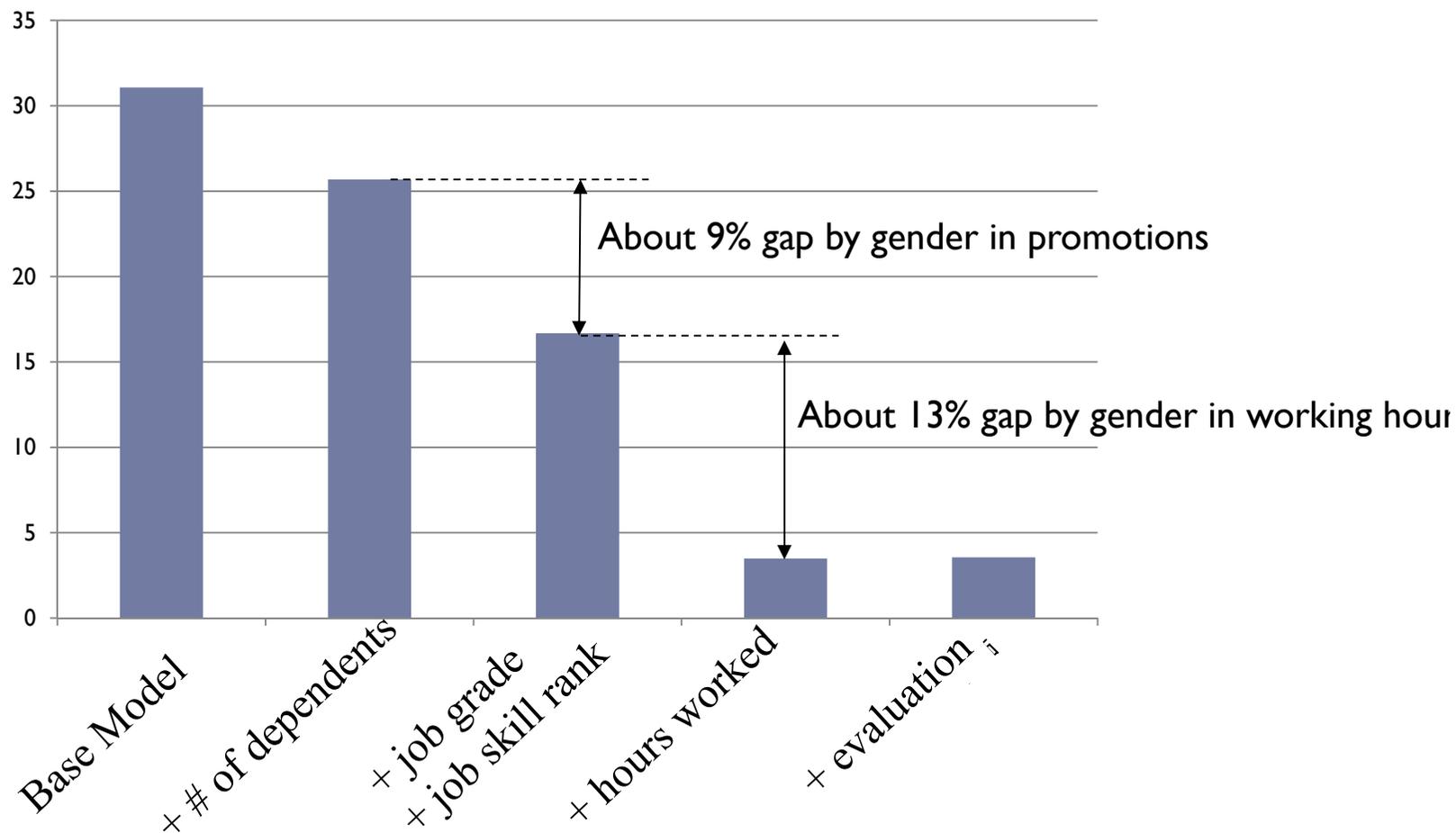
Note: Age, tenure, education and fiscal year are controlled for

Gender Pay Gaps within the firm

Kato, Kawaguchi, and Owan (2013)



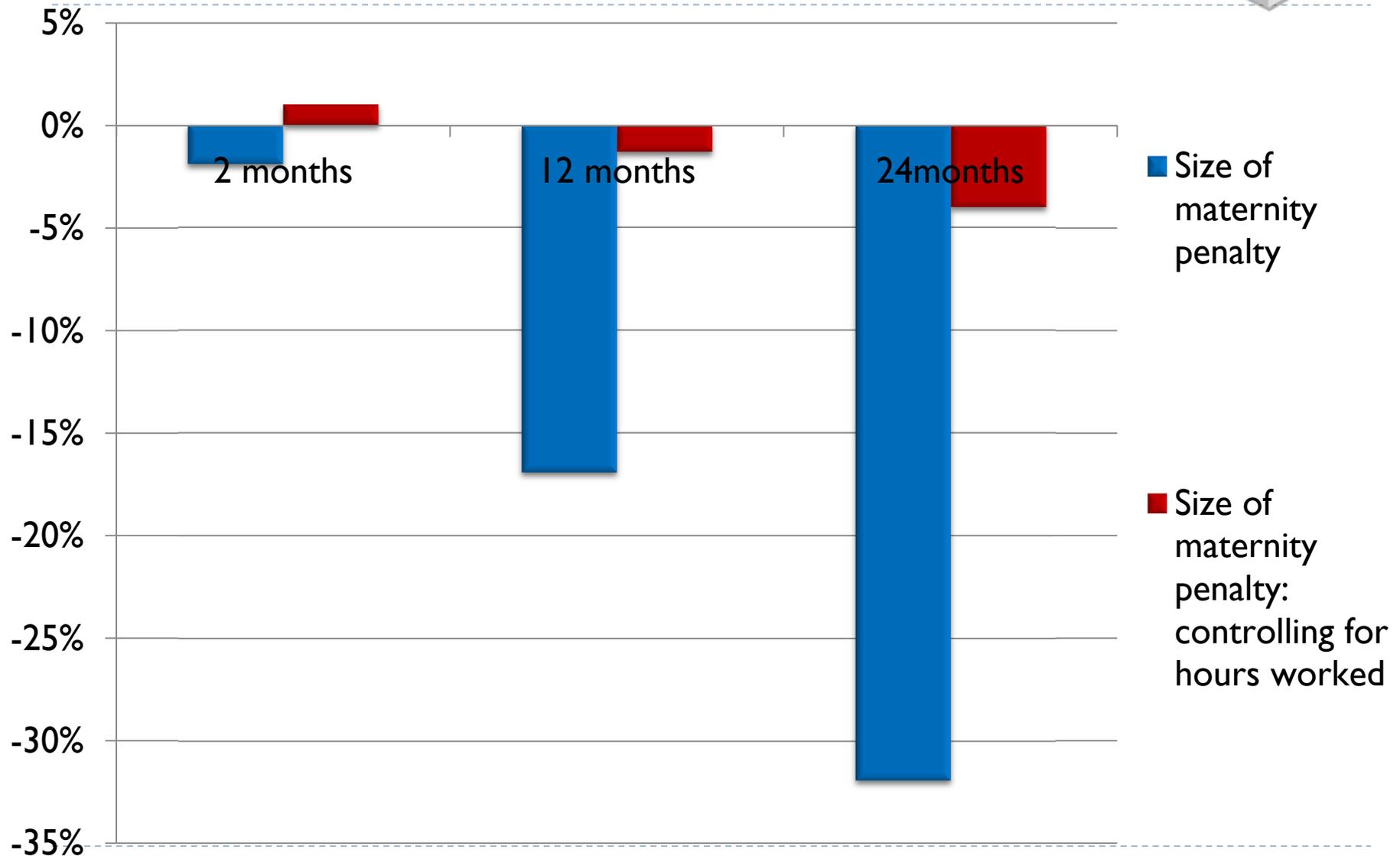
Gender Pay Gaps: Married



Note: Age, tenure, education and years are always controlled for

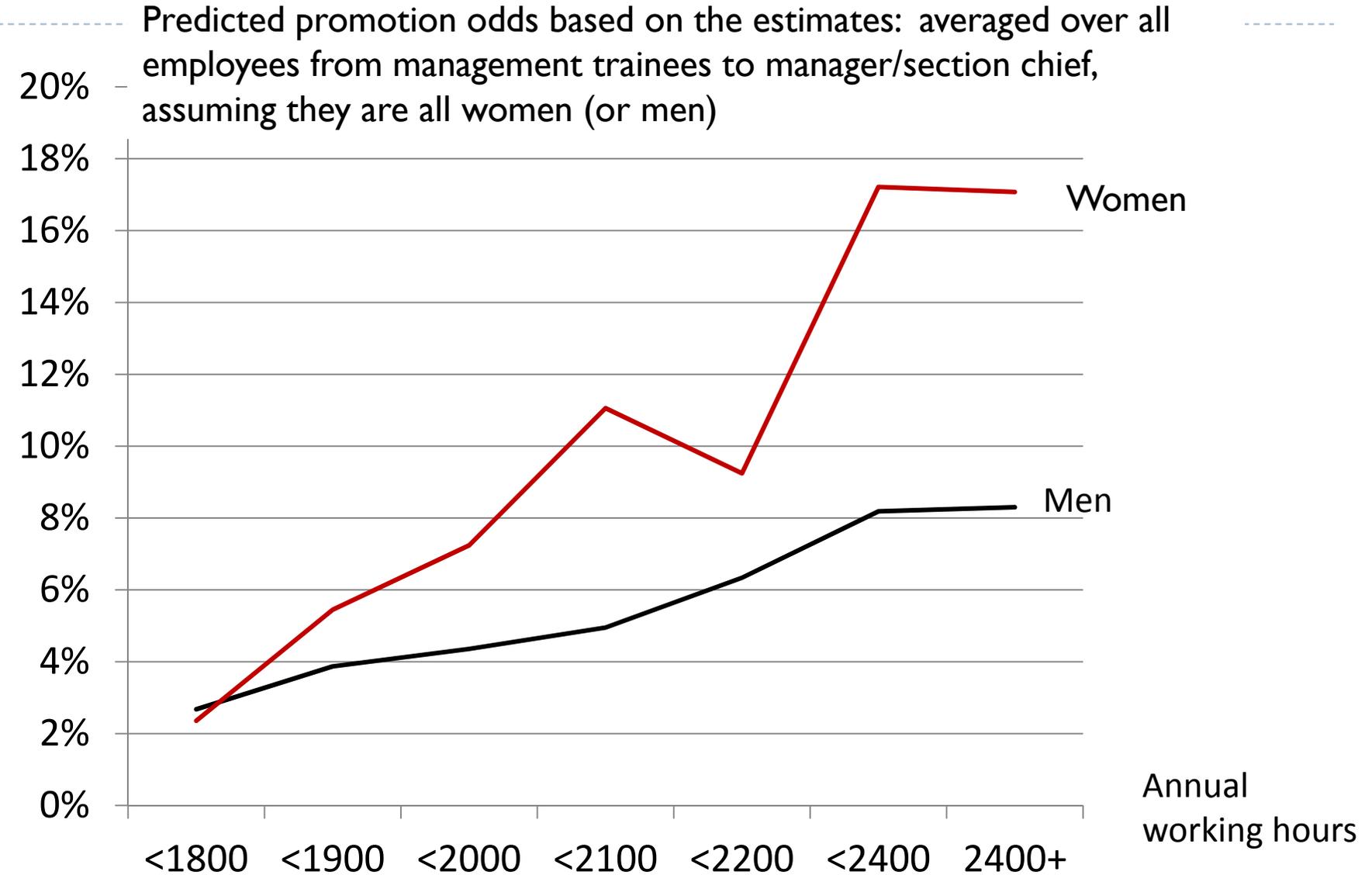
Maternity Penalty

Kato, Kawaguchi, and Owan (2013)



Working Hours matter for women

Kato, Kawaguchi, and Owan (2013)



Interpretations

Kato, Kawaguchi, and Owan (2013)



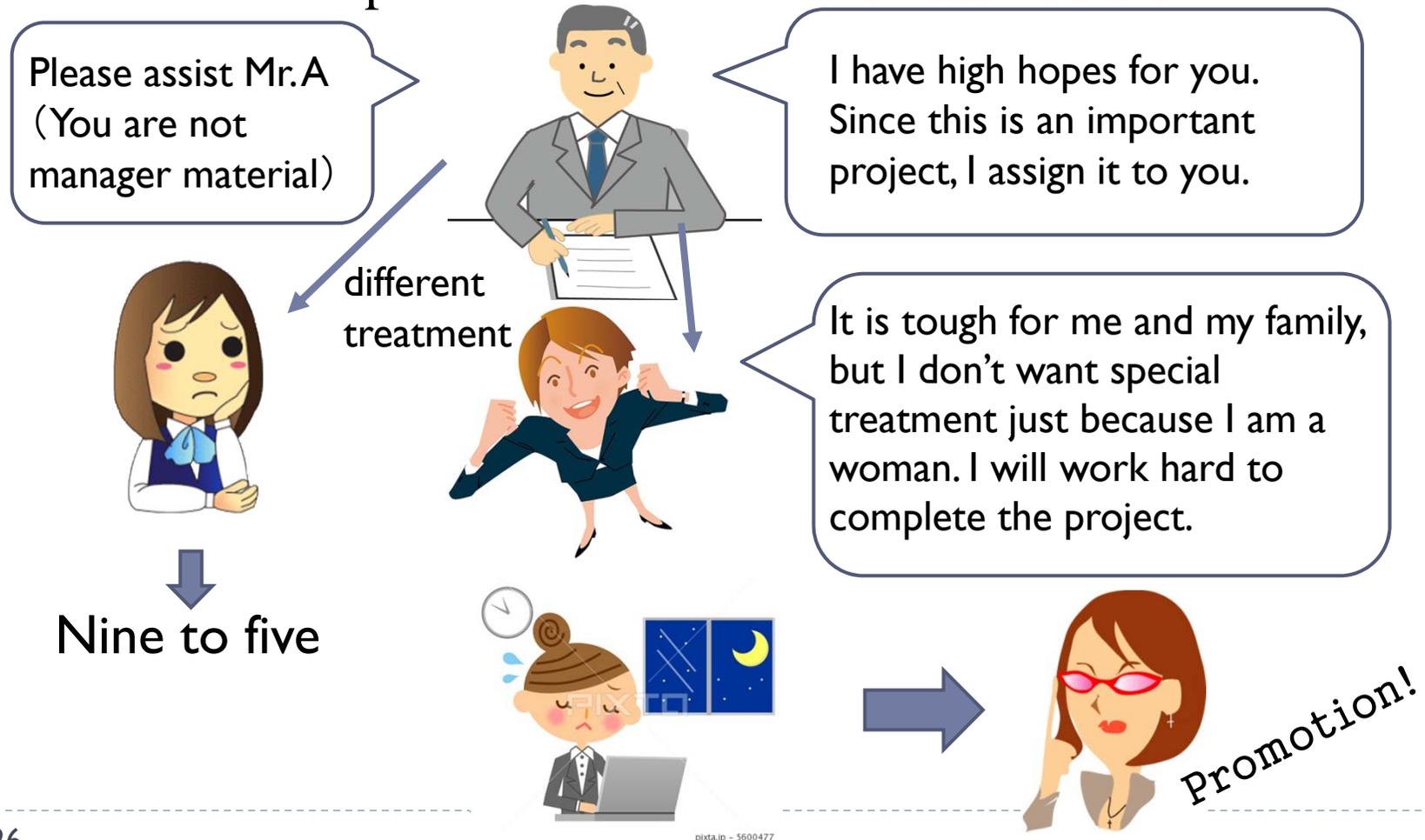
- ▶ Segmented internal labor markets by gender with two-way information asymmetry
 1. The firm has better information about each employee's managerial/leadership ability.
 2. The worker has better information about his/her commitment to the firm (expected odds of quit or willingness to sacrifice his/her leisure)

Interpretations

Kato, Kawaguchi, and Owan (2013)



Internal labor market for women: supervisor and his female subordinate share private information with each other:



Interpretations

Kato, Kawaguchi, and Owan (2013)



- ▶ Internal labor market for men: a **rat-race equilibrium**.



- ▶ Supervisor does not disclose his private information about worker's leadership/managerial ability.
- ▶ Many men signal commitment to the firm by working long hours, but only a small subset of those will get promoted.
- ▶ Consistent with prolonged promotion tournament with cohort-based contestant pools

Implications for management and public policy

Kato, Kawaguchi, and Owan (2013)

- ▶ **Signaling by female employees**
 - ▶ Female employees with strong commitment to the firm and career signal such commitment to the firm by working long hours and returning from maternity leaves quickly.
 - ▶ Cost of signaling may be prohibitively high for some highly capable female employees. “Discouraged worker effect”?
- ▶ **Rat-race equilibrium for men**
 - ▶ Efficient for Japan’s high-growth “catch-up” era.
 - ▶ Efficacy increasingly unclear when problem solving, process improvement, and leadership are equally or more important than hard work and long hours.

Implications for management and public policy

Kato, Kawaguchi, and Owan (2013)

▶ Examples of desirable public policy responses:

1. “Eliminate daycare wait lists in five years” by opening many more high-quality public daycare centers.
2. Support the development of babysitter services (au pairs)
3. Incentivize fathers to take parental leave (set maximum lengths of leave separately for fathers and mothers).

Most importantly:

- ▶ Limited labor force participation of Japanese women (both in quantity and quality) is closely tied to Japan’s internal labor markets, well-developed and deep-rooted institutions in Japan.
 - ▶ No silver bullet: searching for and trying to implement such a silver bullet may even prove counter-productive.
 - ▶ For example, extending parental leave period might be harmful by raising maternity penalty.

Implications for management and public policy

Kato, Kawaguchi, and Owan (2013)

- ▶ Modifying the rat-race equilibrium for men may be the most effective, and feasible, way to help women increase their roles in the labor market.
- ▶ Specifically,
 - ▶ Revising late promotion policy and sending an early signal to men with high leadership/management ability.
 - ▶ Shifting source of competitiveness from long hours to smart hours.
- ▶ Modification of the rat-race equilibrium will influence the way many couples decide on division of labor within household
 - ▶ Some men might focus on helping their gifted wives.
 - ▶ Public policy could facilitate such men's transition from the rat race to a more balanced life style.

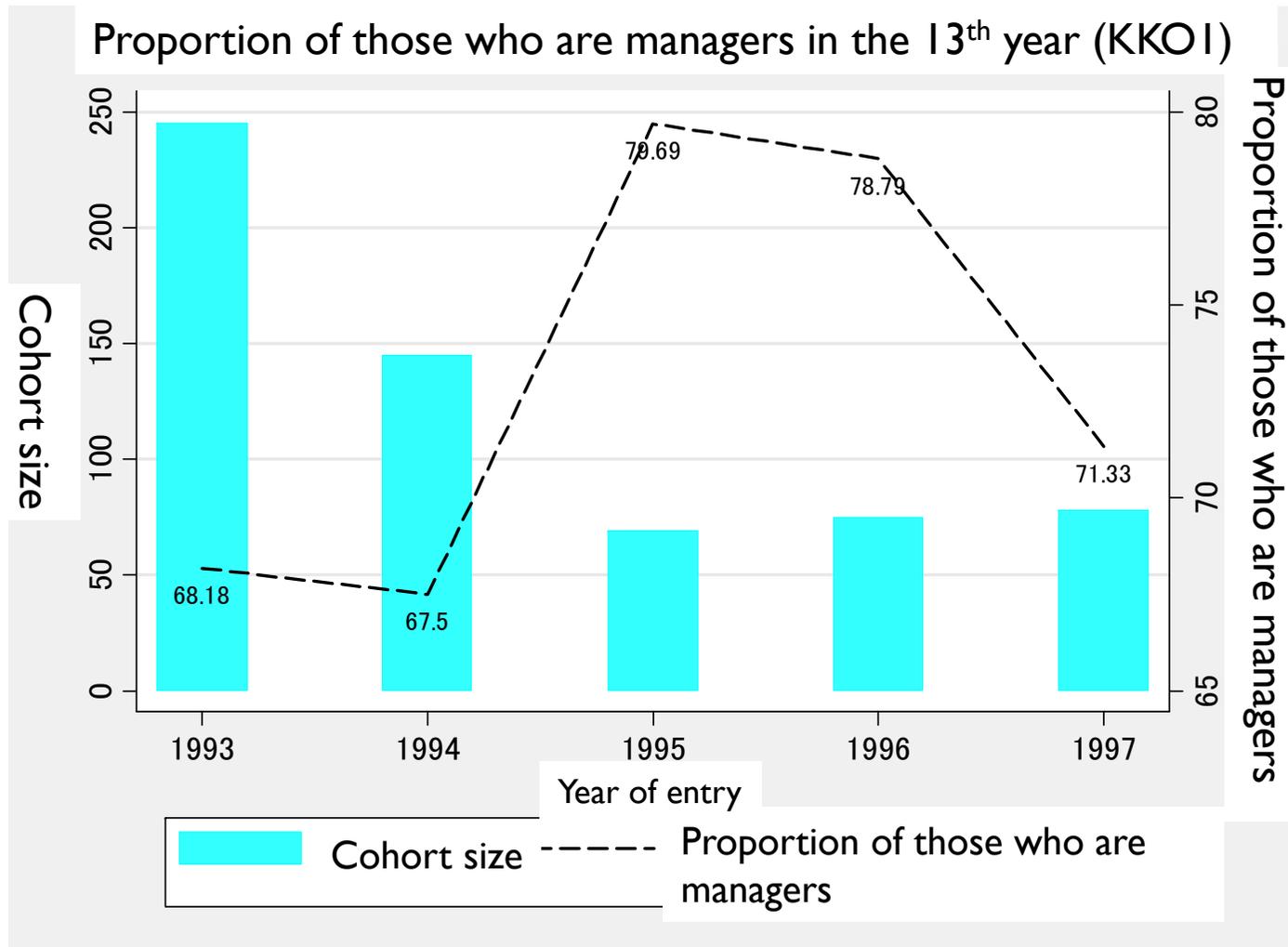
Promotion tournaments with cohorts as well-defined contestant pools

Araki, Kato, Kawaguchi, and Owan (2013)

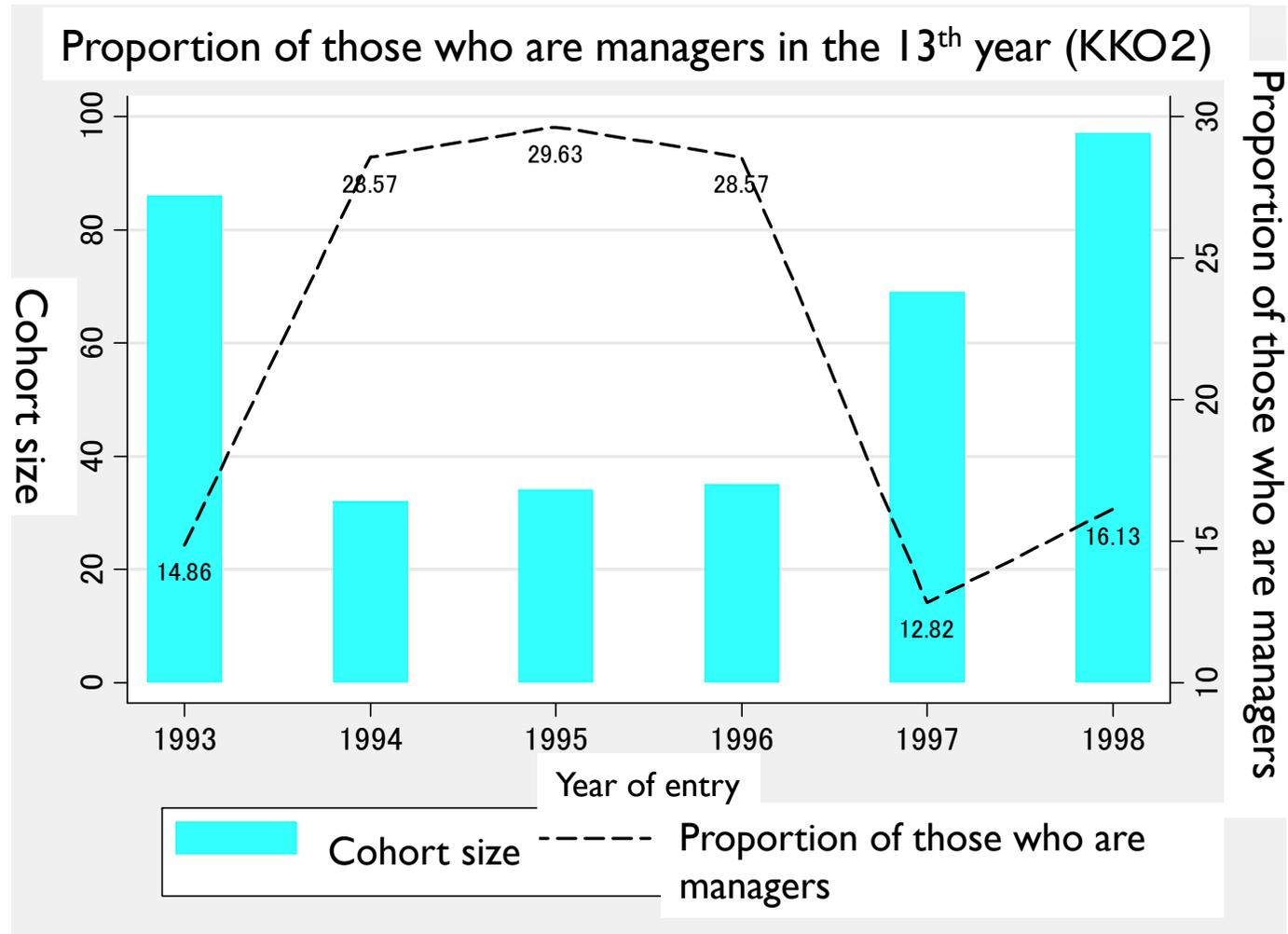


- ▶ The cohort effect literature on the long-term effect on labor market outcomes of entering the labor market in recession.
 - ▶ The cohort effect is observed in every developed country (Genda, Kondo and Ohta 2010 for Japan)
- ▶ One potentially important yet often neglected aspect of the cohort effect.
 - ▶ Reduced size of the cohort in recession.
 - ▶ If the cohort is a well-defined contestant pool in promotion tournament, recession means smaller number of competitors.
- ▶ The cohort size reduction was substantial in the Great Recession (e.g., the “ice-age” of youth employment in Japan in mid-1990s)

Cohort size and promotion rate



Cohort size and promotion rate



Implications



- ▶ New college graduates actually benefitted from the cohort effect as a result of their reduced cohort size and thereby smaller contestant pool.
- ▶ Japan's Lost Decade had little negative long-term effects on careers of those who entered the labor market AND found standard employment.
- ▶ Burden of Great Recession was borne mostly by those who entered the labor market during the recession AND failed to find regular jobs.
- ▶ Further polarization of youth income between winners and losers.
- ▶ The result was not driven by the fact that the average quality of new hires is better during the recession.
- ▶ Got the same result even after controlling for the quality of alma mater

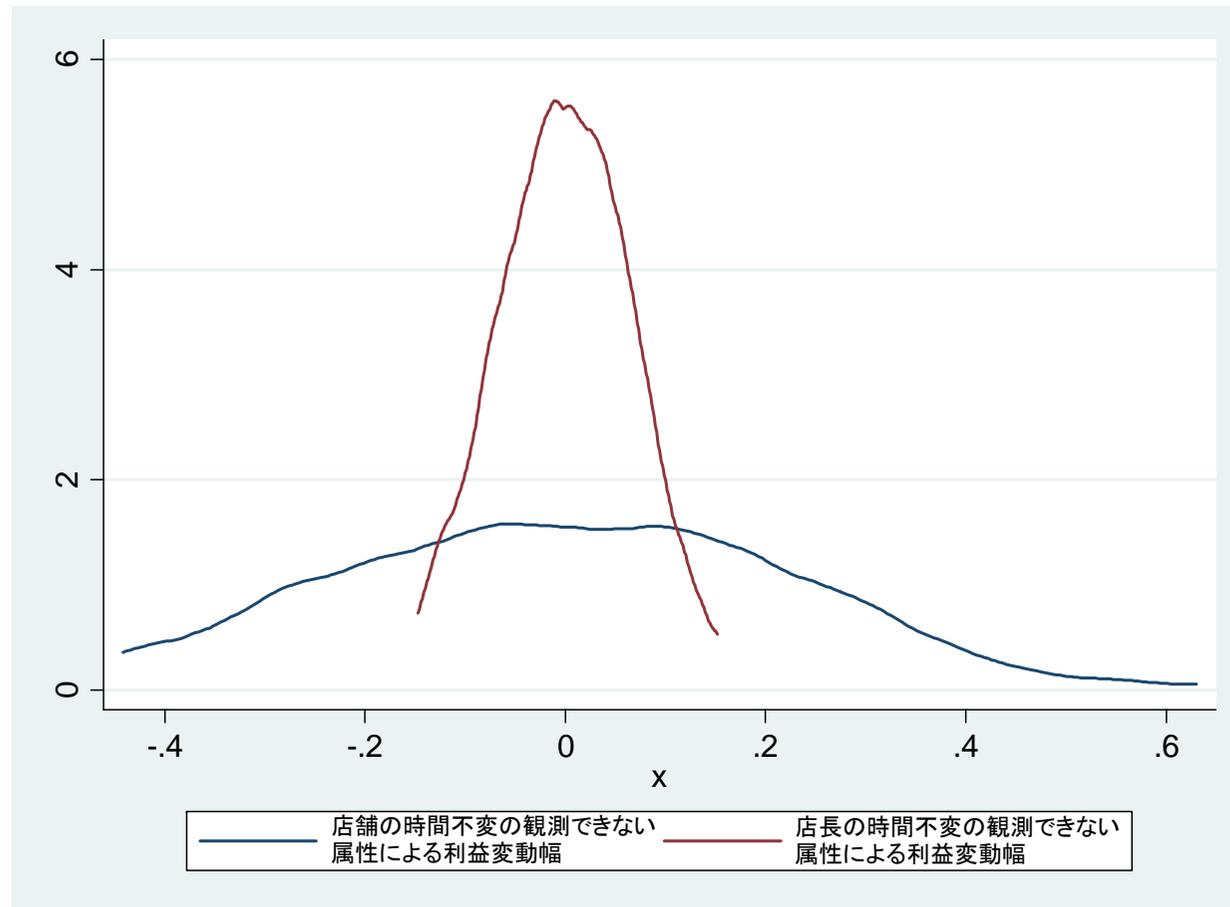


Implications for management

- ▶ In large Japanese firms with well-developed internal labor markets, the cohort serves as a well-defined contestant pool for promotion tournament.
- ▶ Such cohort-based promotion tournament provide a group of relatively homogeneous contestants with significant tournament incentives.
- ▶ Centralized personnel management, new graduate recruits, and late promotion are complementary to the cohort-based promotion tournament.
- ▶ Importance of recognizing :
 1. the cost and benefit of the cohort-based promotion tournament; and
 2. how such cost-benefit calculus will change as globalization progresses and business environments become less static.

How important is middle management?

Uehara, Owan, Takahashi, and Tsuru (2013)



How important is middle management?

Uehara, Owan, Takahashi, and Tsuru (2013)



- ▶ Inter-store differences in profitability due to branch managers account for about one third of those due to other branch characteristics (i.e. location, customer characteristics, human capital of store staff and etc.)
 - ▶ Not rare that branch profitability changes by 5 to 10 percentage points simply because branch managers have changed.
 - ▶ Store manager learning effect is 2-4% and peaks in 2 to 3 years.
 - ▶ Even if branch managers change, branch profitability does not vary significantly during the transition period—little gain in keeping a branch manager in the same store for long time.
- ▶ More important to find and select a good branch manager than to produce a good manager through training.

What makes a good branch manager?

Uehara, Owan, Takahashi, and Tsuru (2013)



- ▶ Jack of all trades: branch managers with experience not only in new car sales but also in used car sales and maintenance/services (repair and state inspection) perform better than branch managers who only have experienced new car sales.
 - ▶ Consistent with Lazear (2012), and Frederiksen and Kato (2013).
- ▶ Younger store managers perform better.
 - ▶ Possibly narrower age gaps and better communication with staff help create a strong team identity.
 - ▶ In spite of the firm's efforts to lower the average age of store managers, rapid aging hampers such effort.

Conclusion

- ▶ The groundwork for the Personnel Data Repository Project is completed.
- ▶ Long-awaited analysis of rich personnel data is now underway.
- ▶ Our findings so far indicate the necessity of reexamining typical Japanese HRM policies, especially toward more flexible job assignments, the evaluation system that accumulate less biased skill information, and more diverse career development paths.
- ▶ Many more insights and implications for practitioners and policy makers are forthcoming.

For instance,

We are also looking at:

- ▶ The effects on hours, absenteeism, and labor turnover of various human resource management policies
- ▶ The cost and benefits of job assignment policies with a particular focus on lateral mobility of workers, both within the firm and to subsidiaries and related firms.
- ▶ The effects on organizational structure and job assignment of technological change
- ▶ An analysis of diversifying careers and human capital formation
- ▶ Knowledge spillover and incentives in R&D organizations.

- ▶ We greatly appreciate your participation in the Personnel Data Repository Project.
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