Perspective Index in Company X from 2004–2013

Nobuo TAKAHASHI,^{a)} Hirofumi OHKAWA^{b)} and
Nobuyuki INAMIZU^{c)}

Abstract: The perspective index (Takahashi, 2014) was tested in a company that has been successful in the process of organizational reform, Company X. An exhaustive survey (Survey X) for all employees was conducted once a fiscal year from 2004 to 2013. According to Survey X, over 13,000 employees showed near-perfect linearity between perspective index and job satisfaction ratio/turnover candidate ratio. Each occupational and rank category also showed a near-straight line, although the values greatly varied per year before and after organizational reform. However, the incline and intercept points of the lines somewhat differed contingent on the occupational and rank category. This might explain the difference between data from Survey X and that of the JPC Survey conducted in Takahashi (2014).

Keywords: leaning on future principle, perspective index, job satisfaction, turnover

^{a)} Graduate School of Economics, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, Japan, nobuta@e.u-tokyo.ac.jp

^{b)} Faculty of Business, Marketing and Distribution, Nakamura Gakuen University, 5-7-1 Befu, Jounan-ku, Fukuoka, Japan, okawa-hf@nakamura-u.ac.jp

^{c)} Faculty of Business Sciences, University of Tsukuba, 3-29-1 Otsuka, Bunkyo-ku, Tokyo, Japan, inamizu@gssm.otsuka.tsukuba.ac.jp

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1. Introduction

At present, many Japanese firms are enduring highly competitive environments to make profit and are tight fisted in terms of paying salaries and dividends. Even if they do not provide accountability, they unfailingly reserve profits internally for investments in further expansion (Takahashi, 2013). Takahashi (1996a, 1996b, 2013) states that this behavior follows the “leaning on future principle,” a decision principle using which people choose a better future rather than act on present mercenary motives based on the past results.

According to Takahashi (2013), even in the 1990s Japanese companies hardly applied the discount rate in investment decisions, whereas American companies rapidly adopted the discount rate method of valuation since the 1960s (Kim & Farragher, 1981; Klammer, 1972). This behavior of Japanese companies also holds for the leaning on future principle, because if Takahashi’s (2013) *future parameter*¹ w is any less than 1, even a large profit earned 10 or 20 years later will be almost nil after being multiplied by w^{10} or w^{20} . Accordingly, even though the expectation values of “long-term profit” will definitely converge, it is similar to focusing on near-future profits and ignoring distant-future profits. If the future parameter $w = 1$, the divergence of the expected profit makes nonsense of discount rate methods, such as the use of net present value (NPV) when making investment decisions. This is the case of Japanese companies having a high future parameter $w \approx 1$. Under such circumstances, we witness “The Ant and the Grasshopper” (Aesop’s Fable) phenomenon in everyday life.

Abegglen’s “lifetime commitment” between a company and an employee—the company will not discharge him even temporarily except in the most extreme circumstances. He will not quit the

¹ The probability that the next round is played in a repeated game (Axelrod, 1984).

company for industrial employment elsewhere (Abegglen, 1958, p. 11)²—is an example of future parameter $w \approx 1$. In this situation, cooperation can easily occur even between mutual enemies (Axelrod, 1984).³ This is seen in labor union cooperation between capital and labor in Japanese companies.

The present paper uses the perspective index developed by Takahashi (1996a) to conduct Survey X, an annual survey conducted ten times at Company X, which has been successful in organizational reform. This paper also compares this data with that of the JPC Survey used in Takahashi (2014).

2. Change of Company X

Survey X is an exhaustive survey for all employees of Company X and conducted once a fiscal year. The questionnaires were distributed at the same time to all the employees and collected once filled (placement method). Like Takahashi, Ohkawa, and Inamizu (2014, in press), this paper uses data gathered over ten years, that is, from the fiscal years 2004–2013. The survey was conducted in October 2004, September 2005, and February from 2007 to 2013. Data from 13,230 out of 13,383 surveys distributed were collected during the ten-year period, which mean response rate is 98.9%.

The most dramatic change during the ten-year duration of Survey X was the restructuring of the company between 2005 and 2006.

² Future parameter w is the probability that the next move is played in a repeated game (Axelrod, 1984). $1 - w$ is a specific case of stopping rule in the sequential decision process (DeGroot, 1970; Ferguson, 1967). See Takahashi (2013) for further details.

³ Although the logic of game theory dictates that the equilibrium of mutual defection in the prisoners' dilemma should remain intact in a finite number of repetitions of the game (Luce & Raiffa, 1957), experiments showed that it quickly collapsed (Pruitt & Kimmel, 1977; Rapoport & Chammah, 1965). Cooperation even evolved in computer tournaments between computer programs (Axelrod, 1980a, 1980b).

This was a large-scale restructuring, in which the offices throughout the country were consolidated into one-third of the original number; workers whose offices had closed down had to transfer to another region to continue their employment with the company. The company called for voluntary retirements at the end of August 2005; nearly 20% of the employees declared their intention to retire, which was more than anticipated. This meant that until the new system was launched in April 2006, the company had to employ as many new recruits as almost half of the retiree.

The first survey was administered in October 2004 and the next in September 2005, after the applications for voluntary retirement closed. The third survey was taken in February 2007, almost one year after the majority of new employees joined the company and the new system had been launched. Consequently, the first three surveys captured data from before, during, and after the major restructuring, providing the perfect opportunity to measure the effect of major organizational restructuring.

The *job satisfaction ratio*⁴ and *turnover candidate ratio* are defined as the ratio of people who answered “yes” to the following questions:

Q1. Are you satisfied with your job?

Q2. If given the chance, would you like to change jobs?

Figures 1 and 2 show annual transitions. While the 2005 survey showed sudden changes in the occupational category (OC1, OC2, OC3, OC4), rank category (ordinary, chief, manager), and total, we see that everything returned to the recovery track from 2006 onwards.

Figures 1 and 2 reflect the success of Company X’s organizational reform.

⁴ This paper expresses job satisfaction from Q1 alone, without calculating a composite variable. This is because although many researchers deal with job satisfaction as a pluralistic concept, they do not necessarily agree on the elements (Sakashita, 1985), and there is a tautology in using similar questions comprising job satisfaction as explanatory variables.

Figure 1. Annual transitions in job satisfaction ratio of Survey X

Figure 2. Annual transitions in turnover candidate ratio of Survey X

3. Perspective Index

The perspective index is a type of future parameter used in discussions on the evolution of cooperation (Takahashi, 2014). If $w \approx 1$, then the future is almost as equally important as the present and it is at little discount.

Takahashi (1996a) defines the “perspective index” as the sum of scores of the following five questions as dummy variables.

P1. Are you able to see the desirable shape that your company will take in the 21st century? 1 = yes, 0 = no.

P2. Are most of your work hours spent on routine tasks? 0 = yes, 1 = no.

P3. Are your job targets clearly specified by your superiors? 1 = yes, 0 = no.

P4. Does your company have the atmosphere in which reaching the short-range norm tends to have priority over pursuing long-range goals? 0 = yes, 1 = no.

P5. Can you visualize a positive future for yourself ten years from in this company? 1 = yes, 0 = no.

From this definition, the perspective index is scored as an integer value from 0 to 5. Takahashi (2014) divides the JPC Survey data from 1992 to 2000 (9,156 of 10,242 people responded, a response rate of 89.4%) into six perspective index groups (perspective index = 0, perspective index = 1, ..., perspective index = 5), and calculates the job satisfaction ratio and turnover candidate ratio for each group. Similarly, this paper divided the Survey X data into six perspective index groups and calculates two ratios for each group. This enables an examination of the relationship between perspective index and the two ratios. The results showed a near-perfect linear relationship, with the job satisfaction ratio increasing and the turnover candidate ratio decreasing as the perspective index rose. The respective

Figure 3. Perspective index and job satisfaction ratio

Note: The bold green line shows the Survey X data (2004–2013), $N = 13,034$; the dashed red line shows the JPC Survey data (1992–2000), $N = 8,908$.

coefficients of determination were surprisingly high at 0.9992 and 0.9946.

The bold green lines in Figures 3 and 4 show a similar analysis on the Survey X data, with a near-perfect linear relationship with the surprisingly high coefficients of determination of 0.9943 and 0.9966. However, compared with the JPC Survey data shown by the dashed red lines, the Survey X data shows a slightly different incline in job satisfaction ratio and a slightly different intercept point in the turnover candidate ratio.

Figure 4. Perspective index and turnover candidate ratio

Note: The bold green line shows the Survey X data (2004–2013), $N = 13,022$; the dashed red line shows the JPC Survey data (1992–2000), $N = 8,886$.

4. Concluding Remarks

Why does the Survey X data show a slightly different incline in job satisfaction ratio and a slightly different intercept point in the turnover candidate ratio from the JPC Survey? Figures 5 and 6, which show the annual transitions in occupational category and position, suggest a reason for these differences.

As previously mentioned, significant restructuring at Company X from 2005 to 2006 caused major fluctuations in the indicators. However, as Figures 5 and 6 show, as the perspective index drops, the job satisfaction ratio decreases and the turnover candidate ratio increases; conversely, as the perspective index rises, the job

Figure 5. Perspective index by occupational and rank categories and annual transitions in job satisfaction ratio

Note: Survey X data taken from 2004 to 2013, $N = 13,034$.

satisfaction ratio increases and the turnover candidate ratio decreases. The company experienced this dramatically in a relatively short period. Although OC2s, OC3s, chiefs and managers, to which originally only small number of respondents belong, showed slightly unstable movements away from a straight line, the overall movement on the graphs occurs along a straight line.⁵ Furthermore, we also see distinctly different inclines and intercept points on the two graphs in

⁵ On this point, Takahashi, Ohkawa, Inamizu, and Akiike (2013) compare the perspective index and degree of self-determination using data from survey X through 2012. Even though the degree of self-determination was mostly the same before and after the organizational restructuring, the job satisfaction ratio fluctuated greatly. Thus, they note that the perspective index is more capable as an explanatory variable for job satisfaction. The nature of the degree of self-determination was again confirmed by Takahashi et al. (2014) using the same data as this paper.

Figure 6. Perspective index by occupational and rank categories and annual transitions in turnover candidate ratio

Note: Survey X data taken from 2004 to 2013, $N = 13,022$

occupational and rank categories. In other words, differences in the incline and intercept point of the lines are due to differences in the composition ratio of occupational and rank categories.

In the Survey X data, the categories of OC1 and ordinary workers somewhat overlap as half of the respondents were in OC1, with ordinary workers accounting for 80% of the respondents. In 2013, 635 out of 1,046 ordinary workers were in OC1 (60.7%), while 635 out of 637 OC1 workers were ordinary workers (99.7%). Consequently, ordinary and OC1 workers not only make up a large proportion of the respondents but also follow similar trends. However, OC1 is a blue-collar occupational category; these blue-collar workers would not have been included in the JPC Survey because it targeted white-collar workers. Consequently, although this comparison shows

the likelihood of a slightly different incline in the job satisfaction ratio and a slightly different intercept point in the turnover candidate ratio due to differences in occupational category, especially between white-collar and blue-collar workers. On this point, there is a need for further collection of data.

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