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**Management Transfer and Job Consciousness in
Indo-Japanese Joint Ventures--Has "Japanese Style
Management" Been Successfully Accepted in India?--**

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This paper aims to analyze the effect of "Japanese style management" on job-consciousness at Indo-Japanese joint ventures. Our analysis for this purpose is focused on uncovering the differences in job-consciousness between the joint ventures and indigenous firms. The transfer of management, which is essentially a transfer of a portion of culture, necessarily colors the job-consciousness in the recipient firms. To prove this hypothesis, we conducted a structured interview survey in 1998 at three Indo-Japanese joint ventures and two Indian firms. Then we confirmed, through canonical discriminant analysis applied to our survey data, that (1) the introduction of various Japanese management practices promoted 'a sense of unity' and 'job satisfaction,' and (2) such management was welcome particularly by workers in the joint ventures, since those practices partly realized egalitarianism in the firm.

Management Transfer and Job Consciousness in Indo–Japanese Joint Ventures—Has "Japanese Style Management" Been Successfully Accepted in India? *—

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I.Introduction

This paper tries to analyze the effect of so-called “Japanese style management” upon job consciousness as a criterion of managerial transfer in the case of India under the liberalization regime. India’s economic liberalization had gradually proceeded in the middle of 1980s and has been accelerated since 1991 onwards. It has promoted the increase inflow of foreign direct investment (FDI in short) into India, which involves obviously the transfers of capital and technology, but also the transfer of management by setting up, for instance, the joint venture firms. Due to this very nature of managerial transfer, FDI is said to strengthen the competitive edge in product market.

In reality, however, such effect of managerial transfer in general could be observed only *indirectly* with years later by, if at all, gaining the market share or winning the market competition. This implies that the practical significance of managerial transfer and its effectiveness are virtually unknown. Namely, at first, only the aspects of managerial practice and institutional transfer have been highlighted so far. Second, it is almost impossible to distinguish the direct effect of managerial transfer from its overall ones, such as sales performance and profitability including effects of equipment investment and market expansion.

For this very reason, it should be important to focus on the job consciousness of employees (both managers and workers) in order to capture the *direct* effects of managerial transfer, since they could be reflected at first in the consciousness of employees. Our aim is, therefore, to examine what have been transferred in the case of Indo–Japan joint ventures and what gains have been achieved by analyzing the job consciousness of employees.

For this purpose, we conducted the structured interview survey in January 1998 for both managers and workers of 5 automobile related companies (3 Indo–Japan joint ventures and 2 Indian companies) in order to examine statistically any differences in job consciousness between the Indo–Japan joint ventures and Indian companies. This survey includes not only the questions of job consciousness in general, such as the attitudes of job satisfaction and innovation, but also those of responses to various practices and institutions of “Japanese style management”. The latter inquiry is specially focused in this paper and used for analyzing the effect of managerial transfer.

Ideally speaking, it is true that for measuring the transfer effect, it should be compared the two states of before and after managerial transfer. But, it is impossible to measure the state of the job consciousness prior to the transfer. So, as a second best measurement, the significance and effect of joint ventures upon the job consciousness shall be considered by comparing with non-joint ventures, though it is well recognized it is not sufficient.

Before analyzing the results of interview survey, the macroeconomic background of the selected five automobile related companies will be reviewed briefly (- 1). Also, the questions of how to understand the various viewpoints of so-called “ Japanese style management ” and its significance in job consciousness will be considered (-2).

II. Indo-Japan joint ventures and so-called “ Japanese style management ”

We shall examine in this section the features of the Japanese FDI into India which has made possible the successive localizations in India having started since 1980s onwards.

1 . FDI to India and the success of Maruti

The economic liberalization in India was aimed at not only de-regularizing the activities of domestic private sectors and Indian private companies, but also open-door policy or relaxing the control against foreign goods and capitals including the inflows of FDI into India. As a result, in the second half of 1980s or early 1990s there was a shift in the forms of foreign capital inflows from technical license agreement to FDI and thereafter the latter form has become mainstream of capital inflow into India¹. The drastic increase of FDI into India took place after the year 1991 when the New Industrial Policy was implemented and deregulated to the great extent the control against the foreign capital, such as relaxing the upper limit to the equity participation in joint venture. The amount of FDI into India (approval base) got increased from 0.23 billion dollars in 1991 to 15.12 billion dollars in 1997, a peak year². It is noteworthy, however, that it was merely about 1/10 of FDI into China so that there was a huge difference in levels of FDI into India vis-à-vis and China³.

The Japanese FDI into India also got increased drastically in 1990s onwards as compared to 1980s⁴. Namely, the number of Japanese affiliated companies in India (local subsidiaries⁵) in 1999 was 165 of which merely 50 companies were operated prior to the year 1990 and 115 companies entered into India after 1990 onwards. 119 companies have been in operation in the manufacturing sector, of which, 48 companies are automobile & parts related industry followed by 25 companies in electrical equipments, 13 companies in chemicals, 10 companies in general machinery⁶. The automobile industry was the typical example of fast expanding

industry under the liberalization policy regime. Not only Japanese automobile companies, but also American and European and furthermore Korean automobile companies entered into India one after another⁷. As a result, the automobile production was raised from 120 thousand units in 1980 to 360 thousand in 1990, 670 thousand in 1995, 830 thousand in 1999, crossed over 1.1 million units in 2003. The nuclei of rapid expansion were the foreign automobile companies and setting up the Maruti Udyog Limited (Maruti in short), a Indo-Japanese joint venture between Indian government and Suzuki Motor Corporation became a trigger for such expansion. Maruti was set up in 1982 and started to produce the small car in December 1983. The rapid expansion of automobile production in India was nothing but the increase of automobile production in Maruti which captured 76% of passenger car market in 1995 and 82% in 1998(April-December)⁸.

It is well known that Maruti has played a leading role in automobile industry and attained an epoch-making success in automobile business. The reasons for its success are given as effective technology transfer from Japan and efficient cost performance. These factors could be attributed mainly by the effect of Japanese style management and thereby the studies on what sort of its management practices and customs are introduced have been conducted so far to some extent⁹. Namely, in such studies, the criterion of success was, by and large, whether the various practices featuring "Japanese style management", such as lifetime employment, seniority wage system, internal promotion system, Ringi system (a method of group-oriented and participatory decision making), multiple skill formation, TQC activity and so forth, have been accepted or not. However, we don't think this is at all sufficient for the reasons given as below:

At first, the existing studies are very often lacking the view that management is indispensable to culture. It is known that FDI has an aspect of transfer of managerial resources and Japanese FDI by itself could be considered as transfer of so-called "Japanese style management" or Japanese management practices. And the criteria for success is based on whether it is universal (successful) or unique (failure). But, since management by itself cannot be isolated from its own culture or value system, it would be desirable to treat management transfer as an issue of *adaptation* rather than as one of universality-uniqueness framework.

Secondly, there is an ambiguity in the definition of so-called "Japanese style management" by itself. The transfer of Japanese management to overseas has been studied in the numerous literatures so far, but there are various kinds of understandings and interpretations on it and no standardized or uniformed views have been found there. It is also true that Japanese management by itself has been reconsidered in Japan under the structural economic reforms and global competition,

which makes necessary to define its meaning or contents clearly.

Thirdly, it is necessary to grasp whether the job consciousness has been changed or not among local employees by introducing Japanese management practices into India. In other words, managerial transfer inevitably brings out the certain degree of change in thinking of working style, so that it would be quite difficult to capture the reality of whether “Japanese style management” is successfully accepted or not in a genuine sense unless its influence upon the job consciousness is considered.

2 . Managerial transfer as “ cultural transfer ” :

“ Japanese style management ” as a system of creating a sense of unity

Based on these arguments, we shall consider the transfer of managerial resources or management practices through FDI as “ cultural transfer ” in a broad sense to a different culture and society. Management by itself not only embodies the corporate culture in a narrow sense such as mission statement and company’ s goal, but also is deeply linked with value system of a society indicated, for instance, as ways of formulating an organization, the order or disciplines, and such practices. It is because the corporate organization is carried out by various institutions and practices, or common beliefs and values, so that it is a restrict form of culture which reflects very likely its society’ s culture.

Here, the culture is defined as “ a system of common sense pertained to a particular society or group ” which signifies the importance of value system. Therefore, “ transfer of management ” , which is meant for the transplant of company’ s common rules and management practices, is nothing but a form of cultural transfer. Managerial transfer as “ cultural transfer ” may often cause a friction in a host country. But, it would also promote the change of job consciousness or working styles of local employees and provide the best opportunity to improve the quality of labor force.

As for understanding the concept of “ Japanese style management ” to be transferred, it obviously includes the institutional aspect such as long-term employment, seniority based wages and promotions, but its effects cannot be traced out in a short period of time. So, rather we focus directly its ways of thinking or value behind the “ Japanese style management ” . In other words, the emphasis is given to the ways of thinking or measures in order to motivate employees in the long term as those of “ collectivism or group-ism ” , “ egalitarianism ” , “ family-oriented managerial style ” , “ welfare-focused community ” and so forth. Such ways of thinking have visualized the actual forms of the institutional sep-ups, such as Genba-ism(or workplace-focused),bottom-up decision making, labor-management consultation system, Ringi system, collective responsible systems of QC activity and suggestion scheme, OJT centered training programs and so forth.

By considering these points carefully, “Japanese style management” can be defined as “a management style that, with its fundamental strategy of aiming at corporate expansion increasing sales securing employment, adopts various kinds of concrete measures in order not only to create the egalitarian environment within a workplace by eliminating the wage differentials among employees as much as possible, but also to motivate all the members by letting them feel participated in it”. Obviously, such ways of thinking behind Japanese style management are also reinforced with an emphasis on the technology-first principle and flexible production system¹⁰.

Our main task in this paper is, based on those understanding, to confirm whether Japanese joint venture in India has succeeded the transfer of so-called “Japanese style management” or not. To put it more concretely, therefore, the spirit or ethos behind “Japanese style management” can be identified as two categories by which we measure empirically the acceptance of “Japanese style management”. That is, the first category of such ethos is (1) to eliminate horizontally mental distance among employees and vertically mental distance in organizational hierarchy, in other words, to create a sense of unity in organization. The second category is (2) to generate the expectations of employees for the future on the base of long-term orientation. The first category should be highlighted more specially in the case of managerial transfer. It is because, as indicated by our definition, the Japanese style management presupposes the peculiar value consciousness, such as collectivism and egalitarianism and so forth, and is thought to have an essential organizational principle of creating a sense of unity within an organization¹¹.

III. Acceptance of “Japanese style management” from a viewpoint of “sense of unity in organization” – An analysis of Job consciousness survey at Indo-Japanese joint venture and Indian companies

In order to test empirically our problem, that is, whether the transfer of Japanese style management as “cultural transfer” is succeeded or not in the case of India, we conducted a job consciousness survey to both middle managers and workers engaged in Indo-Japanese joint venture and Indian companies. In our survey, we asked not only the questions relating to “sense of unity in organization”, but also the general questions regarding job consciousness in a broader perspective, which is mutually linked with it.

1. Specific features of companies under survey

For choosing the Japanese joint venture companies in India to be surveyed, we narrowed them down on the basis of operational years and areas to localize. Accordingly, the companies of operating about ten years and locating at the outskirts

of Delhi were chosen. What we found is that all of those companies are producing automobile parts. This is coincided with the fact that the Japanese FDI into India was concentrated in the automobile sector, as mentioned earlier. Maruti is a typical case for the Japanese FDI, but it was excluded from our survey. Instead, we chose other three Indo–Japan joint venture companies in automobile sector. The reason for excluding Maruti is that it might not be a model for assessing the transfer of Japanese style management since it started with government–managed company, which had the full support of the central government and various exceptional measures such as adopting the qualified workers and engineers, and training in Japan. The selected Japanese joint venture companies were private companies which seem more representative than Maruti. For the matter of comparison, two Indian (non–joint venture) companies, similar to those Japanese joint venture companies in term of products, location and company size, were selected. The selection of those Indian companies was not realized without the help of Automotive Component Manufacturers Association of India (ACMA). The selected five companies are shown in Table 1 as below. We shall examine the features of Japanese joint venture companies and Indian companies and also consider for the former what sorts of human management system were introduced with the result of our interviews to top managers in both the joint venture companies and their headquarters in Japan.

Table 1. Profiles of Japanese joint venture and Indian companies

	Japanese joint A	venture companies D	H
Year of establishment	1986	1984	1984
Products	Automotive safety glass	Automotive electrical parts	Motor cycles
Capital(100 million Rs. in 1996) [Equity ratio]	0.37 ¹⁾ [24%]	1.81 [37.7%]	2 [26%]
Sales(100 million Rs. in 1996)	15.41 ¹⁾	12.9	75
Employees(in 1997)	415 ³⁾	847	2560
	Indian C	companies E	
Year of establishment	1971	1951	
Products	Automotive clutch	Filters and elements	
Capital(100 million Rs. in 1996) [Equity ratio]	3.09 [n.a.]	n.a.	
Sales(100 million Rs. in 1996)	6.65	2.07 ²⁾	
Employees(in 1997)	692	500 ⁴⁾	

Notes: 1) in 1998. 2) in 1994. Due to lack of rupee based sales data, the sales of 6.6 millions US dollars is converted into rupee term by using the average exchange rate of 1994–95(Rs.31.399/ \$). 3) in 1998. 4) in 1996.

(1) Japanese joint venture companies in India

The selected three Japanese joint venture companies were all set up in the middle of 1980s, so operating more than ten years, and they all were the representatives of automobile industry. That is, the company A is the safety glass manufacturer for automobiles, capturing 90% of its market share in India, and the company D is also a leading manufacturer of electrical parts for automobiles. The company H is a two wheeler manufacturer and has achieved the top sales share in the motorcycle market in India.

The equity participation ratios for the Japanese partners were with the range of 20~30% (the company D also had initially 26% equity participation in 1984), so that they did not reach the majority level in order to grip on the management right. Therefore, the cooperation with local Indian partners became important. In our selected companies, the Japanese partners were in charge of production & technology management and marketing whereas the Indian managers were in charge of personal management and marketing, which were more or less as the same as practiced in other Indo-Japanese joint venture companies.

The Japanese way of personal management was introduced in all four surveyed companies, but its degree of adoption and the issues arouse have certain variations among them. At first, the company A adopted the managerial practices right from the beginning of operation, such as common uniform, open space large room system, bonus and paid vacation, commuting allowance and so forth. The QC circle activity was also introduced in 1997, but was practiced in a limited group, confined to the engineers and foremen class, unlike what was implemented in Japan.

In the case of the company D, initially its management had been led mainly by the Indian partner, but turned out to be the financial loss. So, since 1993 its management has been changed and conducted more by the Japanese partner who has implemented various reforms by introducing the Japanese management practices. To begin with, the twelve Japanese staffs were permanently stationed there as top managers in each of major departments. And, for sharing the information (policy and target and so forth), the various organizational linkages were formulated. For instance, the company steering committee and departmental committee were set up in April 1997 and furthermore, the quality improvement committee and new product development committee and so forth were also introduced. The single union system was adopted, and for promoting the labor management coordination, the labor management council was held monthly in order to train the union leaders. Also, the morale training through small group based informal gatherings has been practiced. Furthermore, for strengthening production management system, the foreman system

by which the excellent workers were selected and promoted to be foreman has been implemented since February 1998. The other Japanese management practices such as common canteen and common uniform and so forth have been adopted. According to our interview survey at the headquarter of company D in Japan, what was the most serious issue confronting the company D was a “human factor”. In the concrete, the gap in a sense of time (meaning lack of “Time is money” consciousness), lack of passion to manufacture a good product, lack of crisis consciousness, excess of self-assertion or own rights consciousness and so forth were pointed out.

In the company H¹², the common canteen, common uniform, joint gymnastics, common bathroom, large room system, single union, and so forth have been introduced right from beginning of its operation. The QC circle was also adopted from the beginning, and in 1997 its number of QC circle grew up to 87 (despite the fact that the active ones were only 55, 63% of all of them). The so-called “5Ss”: “Seiri” (straightening up), “Seiton” (putting things in order), “Seiso” (cleaning), “Seiketsu” (personal cleanliness), “Shitsuke” (discipline) was actively carried out, but it was said that it achieved them not fully, but to the levels of “Seiri” “Seiton”. The efficiency wages as an incentive was adopted, which was linked with productivity, constituting 45~50% of monthly wages in order to change the job consciousness of “less work, more money”. The improvement of product quality has been tackled, but making a fishbone (cause-effect diagram) as a tool for problem-finding and solving was seen quite difficult unless the Japanese staffs involved in it.

As described above, the Japanese joint venture companies adopted various means of Japanese style personnel management system, but the degree of adapting them into local working conditions varied among them. For instance, the common canteen as a system of creating a sense of unity in organization was adapted in quite different ways. That is, in the case of the company A, with the policy of “nothing to stick except product quality” based on the company’s mission of “manufacturing together”, its canteen system, which was different from Japanese way, has been adapted into Indian way. It was divided into three separate canteens for Japanese managers, Indian managers, and Indian workers. On the other hand, the company D adopted the common canteen system and all of its employees took meal there, but in a different time schedule according to the job qualifications.

(2) Indian companies

Two Indian companies were selected in our survey, which were the representative companies operating over ten years. The company C was a leading automobile parts manufacturer in the field of clutch, and its main clients were Maruti in the case of

passenger car, and TELCO in the case of commercial vehicle. The company E was also a major leading automobile parts manufacturer in the field of filters & elements. Both companies had no financial tie-ups with foreign companies, but been developed either by technical tie-ups with foreign manufacturers (in the case of Company C), or by itself (in the case of Company E). Although the company C was nearly in bankruptcy in 1987 and became the sick unit, it had cleared up the cumulative deficit by 1993 and turned its net profits into surplus in 1993, with the various managerial efforts. In 1996, it acquired ISO 9002. The top managers have shown great interest in the Japanese style management and introduced some practices, such as teamwork focused collective decision-making, 5Ss. For implementing 5Ss, however, we had an impression through an interview when we visited its factory that it was not effective and even the foreman cadre did not understand fully the meaning of “Shitsuke”. The company E acquired ISO 9001 and has carried out the quality focused management¹³. One of the middle managers, who played a key role assisting the top management, had a working experience at the Indo-Japanese joint venture company, and introduced the Japanese style quality control management practice to some extent. But, It was observed at factory that the quality control was not visible and its management was halfway.

2. Basic design of job consciousness survey and construct

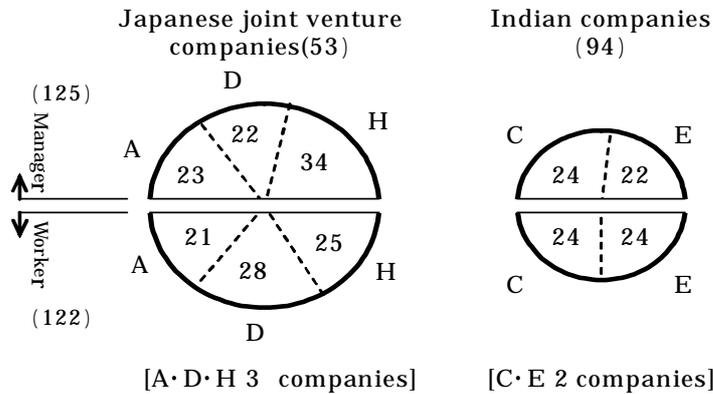
The structured interview survey based on the questionnaire for middle managers and workers was carried out at three Indo-Japanese joint venture companies, outskirts of Delhi in January through February 1998. Similarly, it was conducted for the two Indian companies to be compared in the same way at the same period of time. The samplings of the five companies surveyed and their basic features are indicated in the Figure 1 and Table 2. By way of random sampling in each of job categories (i.e. middle managers and workers), the total of 247 samples out of which 153 from three Indo-Japanese joint venture companies and 94 from two Indian companies were extracted for the interview survey. The ratio of middle managers and workers for interview was designed as an order of about 1:1¹⁴.

Table 2. Specifications of our samples (by company and job categories)

Average	Indo-Japanese joint venture companies					
	A		D		H	
	Managers	Workers	Managers	Workers	Managers	Workers
Length of service(years)	5.24	5.69	6.36	8.32	9.04	10.87
Age	29.74	30.05	33.68	31.86	38.68	33.52
Wages(Rs.)	8802.87	5395.24	12981.82	7974.07	20176.47	11540.00
Gross family income(Rs.)	15602.17	6652.38	18781.82	9742.86	23014.71	15040.00
Income earners(persons)	2.09	1.33	1.68	1.39	1.12	1.40

Average	Indian companies			
	C		E	
	Managers	Workers	Managers	Workers
Length of service(years)	7.93	13.69	4.02	2.90
Age	33.63	37.21	34.73	26.17
Wages(Rs.)	8511.46	2947.08	7218.18	1948.04
Gross family income(Rs.)	19369.79	3880.42	15681.82	3086.71
Income earners(persons)	1.75	1.54	1.95	1.54

Figure 1. Number of sampling



The interview survey was conducted in Hindi with the help of professional investigators, and was paid every attention to get hold of opinions, assessment, and consciousness of working life in general. The questionnaire was, in principle, formulated as close end selective type, and three or five options were given for answering the questions. This indicated by itself the degree of response or assessment of interviewees. Namely, at the stage of interviewing, the job

consciousness was measured by rank scale, but it was not possible to sum up. So, at the stage of data processing, the rank scale was converted into the interval scale by giving points to the options of answering, which made possible to be countable in order to investigate directly the differences in job consciousness among groups, such as different companies or job titles and so forth. Therefore, with being well aware of making the options for answer countable is a tentative yardstick, and various correlations among the answering options were existed, the canonical discriminant analysis was used in order to distinguish managers from workers, and joint ventures from Indian companies (discrimination of four groups).

The questionnaire was consisted of both basic information and six “ constructs ”(job satisfaction, commitment, instrumental attitude, functional working style, attitude of technology and product quality, sense of unity in organization) <For further details, refer to the questionnaire at the end of this paper>. As for the section of basic information, the information of sampling data, such as the length of service, wages, education and so forth are included. The definitions of six constructs are given as follows¹⁵. At first, “ job satisfaction ” is a set concept of satisfaction for working conditions in broad sense, such as wages and bonus, amenities, human relations at workplace. “ Commitment ” is a general term which includes a sense of belonging behind motivation to work, loyalty, will to work continuously, psychological adaptability, respect for work discipline and so forth. “ Instrumental attitude ” considers job by itself as means of earning income and puts importance on rewards out of job, rather than job contents.

On the other hand, “ functional working style ”has a view as such that the company is, by nature, a functional organization seeking efficiency and profits at first priority. In more concrete, it evaluates the economic rationality of pay structure, work discipline, ways of organizing, personnel assessment and so forth. “ Attitude of technology and product quality ” is measured as a willingness of taking and acquiring knowledge of various measures and personnel management system in order to boost technological innovation and to improve product quality. “ Sense of unity in organization ”, as given previously, is a consciousness towards managerial principle of eliminating the mental distances between employees within the organization. In more specific, it is an evaluation or consciousness upon managerial practices, such as common canteen, common uniform and so on.

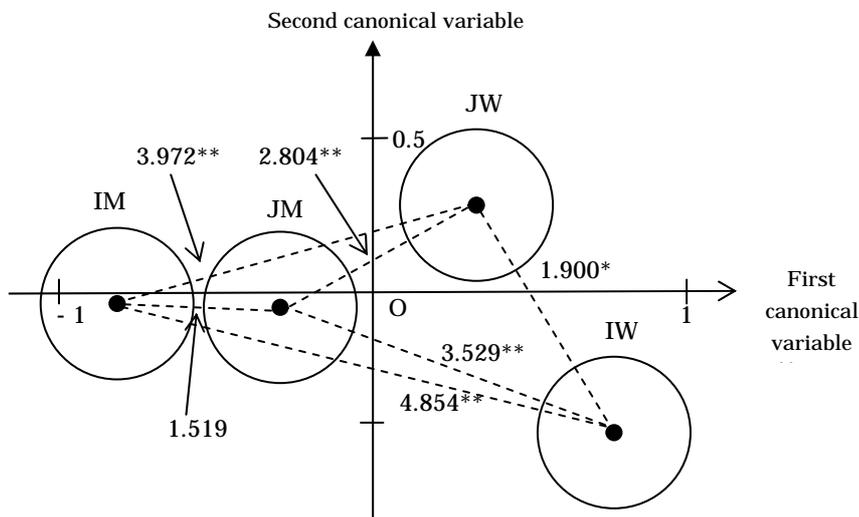
3 . Major analytical findings

Based on the above constructs, our statistical discriminant analysis regarding the difference of job consciousness among four groups has revealed three major findings as follows:

- 1) The significant difference in job consciousness existed between managers and workers in terms of “ Commitment ” , “ Instrumental attitude ” , “ Attitude of technology and product quality ” .

At first, we look at the “ Commitment ” . As indicated in Figure 2, it shows the significant difference between managers and workers in both Indo-Japanese joint venture and Indian company. But, no significant difference was found in between managers of joint venture and of Indian company, and the difference between workers of those two groups was not so significant. The reasons behind such differences are indicated in the equations (1) • (2) as below.

Figure 2. Results of discriminant analysis on “ Commitment ”



- Notes: 1) Numerical values indicate the F-values between respective groups.
 2) *, ** indicate the levels of significance at 5%, 1% respectively.
 3) JM: a group of managers of Japanese joint venture companies. JW: a group of workers of Japanese joint venture companies. IM: a group of managers of Indian companies. IW: a group of workers of Indian companies. [This is followed by other discriminant analyses]

$$Gc() = - 0.649 IVO + 0.422 B - 0.456 D + 0.444 N + 0.357 G + 0.256 O - 0.079 E \quad \text{-----(1)}$$

$$Gc() = 0.643 IVO + 0.769 B - 0.130 D - 0.049 N - 0.277 G + 0.168 O + 0.003 E \quad \text{-----(2)}$$

$$= 0.246(= 0.444), \quad = 0.058(= 0.235),$$

$$(+) / (+ +) = 0.909$$

$$F(21, 526.0) = 2.825 > F_{0.01} \quad \text{Percent classified: 47.2\%}$$

λ_i indicates eigen value of the i th function, and r_i the corresponding canonical correlation coefficient. This is followed by the other discriminant analyses.

Explanatory variables: IVO(whom consult); B(will to work until retirement); D(offering job to son or daughter); N(stronger affinity); G(job security until retirement); O(most important life); E(occupational pride)

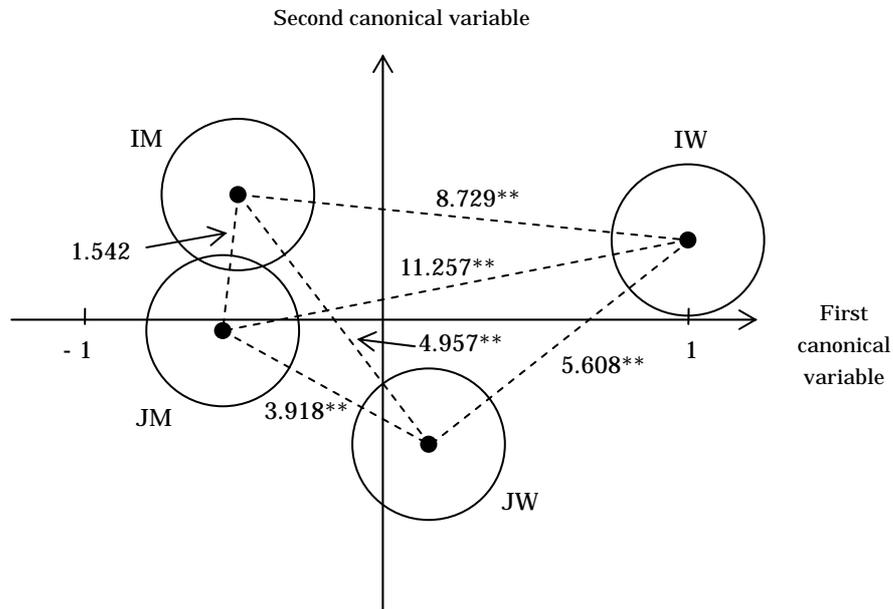
These variables are in order of larger discriminant effects (by minimizing Wilks' λ). This is followed by the other discriminant analyses.

Taking a variable of "will to work until retirement" (IIB: see the questionnaire) which illustrated the above quite well, for instance, the difference of commitment in job ranking was clearly shown. Namely, the managers show relatively stronger tendency to change job rather than to work until retirement whereas most of the workers had a will to work until retirement. It should be noted, however, that many of the managers of Indo-Japanese joint venture said that they continued to work at present job.

In a society of huge unemployed labor force like India, the "commitment" could be stronger in the case of workers than of managers. It is because they have the fewer chances of job changing and greater possibility of losing the job, so that in general, "will to work until retirement" and "sense of belonging to organization" and so forth would be felt more strongly. However, it does not necessarily mean they are highly motivated to work. It implies, therefore, that the motivation as a most fundamental key concept should be grasped in a wider perspective.

Next, the difference in job ranking was also clearly appeared in the "Instrumental attitude", as indicated in Figure 3. The "Instrumental attitude", measured by six variables shown in the equations (3) • (4), was influenced most by the variable of "new job after quitting the present job". Here, the majority of managers supported the "a more challenging and interesting job" which implies they evaluated the job contents by itself. On the other hand, the many workers supported the view of "the same job with higher wages" which seems quite natural. It should be noted, however, that not the few workers of Japanese joint ventures had similar view of managers who tried to find out the value in job by itself.

Figure 3. Results of discriminant analysis on “ Instrumental attitude ”



$$Gi(\quad) = 0.539 \quad S + 0.349 \quad IVN + 0.407 \quad G + 0.166 \quad F - 0.285 \quad Q - 0.058 \quad R \quad \text{-----(3)}$$

$$Gi(\quad) = 0.515 \quad S - 0.679 \quad IVN - 0.457 \quad G + 0.656 \quad F - 0.068 \quad Q + 0.116 \quad R \quad \text{-----(4)}$$

$$= 0.340(\quad = 0.504), \quad = 0.099(\quad = 0.300),$$

$$(\quad + \quad) / (\quad + \quad + \quad) = 0.954$$

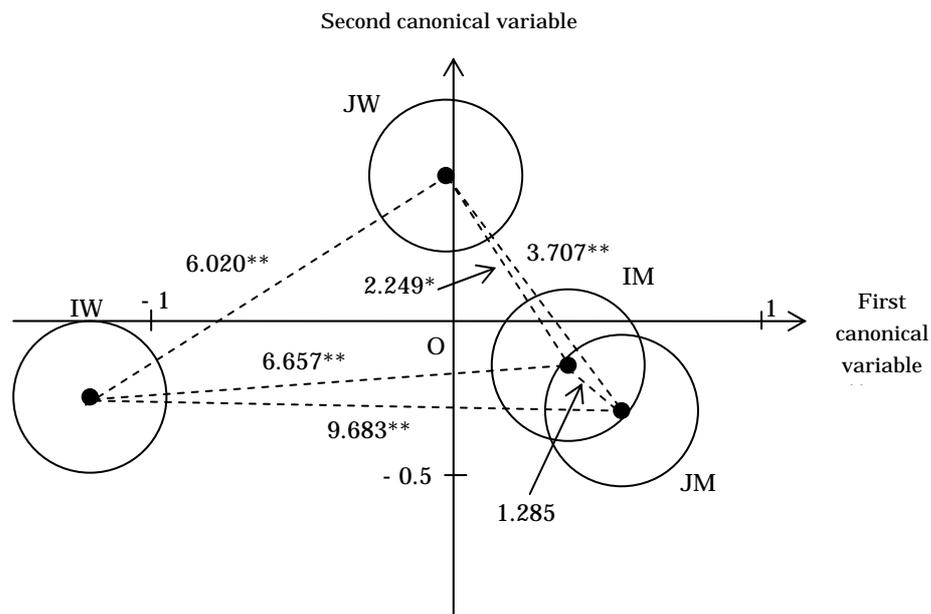
$$F(18, 648.2) = 5.580 > F_{0.01} \quad \text{Percent classified: 43.7\%}$$

Explanatory variables: S(kind of job to choose after job-change); IVN(reasons to continue in present job); G(meaning of “good job”); F(prefer promotion or wage increase); Q(prefer time-rate wage or piece-rate wage); R(accepting the offer of same job with higher salary) These variables are in order of larger discriminant effects.

The significant difference in job ranking was also seen in “attitude of technology and product quality” and it was striking specially between managers and workers of Indian companies (as indicated in Figure 4). This attitude, measured by nine variables, was attributed most by the variable of knowing “the purpose of QC circle”, or of understanding its meaning. As anticipated easily, the fairly large number of managers answered as “know it very well” but not for workers. The reason the few workers knew it was mainly attributed by the fact that nearly 40% of the workers of Indian companies knew nothing about the purpose of QC circle, which was quite high as compared to those of Japanese joint ventures. This is also true for the next most effective variable

of “ introducing new technology by replacing the old equipment ”, or the question of “ If advanced machinery or new technology is available, should it be introduced even if older machinery or equipment would have to be scrapped (replaced)? ” . Namely, 74% of managers answered as “ machinery with advanced technology should be introduced even if older machinery or equipment must be scrapped ” which showed far more positive attitude than the workers(only 43%).

Figure 4. Results of discriminant analysis on “ Attitude of technology and product quality ”



$$Gt() = 0.601 IVH + 0.320 IVD + 0.310 IVI - 0.141 IVL + 0.400 S + 0.268 IVE + 0.226 IVF + 0.197 IVJ + 0.125 IVC \quad \text{-----(5)}$$

$$Gt() = 0.398 IVH - 0.400 IVD - 0.389 IVI + 0.434 IVL + 0.048 S - 0.408 IVE + 0.291 IVF - 0.014 IVJ + 0.147 IVC \quad \text{-----(6)}$$

$$= 0.417(= 0.543), \quad = -0.116(= 0.322),$$

$$(+) / (+ +) = 0.920$$

$$F(27, 660.7) = 4.604 > F_{0.01} \quad \text{Percent classified: 49.6\%}$$

Explanatory variables: IVH(purpose of QC circle); IVD(introducing new technology by replacing existing equipment); IVI(most useful to improve technical skill); IVL(expanding production volume or improving product quality); S(suggestions for increasing productivity); IVE(what prefer if new machinery or equipment introduced); IVF(product or quality inspections of your factory); IVJ(introducing the imported machinery is effective); IVC(important assets to cope with new machinery or new technical advancement)

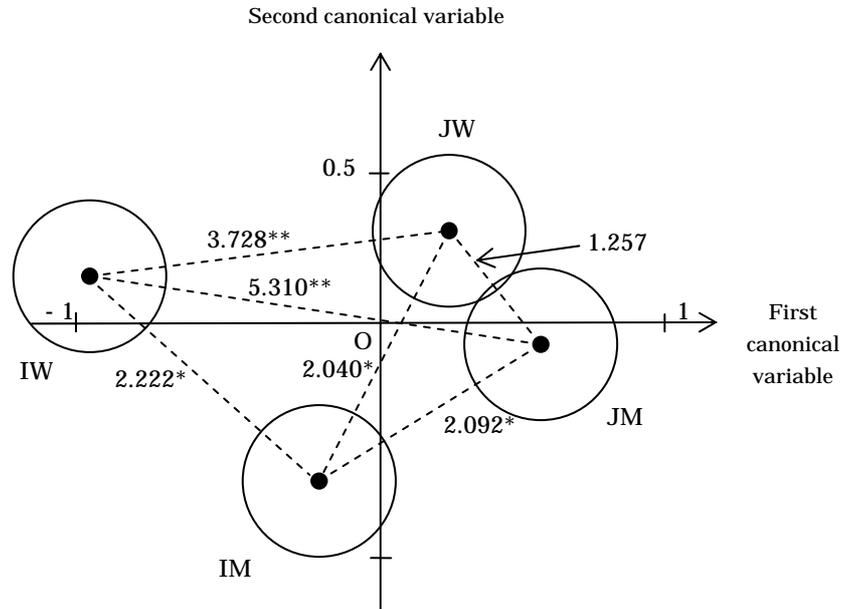
These variables are in order of larger discriminant effects.

As for the “ functional working style ” , the significant differences were detected not only in job ranking, but also in inter–firm level, so that it makes difficult to focus on the former. That is, in this construct, the significant differences existed in each set of all four groups of managers and workers in Japanese joint ventures as well as Indian companies. It is designed to inquire the job consciousness of market mechanism and economic rationality, such as the purpose of a company (IIIJ;IIK), pros and cons of (market) competition(VD), or seniority–based promotion(VH), wage structure(VF) and so on. Therefore, the fact of significant differences in all four groups makes very interesting. It is noteworthy here that the workers of Japanese joint ventures showed to the some extent, the closer job consciousness of managers, as found in “ commitment ” and “ attitude of technology and product quality ” ¹⁶.

2) Regarding the “ sense of unity in organization ” representing the essence of Japanese style management, it was not significantly different in job ranking (managers–workers level), but in–between Japanese joint ventures and Indian companies.

The “ sense of unity in organization ” , as indicated in Figure 5, was not significantly different in–between managers and workers in the case of Japanese joint ventures, but different significantly in those in the case of Indian companies. It implies that in the former, the common consciousness sharing with “ sense of unity in organization ” irrespective of managers or workers was formulated, but not for the latter.

Figure 5. Results of discriminant analysis on “ Sense of unity in organization ”



$$\text{Gu}(\quad) = 0.346 \quad F + 0.491 \quad O + 0.363 \quad G - 0.075 \quad N + 0.325 \quad C - 0.304 \quad P + 0.291 \quad I + 0.039 \quad H + 0.018 \quad Q + 0.000 \quad K - 0.036 \quad D \quad \text{-----} (7)$$

$$\text{Gu}(\quad) = 0.743 \quad F - 0.162 \quad O - 0.181 \quad G + 0.150 \quad N - 0.214 \quad C + 0.264 \quad P - 0.173 \quad I + 0.399 \quad H + 0.391 \quad Q - 0.259 \quad K - 0.163 \quad D \quad \text{-----} (8)$$

$$\begin{aligned} &= 0.281(\quad = 0.469), \quad = 0.086(\quad = 0.282), \\ &(\quad + \quad) / (\quad + \quad + \quad) = 0.900 \\ &F(33, 654.8) = 2.663 > F_{0.01} \quad \text{Percent classified: 48.3\%} \end{aligned}$$

Explanatory variables: F(taking meals at the same canteen); O(opportunity to talk and/or have meals with supervisors); G(wearing a uniform in factory); N(technical guidance or advice directly from supervisors); C(job rotation within factory); P(top managers should lead the decision-making process); I(factory-wide recreation activities); H(morning meetings are necessary); Q(middle managers should voice the suggestions of workplace); K(sharing business information or technology with colleagues); D(should cover his or her job if absent)

These variables are in order of larger discriminant effects.

The “ sense of unity in organization ” was , as indicated in equations (7) • (8), measured by eleven variables. The most effective variable among them was “ common canteen ” (meaning that both managers and workers taking meals at the same canteen). In this, almost all employees of Japanese joint ventures agreed to have “ some sort of common feeling between managers and workers may be created ” . In

the Indian companies, however, about 20% of those felt either no necessity of having “ common canteen ” or “ the separate canteen is better because I feel at ease ” . It implies that in the Japanese joint ventures, both managers and workers were released from India’ s traditional class-biased view which prohibits taking meals together among different class people. And, their awareness of working together was promoted and strengthened a sense of unity in organization through taking meals at the common canteen.

Next, regarding the variable of “ the opportunity to talk ” (or the question of “ Do you have an opportunity to talk and /or have meals with your superiors? ”), answered as “ very often (to talk or take meals) ” was nearly 70% of employees of Japanese joint ventures, but it was not more than 40% of those in Indian companies. In specific, the case of workers of Indian companies, answering as “ Sometime ” or “ Rarely ” was nearly 70% . Therefore, here also the clear difference existed between the two groups in respect to the frequency of communication with superiors.

Furthermore, concerning about wearing a uniform in factory, the view of “ wearing a uniform is useful because it creates the common feeling and a sense of unity ” was accepted by almost all of employees in Japanese joint ventures. But, it was not necessarily so for those in Indian companies. It is because in the latter case, about 20% of employees answered as “ the uniforms are useful for practical reasons ” which shows wearing a uniform is not meant for creating a sense of unity, but for its practical use.

It should be noteworthy that it may be somewhat irrelevant to ask the employees of Indian companies about their consciousness of egalitarian and collectivistic practices which are considered to be quite unique Japanese style and were not introduced there. It is because that taking, for instance, the variable of “ common canteen ” , the meaning of answering it might be different if it is not introduced in Indian companies. However, we are convinced that this problem is solved to a certain extent by the reasons given as follows.

At first, the practice and ethos of so-called Japanese style management were known even to the employees of Indian companies whatsoever the degree it may be. Namely, the Maruti’ s success as a precedent case had highlighted the Japanese style management and many Indian companies including our surveyed ones had tried to get information from it directly or indirectly. This is confirmed by the evidences that our Indian companies C and E had been the suppliers of Maruti, and their top managers had a positive attitude to learn the Japanese style management. In the case of company C, for instance, the top managers visited Japan and touched upon its culture, and introduced the decision-making system based on teamwork and consensus. Also, they introduced “ 5Ss ” and displayed it on the wall of their factory.

Also, in the case of company E, it appointed the person in-charge (responsible for managing the factory), who had used to work at a Japanese joint venture company in India¹⁷.

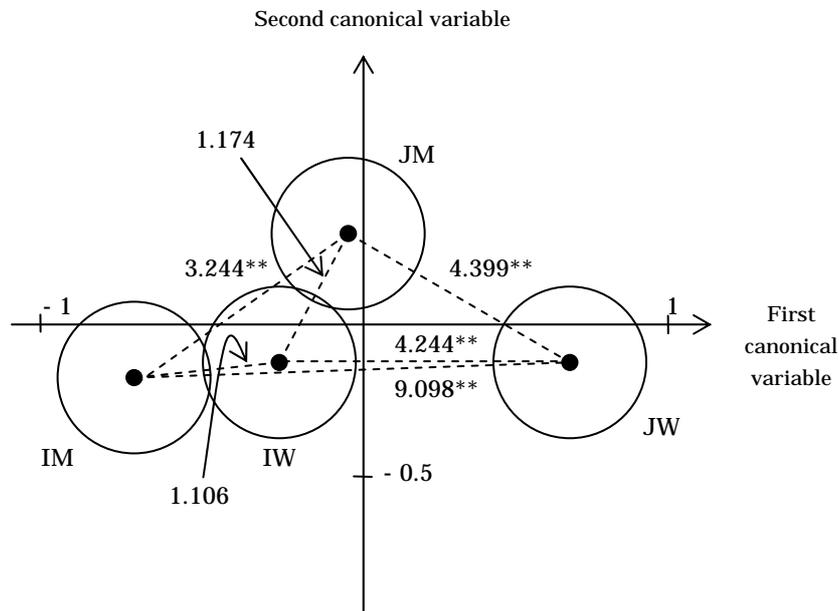
Secondly, the majority of variables used in the “ sense of unity in organization ” are not directly linked with the introduction of specific institutional practices. For instance, the issues of talking with the superiors and the opportunity of receiving advice from them, and furthermore the role of middle managers and so forth may be more universal nature, and take place even without the premise of some specific institutions or practices.

Our intention here is simply to show that the specific corporate culture or ethos and the emphasis of clear value premise (such as egalitarianism and collectivism) can be depicted in the observed job consciousness. Obviously, the reservation to a certain extent for our attempt may be necessary, but we are convinced that the construct of “ sense of unity in organization ” is measurable in those context.

3) In specific, the job consciousness of workers of Japanese joint ventures had been changed by the various practices of Japanese style management. And it was different in great extent from workers of Indian companies, and much closer to the consciousness of managers.

The higher job consciousness of workers of Japanese joint ventures, as indicated in Figure 6, was reflected in the higher job satisfaction. In fact, their satisfaction was highest among four groups, and showed the significant differences vis-à-vis other three groups. On the other hand, the difference of the job satisfactions of workers and managers of Indian companies were found to be statistically insignificant. And, the satisfaction of managers of Japanese joint ventures was quite close to them.

Figure 6. Results of discriminant analysis on “ Job satisfaction ”



$$Gs(\quad) = 0.726 \quad A - 0.666 \quad L + 0.178 \quad H + 0.334 \quad J + 0.004 \quad I + 0.149 \quad M \quad \text{-----} (9)$$

$$Gs(\quad) = -0.237 \quad A - 0.228 \quad L + 0.870 \quad H - 0.167 \quad J + 0.443 \quad I - 0.413 \quad M \quad \text{-----} (10)$$

$$= 0.260(\quad = 0.454), \quad = 0.043(\quad = 0.202),$$

$$(\quad + \quad) / (\quad + \quad + \quad) = 0.981$$

$$F(18, 656.7) = 3.780 > F_{0.01} \quad \text{Percent classified: 43.2\%}$$

Explanatory variables: A(satisfied with present job); L (bonus and dearness allowance); H(preset wage(salary)); J(amenities and welfare facilities); I(paid holidays and working hours); M(satisfied with the human relations in workshop)

These variables are in order of larger discriminant effects.

This finding will be considered also by the equations (9) • (10). The most effective variable to the job satisfaction (measured all together by six variables) is the question of “ satisfied with present job ” . The ratio of answering “ completely satisfied (to the present job) ” was high as 61% in case of Japanese joint ventures, but low as 39% in case of Indian companies. In particular, the case of workers of Japanese joint ventures, they answered it as high as 76% whereas those of Indian companies were merely 44% (for managers 33%).

It might be pointed out that the reason behind such differences in job satisfaction is attributed to the wage differences between Japanese joint ventures and Indian companies. It is true that as shown in Table 2, the wage levels of Japanese joint

ventures were quite high as compared to those of Indian companies¹⁸. That is, it was 1.2~2.3 times higher in managers, 2.8~3.9 times higher in workers, which show the wage gap was larger in the case of workers. But, as we have analyzed so far, the higher level of job satisfaction of workers in Japanese joint ventures may not be solely explained by higher wage level per se, but also by positive interactive effects of “ sense of unity in organization ”, “ commitment ”, “ instrumental attitude ”, “ attitude of technology and product quality ” and so forth. In more specific, their high motivation can be observed not only in variables, such as “ the opportunity to talk ” mentioned as above in “ sense of unity in organization ”, but also in those of “ consultation person ” embodying “ commitment ”. That is, even if the degree of commitment is same, the workers of Indian companies show the tendency of consulting to labor union (21%) and family (13%) other than to superiors. But, those of Japanese joint ventures consulted more with superiors and colleagues of workplace, rather than with the institution or outside of workplace. That is, the strong tendency to seek the workplace persons for consultation has suggested that they not only had the strong sense of belonging to the workplace, but also had a strong link with “ sense of unity in organization ”.

IV. Conclusion

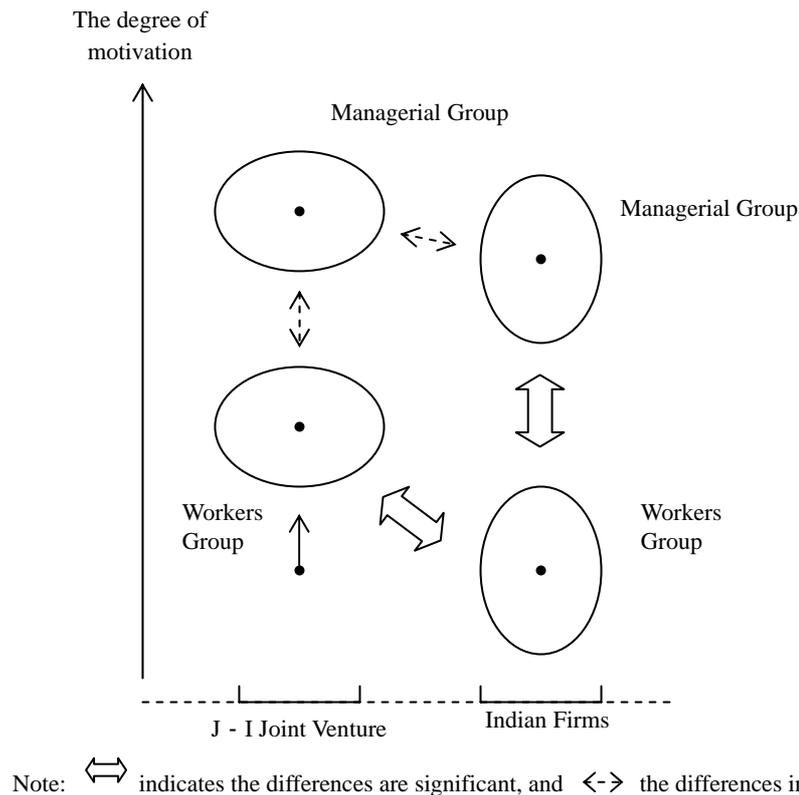
With the overall assessment of the above findings based on the discriminant analysis, we have reached a conclusion with confidence that the transplant of so-called “ Japanese style management ” has been slowly but steadily implemented into India. That is, in the Japanese joint venture companies, the job consciousness of Indian employees has been changing clearly, though it has been a gradual process, by transferring various Japanese practices and institutions, such as the adoption of wearing uniform, setting-up of common canteen for all employees, QC circle, large room, in-company union system and so forth.

It is true that the clear differences of job consciousness between managers and workers were observed in “ commitment ”, “ instrumental attitude ”, “ attitude of technology and product quality ”, but as for “ sense of unity in organization ”, those difference was significantly appeared in the company level, i.e., between Japanese joint ventures and Indian companies. We are convinced from this fact that the basic ethos of creating a sense of unity among employees within a company, a core of Japanese style management, has been accepted in India to a certain extent.

Specially, the various policy measures of personal management promoting the sense of unity have been supported strongly by the workers of Japanese joint ventures. As already pointed out in Table 2, the wage level of workers of Japanese joint ventures

was quite high as compared to those of Indian companies. Because of these facts, not only their quite high “ job satisfaction ”, but also their “ commitment ”, “ instrumental attitude ” and, “ attitude of technology and product quality ” and so forth were quite different from those of workers of Indian companies and were rather similar to the managers of Japanese joint ventures.

Figure 7 The Total effects of transfers of Japanese style of management



As a result, their sense of belongingness and responsibility is strengthened and motivation to work also becomes higher, as indicated in Figure 7. In other words, because of becoming “ motivated labor force ”, they are worthy of being paid higher. And it is consistent that the “ motivated labor force ” achieves higher labor productivity, since a positive correlation exists, to some extent, between wages and labor productivity.

In short, our survey has shown that by transplanting various institutions and practices of “ Japanese style management ” into the Japanese joint ventures in India, this has been successful to motivate employees, in specific, workers through strengthening a sense of unity to the company, having conscious of technology and product quality, finding out the value of work (non-instrumental attitude) and so forth.

Two points, however, should be taken into account as follows. At first, no significant difference existed between managers of Japanese joint ventures and Indian

companies, though higher motivation of workers of Japanese joint ventures vis-à-vis workers of Indian companies was known to us. Therefore, the mind-set reform by way of managerial transfer should be focused on the middle managers in the next step.

But, it may not be so easy task. It is because, at first, the wage levels of managers of Japanese joint ventures (Company D and H) were sufficiently higher than those of Indian companies, but the wage differences between managers and workers in Japanese joint ventures became smaller. This egalitarian wage structure and other practices of “Japanese style management” promoting to eliminate the power and psychological distances between managers and workers may have been challenged by the psychological resistance born out of caste society. In this way, the acceptance of egalitarian mind-set for the employees, in specific for middle managers may require further time consuming efforts.

Secondly, despite the major institutions and practices of “Japanese style management”, such as QC circle, 5Ss, Large room style, various Kaizen activities have been introduced, their actual performance is said to be quite insufficient. In particular, as our interview survey at their headquarters in Japan and joint ventures in India (referring note15) have revealed, not only their performances have been far below as compared to those in Japan, but also the malfunctioning of those practices arising from lack of leadership of middle managers has become serious problems to be conquered. Having said these, we should be aware well that we have just touched the surface of the whole reality of transferring Japanese style management.

At the same time, it is true that the managerial transfer as a cultural transplant, though it may be partial, would not be so easy since it requires enormous time and energy to be spent for changes of mind-set as job consciousness (for instance, to a certain degree of accepting egalitarianism). Therefore, more rigorous and comprehensive analysis based on panel survey and comparative cultural studies and so forth will be necessary in the near future. In other words, the issues to be tackled are quite significant and great importance to us.

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Notes:

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¹ The ratios of FDI in total foreign collaboration (including technical collaboration) in terms of number of approval have been increased from 12.9% in the years 1975-79 to 28.2% in the years 1985-89, further to 30.4% in the year 1991 and 57.3% in the year

1994. For more details, see Kojima, M. [1995] pp.221-223.

²The highest FDI inflow into India in terms of the cumulative years in August 1991 and July 1999 was U.S.A.(22.4%), followed by Mauritius(10.6%), U.K.(7.2%), Korea(4.6%). Japan (4.3%) became on fifth in its ranking, followed by Germany, Australia, Malaysia, France and so forth.

³ According to JETRO(the Japan External Trade Organization), the FDI inflow into China from Japan (contract basis) was 62.6 billions of dollars in the year 2000, but the FDI inflow into India from Japan (approval basis) was merely 6.5 billions of dollars in the year 1999.

⁴ However, the ratio of Japan's FDI inflow into India in the total is negligible and not more than 1%. For instance, during its peak year 1997, it was 0.8% (in contrast, its FDI into China was 3.7%). In the late 1990s, the Japanese FDI inflow into India had been decreased from 53.2 billions of yens in the year 1997 to 32.9 billions of yens in the year 1998 and further down to 23.2 billions of yens in the year 1999.

⁵ According to the handbook of Japanese FDI abroad, "Kaigai shinshutsu kigyō soran-2000 by country" published by Toyokeizaishinpo-sha in 2000, the Japanese subsidiary abroad is defined as the one with more than 10% equity participation (including indirect investment through local subsidiary).

⁶ In the future, India is expected to be one of promising countries for investment. According to the 1999 survey of JBIC(Japan Bank For International Cooperation), as promising countries (for the next three years) India is rated in fourth from the top, following China, USA, Thailand. The prior reason why India is attractive is "huge market size and its growth potential" and other reasons are "cheap labor force", "production center for assembly makers", "abundant qualified human resources", "English speaking", "well –established legal system" and so forth. For more details, see Kaburagi, Shinji · Noda, Hidehiko · Ikehara, Gakushi [2000].

⁷ For more details, see Oba, H. [1999a] pp.99-100, and [1999b] pp.83-87.

⁸ In recent years, however, not only other Japanese automobile companies but also American and Korean automobile companies have set up their production units in India, which led Maruti's market share declining into 62% in the year 1999/2000, and further down to 51.3% in April-June 2000.

⁹ The adaptation of Japanese management style and practices at Maruti was not a smooth at the beginning, but has been successful without facing the strong reluctance. The reasons are as follows. The first is that as a joint venture, Maruti started from scratch and was easy to create new organizational and working environment. Moreover, most of the employees joined Maruti directly after graduating from the technical training schools, so that they have been adapted into new organizational environment

without much of difficulties. The second is that all of Maruti employees had in-company training and some of them went to Suzuki's factory in Japan constantly for experiencing by themselves the Japanese or Suzuki style manufacturing, which is said to be so effective. This has promoted the localization of management and been able to run the Maruti factory with a few Japanese staffs. For more details, see Suzuki, Yasuo.[1999] pp.52-53, and Chatterjee, B.[1990].

¹⁰ The structured concept of "creating a sense of unity in organization" is closely linked with "commitment" expressing a sense of belonging to organization. But, as mentioned later in the individual variables (questions), the former is strongly linked with egalitarianism and group-ism, whereas the latter is almost independent of them.

¹¹ Lots of definitions for "Japanese style management" have existed in literatures. Among them, our definition is close to Okamoto, Y.[1998] pp.181 ~ 185.

¹² In the case of company H, there are two factories starting operation in 1985 and 1997 respectively of which each has a production capacity of 300,000 units per annum. The factory we surveyed is the old one. The employees of the company H were 2,560 (including seven Japanese staffs) in July 1997, of which 250 are for head office, 1,800 for the old factory and 510 for the new factory. The localization ratio of parts and materials was 96%, and suppliers were 197.

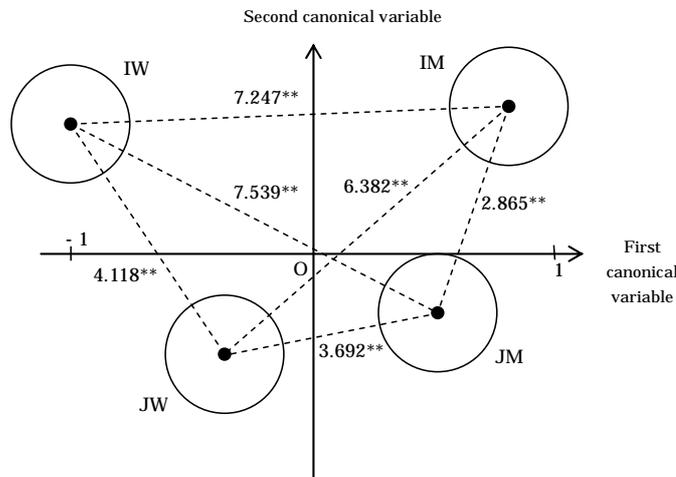
¹³ The company E has a long history and was set up in 1951. The seven factories were in operation and 500 employees were working there. The factory we surveyed was said to be most modern factory among them, but it gave us an impression of like "backstreet small workshop". Its employees were 85 of which 35 were managers and 50 workers including 40 part-timers. It started operation in 1985.

¹⁴ Besides our structured survey conducted in India, we also had the interview surveys in both Japan and India as follows: In the companies D and H, we interviewed several persons in charge of India operation at their headquarters in Japan concerning their management strategies and operational performances. With more or less same questionnaires, we conducted the survey for Japanese engineering industry in Japan (six companies) in order to investigate the question of whether so-called "Japanese style management" has been accepted in Japan or not (for this research findings, please refer to Kiyokawa, Yukihiro and Oba, Hiroyuki[2003]). Interviews with top managers of five companies surveyed were also conducted when we visited there.

¹⁵ For more detailed definitions for five constructs other than "sense of unity in organization", see Kiyokawa, Yukihiro[1994].

¹⁶ The regression result of "functional working style" is shown in a figure as below.

(Reference) Results of discriminant analysis on “ Functional working style ”



¹⁷ Besides the job consciousness survey, we examined the extent of transferring authority by interviewing the top managers of surveyed companies. In general, the Japanese style of management has focused on bottom-up decision making and given the importance to the role of middle managers. But, the clear difference between Japanese joint venture and Indian companies in this respect was not found. Rather, in some of the Japanese joint venture companies, transferring authority (to the middle managers) did not proceed well. Such case was found in the company D. It had been in the process of restructuring management, and the Japanese staffs were posted as a head of major departments, so that transferring those posts to Indian middle managers had not taken place. On the contrary, however, in the Indian company (company C), transferring authority to the middle managers has proceeded like Japanese style of management.

¹⁸ JETRO surveyed the starting monthly salary of India in big urban city in 1999. This survey revealed that it varied widely by professions, ranging from Rs.6,000 ~ 8,000 of accountants, Rs.12,000 ~ 22,000 of engineers, to office workers of Rs.5,000 ~ 7,000 and labors of Rs.2,500 ~ 5,000. Therefore, the wage levels of managers of our Japanese joint venture companies are roughly same as one of engineers, whereas those of Indian companies are same as accountants. In the case of wages of workers in our Japanese joint venture companies, they are higher than those of workers JETRO surveyed. In specific, the wage level of the workers of the company H is close to the one of engineers. On the other hand, the wage levels of workers of Indian companies are more or less same as those of labors. For further details, see Indian Business Center *I.B.C. Indo Toshi yoran (I.B.C. India Investment Handbook in the year 2001)*, 2001, p.47.

JOB CONSCIOUSNESS OF MIDDLE MANAGERS IN INDIA

Name of Interviewer_____

Date & Time of Interviewing_____

This survey has only a purely academic purpose. It will never be used for other purposes. So, please feel free to answer the questions as you really think. If there are questions you don't want to answer, please say so.

Name of Interviewee_____

Sex: 1. Male 2. Female

I. Basic Information on the Interviewee

Before answering the questions, let me know some facts about yourself and your family.

- A. How many years have you worked at this factory?
1. _____ years (or from when did you start to work? i. From _____)
- B. Before entering this company, did you work for other companies?
1.No 2.Yes (Which company? i. _____ How long? ii. _____)
- C. What sort of job do you do at this factory?
1. Dept. _____ 2. Sect. _____ 3. Status _____
- D. Where are you living?
1. Address _____
2. Type of the dwelling(i.Own house ii.Company house _____ iii.Rental room _____ iv. Dormitory)
- E. Where were you born? (Or where did you grow up?)
1.Name of District _____ (i. Rural ii. Urban)
2.Father's occupation _____
- F. How old are you now?
1. _____ Years old (which year were you born? i. _____)
- G. What is your religion?
1.Hinduism 2.Muslim 3.Buddhism 4.Christianity 5.Others
- H. What was your highest level of schooling?
1.Primary school 2.Middle school 3.High school 4.Higher secondary
5.Graduate 6.Post Graduate 7.Technical (or vocational) school 8.None
(i. Passed ii. Incomplete, dropout)

- I. What is your employment status?
1. Permanent employee
 2. Casual employee (i. _____ Months per year)
 3. Part-timer (i. _____ hrs. per week)
- J. How much are your monthly earnings (including all allowance)?
1. _____ Rs. Per month
- K. Are you married?
1. Unmarried
 2. Married
 3. Divorced
 4. Widowed (Separated)
- L. How many children do you have?
1. None
 2. One
 3. Two
 4. Three
 5. Four
 6. More than Four (Their ages i. _____ yrs. old, ii. _____ yrs., iii. _____ yrs., iv. _____ yrs.)
- M. How many persons do you have in your family (those who live together)?
1. _____ Persons.
- N. Among them how many persons are working?
1. _____ Persons (who and who? i. _____ , ii. _____)
- O. Who is the breadwinner (main income earner) in your family?
1. Myself
 2. My spouse (husband or wife)
 3. Father
 4. Brother
 5. Others
- P. How much is your family's total monthly income (earnings)?
1. _____ Rs. per month.

II. Job Satisfaction and Views on Competition, Fairness

I will now begin to slowly read aloud questions, once, and answers twice. Please choose only one answer which you think is closest to your view or judgement.

- A. Are you satisfied with your present job?
1. Completely satisfied
 2. Well (almost) satisfied
 3. Neither satisfied nor dissatisfied
 4. A little dissatisfied
 5. Very dissatisfied
- B. Do you plan to work at this factory until you reach retirement age?
1. Yes, till retirement
 2. Will work for quite some time
 3. Not decided yet
 4. Will take up a better employment, if available
- C. What do you think about the system, which guarantees your son or other family members getting a job in your company after your retirement?
1. Good
 2. Bad
 3. It can't be helped in the present Indian situation
- D. If your son or daughter were offered a job identical to yours, what advice would you give him(her)?
1. Strongly recommend him (her) to take the job
 2. Urge him (her) to decide for him (her) self
 3. Urge him (her) to search for a better job than mine

- E. If you have occupational pride, is it the pride in the organization (company) or the work?
 1. In our organization 2. In my work 3. Don't have the pride
- F. Suppose that you are offered either promotion (with no wage increase) or wage increase (without promotion). Which do you prefer?
 1. Promotion 2. Wage increase 3. Hard to say
- G. What does the "good job" suggest you most in the following reasons?
 1. High wage
 2. To be a rewarding (worthy) job
 3. Good relations with workmates
 4. Can work for many years
 5. Easy work
- H. How do you feel about your wage (salary)?
 1. Should be a little higher
 2. Reasonable
 3. Very satisfied
- I. What do you think about the present condition of paid holidays and working hours?
 1. Satisfied
 2. Not satisfied
 3. Neither satisfied nor dissatisfied
- J. What do you think about the amenities and welfare facilities of this factory?
 1. Very good
 2. Satisfied
 3. Poor (What kinds of facilities should be improved? i. Toilets ii. Drinking fountains iii. A mess room iv. A recreation room v. A commuter bus vi. A canteen vii. A medical room viii. Others)
- K. Do you think that your company should give priority to provide welfare facilities even if they reduced profits?
 1. The company should give priority to providing welfare facility because it is important for employees
 2. The company should give profits the first priority
- L. What do you think about your bonus and dearness allowance?
 1. Sufficient 2. Neither sufficient nor insufficient 3. Insufficient
- M. Are you satisfied with the human relations in your work shop?
 1. Satisfied
 2. Not satisfied
 3. Neither satisfied nor dissatisfied
- N. To whom do you feel stronger affinity: your colleagues at your factory or your friends outside the factory?
 1. My colleagues at the factory
 2. My friends outside the factory

- O. Which, do you think, is the most important?
1. Family life
 2. Working life/human relations at working place
 3. Social life other than a) and b)
- P. Does your job require skill and experience?
- 1.Requires a lot
 - 2.Requires a little
 3. Almost no skill and experience
- Q. Which do you prefer, time-rate wage or piece-rate wage?
1. Time-rate wage, which is not affected by the speed of work
 2. Piece-rate wage, which guarantees more wage for harder work
- R. If some company offers you the same job with higher salary, would you accept it?
1. Yes
 2. No
 3. Hard to say (Why so? i. _____)
- S. If you are offered an opportunity for the job-change, what kind of a job will you choose?
1. A job with higher wage
 2. A job requiring higher skill
 3. An easier job
 4. A more challenging and interesting job

III. The Meaning of Work and Work Disciplines

- A. How did you find your present job?
1. By the referral (introduction) of my friend
 2. By the referral of my parents, brothers or relatives
 3. Through the recruitment of company
- B. Which do you prefer, earning extra income by working overtime or regular return home with regular payment?
1. Prefer overtime
 2. Hard to say which
 3. Prefer regular return even without extra income
- C. Do you like the job rotation within your factory (or company)?
1. No, I would prefer to stay in the same job
 2. Yes, I want to have various job experiences
- D. If somebody is absent from his/her job, then, do you think, some other person should cover his/her job?
1. No, the same person should do it later
 2. Yes, some other person in the same work shop should cover it
 3. Substitute personnel (for the absentees) should be arranged
- E. In your factory or surrounding society, do you think, male and female employees are treated equally, if their abilities are the same?
1. Yes, by and large they are treated as equal
 2. No, not equally treated

3. Male employees should be the first priority, and females may not be necessarily treated as equals
- F. What do you think about managers and workers taking meals at the same canteen?
1. Disagree: they need not take meals at the same canteen
 2. Agree: by taking the same meals in the same canteen, some sort of common feeling between them may be created
 3. Disagree personally: the separate canteen is better because I feel at ease
- G. Do you think that wearing a uniform in factory has any meaning?
1. No, dress should be entirely personal choice
 2. Yes, wearing a uniform is useful because it creates the common feeling and a sense of unity
 3. Yes, the uniforms are useful for practical reasons (safety, hygiene etc.)
- H. Do you think that the morning meetings (for the section or factory as a whole) are necessary?
1. Not necessary
 2. Necessary for creating a sense of unity and discipline among employees
 3. Necessary only if some ongoing project or works require it (as an effective communication channel)
- I. What do you think about the factory-wide recreation activities (social gatherings such as athletic events, party)?
1. It is not the activity which the factory (or company) should conduct
 2. Factory (or company) should do it for the sake of creating a sense of unity among employees
- J. What is the main purpose of your company?
1. Profit-making for shareholders (capitalists) and managing directors
 2. Development of company itself (as a corporate body)
 3. Promotion of employees welfare and job security
- K. Suppose you acquired information on business or technology by participating in business seminars or outside training programmes, do you think it should be shared with your colleagues?
1. Yes, of course, because it is a part of my job
 2. No, because it is my personal asset (possession)
- L. For evaluating the personnel in your company, by which standards, do you think, is the most important?
1. Philosophy and ideology
 2. Job performance
 3. Personality

IV. Views on Skill, Technology, and Quality Consciousness

- A. What kind of quality do you think is the most important for the managerial staff such as a foreman or supervisor?
 - 1. Educational attainment
 - 2. Skill and experience
 - 3. Personal attractiveness
- B. Do you think, working at the same job (within the factory) for long periods of time is better for learning skills and/or technology?
 - 1. Disagree: experiencing the various jobs is better for skill acquisition in real term
 - 2. Agree: it's better to stay longer at the same job
- C. When the new machinery is introduced, or new technical advancement takes place, then, what do you think most important assets to cope with it?
 - 1. Experience 2. Technical education 3. OJT
- D. If advanced machinery or new technology is available, should it be introduced even if older machinery or equipment would have to be scrapped (replaced)?
 - 1. Machinery with advanced technology should be introduced even if older machinery must be scrapped
 - 2. Should not be introduced if older machinery is still in operation
 - 3. Should be introduced only after the old machinery becomes totally obsolescent
- E. What would you prefer to do if new machinery or equipment were introduced somewhere in your factory? (Assuming no wage or salary increases)
 - 1. Want to undergo formal training and operate the new machinery
 - 2. Don't want to change the present work, because I am satisfied with it
 - 3. Want to learn to operate the new machinery through informal training (for example, OJT)
- F. What do you think about the product or quality inspections of your factory?
 - 1. I do not know much about it
 - 2. Satisfied with it
 - 3. It should be more strict
- G. Have QC circle been introduced in your factory?
 - 1. Yes 2. No 3. Don't know
- H. Do you know the purpose of QC circle?
 - 1. Yes, very well
 - 2. Yes, but don't know in details
 - 3. Don't know
- I. To improve your technical skill, which do you think is the most useful?
 - 1. Technical guidance by your superior (boss)
 - 2. Technical education outside your factory
 - 3. Improving the environment of your work shop so that you feel motivated to

work harder

- J. Do you think that introducing the imported machinery is effective for increasing productivity?
1. Yes, it's effective if it is better or more advanced machinery
 2. No, it's not effective because there will be problems if it is introduced
- K. What do you think is the attitude of your labour unions toward improving productivity?
1. The labour union should more actively scrutinize efforts to improve productivity
 2. The union need not be concerned about productivity but only with protecting workers' rights
 3. The labour union's present policy is O.K.
- L. In order to increase earnings of your factory, which do you think is the more important, expanding volume of production or improving quality.
1. Expanding volume of production
 2. Improving quality
 3. Some other issues need to be solved
- M. What do you think about the most effective way to improve (product) quality?
1. Introduce brand new machinery or equipment
 2. Change the attitude of workers with regard to quality
 3. Improve the ability of managers and engineers
- N. What is the main reason for you to continue in your present job?
1. Because of a high wage
 2. Because of a short journey to and from work
 3. Because the job is interesting
 4. Because of unavailability of other jobs
 5. Because my work is part-time job
- O. When you have difficulties in the workplace, whom do you consult?
1. My superior 2. Trade union 3. Workmate 4. My family

V. Supplementary Questions

- A. Which occupation do you think is the socially most important among the followings? (Select two with the order of importance) and which do you think is the socially least important? (Select one with a tick)
1. () Medical doctor 2. () Engineer 3. () University professor 4. () Primary school teacher 5. () Soldier 6. () Company manager 7. () Government official 8. () Policeman
- B. Which factor do you think is the most important for promoting the work skill? (Select two with the order of importance)
1. () Experience 2. () Educational basis 3. () Supervisor's guidance 4. () In good health 5. () Aptitude of an individual

- C. How do you feel about the regulations in this factory?
1. Too strict
 2. Reasonable
 3. Should be more strict
 4. Strict, but not fully enforced
- D. Do you think competition among employees is necessary?
1. Yes, the competition is indispensable
 2. No, the cooperation among employees is more important than competition
 3. No, employing more people is more important than competition
- E. If competition become necessary at your work shop, then, what types of competition should be introduced?
1. Person-to-person competition
 2. Group-to-group competition
- F. What do you think about the seniority wage system based on your length of service?
1. Seniority wage is important
 2. Egalitarian wage is preferable rather than seniority wage
 3. I prefer piece-rate or efficiency wage based on the ability.
- G. What do you think about the lifetime employment (job security upto retirement)?
1. It tends to lower productivity
 2. It is desirable for employees because it assures the long-term stable employment
 3. The opportunity for changing job (company) at your will is more important than long-term stable employment
- H. Do you think that length of services should be the most important factor in deciding promotions?
1. No
 2. Yes
- I. How do you think about the overall wage/salary system of your factory?
1. Not good, because it is too egalitarian
 2. Not good, because wage/salary discrepancy is too large and not fair
 3. Good, it's appropriate
- J. Do you feel that wages, status and promotions should in principle, be based on the educational level (including technical education)?
1. Agree in principle
 2. Agree, but other factors besides education should also be considered
 3. Disagree: the educational background is not an appropriate criterion
- K. What qualities are most important for (factory) managers?
1. Ability to make big profits
 2. Ability to take good care of employees
 3. Personality, including philosophy and ideology

- L. Do you agree that managers should be promoted among employees of your factory?
1. Agree in principle
 2. Disagree, manager can be recruited from outside my factory (company), if he/she is well-qualified
- M. Who are the key persons (as a communication channel) to promote coordination between managers and workers?
1. Indian managers
 2. Japanese managers
 3. Supervisors
 4. Others(i. _____)
- N. Do you often receive the technical guidance or advice directly from your superiors (boss)?
1. Very often
 2. Sometime
 3. Rarely
- O. Do you have an opportunity to talk and/or have meals with your superiors?
1. Very often
 2. Sometime
 3. Rarely
- P. Do you think that top managers should lead the decision making process in the factory?
1. Agree
 2. Agree, but opinions of employees should also be considered
 3. Disagree, it should be decided on the basis of consensus among employees of factory as a whole
- Q. Do you think that the middle managers (general managers, managers) should voice the suggestions of work place?
1. Agree
 2. Disagree, their role should be opposite conveying the top decision-making down to the work shop level
- R. In your factory, does management appreciate workers proposing suggestions and solutions regarding production based on “suggestion scheme”?
1. No, not in general
 2. Yes, they do and they have, in long term, positive impact on promotions or wage/salary increases
 3. Cannot tell, though it is better to make suggestion
- S. If you make suggestions for increasing productivity, does management pay attention?
1. Yes
 2. No