

March 25, 1995

A Dynamic Model of Japanese Human Resource System

Proceedings of the 40th
International Conference of Eastern
Studies, May 26, Tokyo, Japan.

I Introduction

Over the last decade, there has been a rapid escalation in research on the topic of human resources or human capital, associated with worldwide shifts in the driver of competitive advantage from 'manufacturing' to 'services'. This research has provided rich insights into the significance of 'quality' of human resources in growth of all persons - corporations or nations. A number of models have been proposed explaining formation and accumulation of 'quality' human resources, with a common feature being the treatment of quality as "skills" (Becker, 1964; Schultz, 1961) and, especially in context of least developed nations, "physiological health" (Fogel).

However an important element missing in the literature has been an understanding of shifts in the system of human capital formation, especially in context of intensely competitive globalization. The rapid globalization is forcing all persons to upgrade the proficiency of their human resource systems by at least one level: from supra proficiency acceptable in a national environment to supreme proficiency essential for very survival in a global environment. Investigating this system upgradation process requires examining the goals and values of human resources, in line with a long behavioral research tradition highlighting the need to understand the role of personnel management especially motivating power in performance (Mayo; McClelland), as well as the growing research on incentives under principal-agent conditions (Jensen; Aoki).

This paper develops a dynamic perspective of the system upgradation process. The paper is based on findings of extensive field studies on the transfer of human and material technologies by the leading Japanese Multinational Corporations (MNCs) to their overseas subsidiaries in the automobile industry. These field studies have been conducted by the Japan Multinational Enterprise Study Group, headed by Dr. Tetsuo Abo, over the last one decade (Abo, 1994).

Rather than simply being a passive, adaptive or incremental learning-oriented "evolutionary" process, the research demonstrates that proficiency in system upgradation requires an intentional creative and innovative "hybridization" by an multinational corporation (MNC). The deciding factor in performance is an active employee "involvement" - of both MNC as well as of local subsidiary - in contrast to purely system-dependent (or path-dependent) "participation". The differences in such involvement conditions the appropriateness of human resource system transplanted by any MNC. As the parameters of the role - i.e. involvement or participation - of human resources are ultimately a function of corporate and national cultural systems, this research

in particular highlights the dynamic significance of entity-specific cultural system in the proficiency of human resource system.

This research also seriously challenges the validity of much of the current literature on new growth theory, and calls for a dynamic systems analysis of the process of growth. The findings of this research are especially instructive because Japan in general, and its automobile industry in particular, has the most proficient indigenous human resource system in the world (MacDuffie and Hamada). This research confirms that the core strength of the Japanese human resource system is decentralized work-site orientation, but at the same time it disproves conventional research that attributes complementary development of such core in the overseas transplants as the dominant role of Japanese expatriates (Koike, 1991). Therefore, findings of Stopford and Wells (1972) about system upgradation process of American MNCs can not be extrapolated to the Japanese case, because of fundamental differences in the behavioral characteristics of Eastern and Western persons (Gupta, 1995).

Conventional literature generally analyzed culture in terms of either whether it is universally applicable or whether it is universally superior or inferior. Gunnar Myrdal (1970) thus identified the kinds of cultural qualities necessary for economic development as follows: efficiency, diligence, punctuality, frugality, honesty, rationality, flexibility, integrity etc. Another stream analyzed the conflicts of interests between host governments and MNCs arising from cultural differences, and the desire of MNCs to enhance their control to avoid such problems (Buckley and Casson, 1991). The most recent research demonstrated how national differences in cultural values, and especially the contrast between East Asian Confucianism and Western style individualism may affect economic performance (Franke, Hofstede and Bond, 1991). All these conceptions of culture were based on static conceptions of culture, instead of dynamic models of cultural system (Gupta, 1995). Kogut and Singh (1988) demonstrated that cultural distance of a nation along with MNC propensity to avoid uncertainty tends to inhibit MNC investments in a particular nation. Abo (1994) demonstrated how such reluctant investments are managed by the Japanese multinationals using a variety of application-adaptation tradeoffs, how subsequent performance is an inverse function of cultural distance. Now there is a further need to use a dynamic systems approach for analyzing the impact of various approaches to management of culture on performance.

Dore's (1973) account of factory regimes in Britain and Japan emphasized their national-institutional distinctiveness. However, the cross national studies conducted by regulationist scholars have revealed persistent difference between societies and sectors sharing the same political economy (Rose, 1985).

II Mission Statement

This paper seeks to demonstrate that performance of an MNC is decidedly conditioned on utilization of an “appropriate technique” to fit the cultural linkages of various nations, just as there must be an “appropriate technology” to fit the infrastructural linkages of various nations. It then investigates the most appropriate technique for management of Japanese overseas transplants, and demonstrates the inferior performance consequences of impediments to adoption of this technique.

III Parameters

The following sets of propositions can be identified on the basis of current literature for describing the process of dynamic upgradation of human resource system:

1. Servicing Technique: “Advantages” versus “Culture”

According to the conventional literature on international management, the choice between centralization and decentralization, or market and hierarchy is conditioned on three factors. The pre-dominating role is to take up residual ‘upper-tier’ activities that local employees are not capable of doing cost-effectively (Hymer, 1970), the dominating role of the home-nation management and expatriates is to develop the capabilities of the local transplant in idiosyncratic, uncodifiable, costly to transmit knowledge (Kogut, 1988), and deciding role is to ensure goal identity by creating structures that reduces transaction costs (Williamson, 1975). The factors determining these three roles are summed up respectively as ownership advantages, locational advantages, and internalization advantages (Dunning, 1979). As the technical parameters defining both transaction costs as well as diffusion efficiency are weaker in the developing nations relative to the developed nations, subsidiaries in the developing nations are allowed less autonomy than those in developed nations (Negandhi and Welge, 1984). Further, MNCs seek a greater influence of affiliate activities in the functional areas perceived to be culture free, which offer substantial economies of common governance, and which are more efficiently implemented by the parent company (Young, Hood and Hamill, 1985).

In contrast to the dominant technique of the Western MNCs that relies on “advantages”, however, embodied skill intensity in labor as a function of national development have not been found to be of determining significance in Japanese overseas investments. Even after controlling for the transplant age, Japanese operations in the US have tended to be relatively less skill-intensive than their operations in many British and even Asian transplants (Abo, 1995a). Moreover, Japanese firms in the US have tended to locate their plants in areas with fewer skill-base, hiring workers with little prior industry experience. Thus Japanese MNCs in the US have long suffered from two sources of high costs: using substantial Japanese expatriates whose costs overseas are twice as at home, and inability to sufficiently capitalize on local talent both in static

(market availability) as well as dynamic (internal labor markets) terms. The reasons for these decentralizing difficulties are rooted in the vast differences in the cultural systems of the US and Japan.

Therefore it is proposed that cultural compatibility, not technical compatibility, of human resource system is the predominant factor in the performance of MNCs. A culturally incompatible local human resource system demands compensating from parent human resource system through greater centralization in order to ensure local survival.

2. Networking Nature: “Passive Epistemological Adaptation” versus “Revised Axiological Adaptation”

According to the conventional literature on strategic management, human actions are boundedly rational, or are fully rational subject to information constraints (Simon). Therefore there is a need for a monitoring or control system that discourages shirking and encourages participation, an incentive system that aligns interests of various participants with that of the corporation through joint-decision making and measured-performance-based compensation (Jensen), and a coordination system that networks the division of labor among various participants through information sharing or other means (Murphy and Becker). It is held that organization structures in developed nations with more skilled workers and with better information infrastructure would be loose network-type and the activities performed would be relatively more skill-intensive, as against those in less-developed nations where more centralized monitoring/coordination would be used. The locational advantage thesis presumes that inter-nation differences are dominantly rooted in the technical comparative advantages. Therefore MNCs network structuring, *cet. par.*, is a function of location-specific advantages. The employees differ only in terms of embodied skills, and a most productive utilization of employees is done when such skills are fully utilized by ensuring adequate participation in relevant decision making. The temporal elasticity of skill upgradation, given the training system, is presumed to be individual-independent.

The case of Japanese transplants discredit the proportionate significance of factors emphasized in the conventional literature. Unlike Western MNCs that base remuneration on job-related determinants (job specification, function, type of work), Japanese MNCs are more conscious of employee related determinants (ILO study, 1979). Unlike American and European MNCs that are more prone to hire experienced or trained workers from other firms, Japanese MNCs often prefer recruiting younger and less experienced workers who they can train in the Japanese way. In addition, Japanese MNCs generally ensure their local employees more job security than do indigenous companies (Dunning, 1986). The competitive strength of the Japanese human resource system is based on “my-company consciousness” among the employees, who make voluntary decisions and take voluntary actions for promoting the corporate interests fully

certain that such devotion would be rewarded based on higher group performance. As these decisions and actions are made at the ground level, a higher degree of flexibility in utilization of all opportunities is realized. As such a strong degree of involvement is lacking in the overseas cultural systems, Japanese firms have traditionally been characterized as “reluctant” multinationals (Yoshino, 1976; Trevor, 1983).

Therefore it is proposed that “passive adaptation” of the human resource system to “involvement-oriented” epistemological cultural systems is the dominating factor in the supreme proficiency of MNC human resource system, and must be compensated by “revised adaptation” to “participation-oriented” axiological cultural systems for realizing supreme proficiency.

3. Nurturing Technique: “Passive Evolutionary Application” versus “Revised Intentional Application”

According to the conventional literature, the centralization or role of top management tends to evolve with the age of subsidiary depending on the initial condition of centralization (ethnocentrism) and decentralization (polycentrism) (Franko, 1976). This is explained by the literature on technical change, all dynamic processes follow an “evolutionary” path because of “increasing returns” arising from stochasticity and bounded rationality (Romer, 1986). First, experience leads to non-ergodic learning-by-doing of selection, variation and adaptation in a particular direction based on initial conditions by reducing costs of search in that direction (Nelson and Winter, 1982; Cohen and Levinthal, 1991). Secondly, agglomeration or co-location of various people generates benefits of coordination of their adaptive expectations (Paul David, Brian Arthur). Finally, set-up conditions result in co-specialization of human resources, thereby creating economies of scope, focus and speed for directing evolution of any organization (David Teece). The resulting evolutionary path imposes “competency traps” or “constraints” on system upgradation of nations and organizations and perpetuates “lock-ins” in current system (Olsen). As such, continuous system upgradation follows Lamarckian evolution, and is a function of “experimentation” or creation of portfolio of options and exercising the options as per the subsequent changes in the environment (Hayek, 1956). In contrast, a threshold system upgradation follows Darwin-Mandelian evolution, and is possible only through “punctuated” inflow of energy from an external system, such as entry of new CEO that breaks lose the norms and constraints of older institutions and let the resources flow in more efficient channels (Tushman and Romanelli) or entry of new firms in an industry that leads to creative destruction of prior structures (Schumpeter).

The case of dynamic creation and innovation of the overseas human resource systems by the Japanese MNCs seriously challenges the significance of the above institutional literature from a management perspective. First, there is little evidence of any systematic incremental learning in

the management of human resource system of the transplants. There are substantial differences in the strengths of human core among different firms entering around the same time, as well as among different industries entering at vastly different times. Secondly, there are significant inter-nation differences in the strength of human core. The core is stronger in nations that accommodate Japanese-style management more flexibly, than in nations that do not do so. Thirdly, human resource system upgradation has been a function of neither any flow of external energy nor any institutional reforms in the local environments, but of “intentional hybridization” by the Japanese MNCs in a manner appropriate to the relative ground realities of the host nation. However, some of those Japanese companies that earlier found centralization essential for their survival in the US, have now been able to use to the local talent more flexibly and are reducing their centralization (Abo, 1995jap). Therefore a passive adaptation approach has proved ineffective and has required use of expatriates. These expatriates are required primarily for performing activities for which the corporate human resource system is unable to provide required local employees, rather than for training the local employees. To summarize, Evolution can ensure only parallel proficiency, that too only under non-global conditions when the cultural system is stable. Only Intentionality can ensure ascending order proficiency, and becomes proportionately more important than Evolution under eternal global condition of fundamentally different cultural systems.

Therefore it is proposed that “revised application” rooted in sensible intentionality is the deciding factor in supreme proficiency of an MNC human resource system, and is a superior strategy as compared to “passive application” rooted in punctuated evolution.

IV Criteria

The conventionally used criteria is based on a pioneering contribution by Perlmutter (1969; 1985) under non-global conditions. In the modern global world, human resource system must be adapted to the cultural systems at each of the five levels: individual (selfcentric), local (ethnocentric), national (polycentric), regional (regiocentric) and global (geocentric) in order to realize supreme productivity using an “Omnicentric” orientation. Based on the proficiency of such orientation, the MNCs may be dynamically characterized in an ascending order as Super-omnicentric, Supra-omnicentric, or Supreme-omnicentric, distinguishing them from the domestic corporations that also must now be at least omnicentric for surviving cut-throat global competition.

V Conditionalities

The most distinctive characteristics of Japanese cultural system are its contemporary comparative geography characterized by egalitarian intentionality and its contemporary comparative groupism characterized by high involvement based on emotional and devotional

intensity to the corporation (Gupta, 1995a). The comparative characteristics of the Japanese human resource system can be analyzed in terms of three groups of conditionalities: work organization, work behavior and work administration.

1. Work Organization: There are three aspects of work organization system - work design (wage and promotion systems), work differentiation (job classification) and work heuristic (training and job rotation systems).

a) Work design: Job Classification

In America, work design is based on a job-centered approach that is based on a detailed technical division of tasks. The focus is currently on realizing a greater mobility of unskilled workers from one job to other, and greater acceptance of job-related work such as material handling for unskilled workers and maintenance for skilled workers - the work which is within the current competence of the workers but which previously was demarcated for performance only by specialized indirect workers.

In Europe, work design is based on a socio-technical approach that focuses on flexible introduction of new technology. A new technology is introduced by redefining "complete tasks" or "solidaristic work", i.e. specific technically identifiable parts of production process with clearly defined performance standards. Under this approach, indirect production tasks such as quality control, equipment maintenance and material handling, and in some cases even other indirect tasks such as tactical budgeting, are integrated with the direct production tasks.

In Japan, work design is based on a person-centered approach that focuses on flexible use of manpower and continuous broadening and upgradation of the skills of the employees. The responsibilities for each worker rise with on-the-job experiential training over time, from direct production work to gradually include process and machine improvement, routine maintenance work, specialized maintenance work, supervisory work, and other work that has any bearing on performance of productive activities. While technical division of tasks is present in Japan also, but human resources perform those tasks not by virtue of whether they have agreed to do so but because they belong to the corporation.

b) Work differentiation: Wage and Promotion Systems

In Europe, workers are differentiated in terms of skilled and unskilled labor, with various classes of crafts. There is a focus on autonomy. The developmental role is vocational training performed only with respect to apprenticeships that generates well defined qualifications usable in a variety of firms. The upgrading of competency is often organized by public authorities when industries become obsolete. Within the same class of workers, the wages are nearly constant and are not a function of seniority unlike in Japan. The potential upgradation is normally conditional on market expansion or changes in market structure. Workers position in the intra-firm division

of labor, including participation in decision-making and promotion, is primarily a function of their certified technical qualifications though one's experience remains the deciding criteria. The division of labor in the firms is closely inter-linked with the codification of technical curricula and diplomas.

In America, workers are differentiated in terms of skilled and unskilled labor, though the earlier additional differentiation based on functions within a particular type of class is now quite limited. For example, skilled tradesman are taking over trade-related maintenance work from the specialized maintenance personnel. The inter-firm mobility of employees is motivated by exercise of market power, and tends to be associated with increase in incomes. The potential upgradation tends to be responsibility of employees, and tends to be greater in times of economic adversities and poor labor demand conditions when the workers prefer education and training to jobs using rational expectations about future employment potential. The companies per se offer few internal promotion opportunities to the workers.

In Japan there is no horizontal work differentiation among the employees, but there is a vertical work differentiation manifested in strong correlation of seniority with breadth and depth of employee responsibilities and with employee compensation. The workers are assigned responsibilities based on their enthusiasm and competence, rather than on the basis of job demarcation. The inter-firm mobility of employees is a manifestation of a disciplinary action by the company, and tends to be associated with decrease in incomes. At time of entry, the wage differences are limited and are a function primarily of length of education besides gender and nature of employment contract (temporary/ permanent). The potential upgradation is continuous, and is a function of both variable market as well as constant factors.

c) Work Heuristic: Training and Job-rotation Systems

There are three roles of a work heuristic: (a) dynamic ascending order compensating by upgradation of skills and wages of workers [polarization role] (b) dynamic parallel order compensating by replacing older skills and worker classes, with new skills and worker classes for industrial upgradation [evolution role] (c) dynamic descending order compensating by mechanizing lower-order tasks [support role]. Support role is the dominating factor in the dynamic performance, while polarization role is the deciding factor.

In the US, there is little emphasis on strategic upgradation of worker skills. However in case where the workers of skills required for a new technology are not available in the market, tactical off-the-job specialized training may be provided. Support may also be provided to promising workers for advanced studies if the workers take the initiative. The dominant work heuristic is to employ workers with skills required for a given technology. Changes in skill requirements as a result of change in technology are coped by worker redundancy and employment

of new workers. This creates continuous skill shortages at the macro level and raises the wages of workers with skills compatible with technology of a particular time while depressing wages of others. In turn, incentives for mechanization of lower-order unskilled work are reduced. As a whole, work heuristic can ensure only super-proficiency of human resource investments.

In Europe, companies aim to realize “solidaristic wage” with reduced pay differentials among different classes of workers. Increase in pay for the lower paid categories of workers is realized through gradual expansion of tasks of workers in these categories along a pre-defined “skills ladder”. As the dynamism of higher skilled- higher wage workers is inhibited under this approach, polarization role is only half realized. The European approach is not at all effective in fulfilling the evolution role, as the existing skill classes can not be replaced with the new skill classes. The dominant focus of socio-technical approach is to flexibly introduce new technology through work integration. Such work integration creates two kinds of skill mismatches: intended ascending order (additional higher-skilled tasks relative to worker skills) and unintended descending order (residual low-skilled tasks such as feeding parts). The employees are given additional on- or off- the job training to bridge the former in line with solidaristic wage policy, and are responsible for the descending order tasks until they are automated through additional mechanization. As the European approach dynamically creates new lower-order tasks for the workers, it is only half effective in realizing support role. As a whole, work heuristic can ensure supra-proficiency of human resource investments.

In Japan, work organization may be divided into two time-periods decided on a daily basis, as well as on a more long-term basis: when the production requirement is above average level, and when the production requirement is below average level. In the former times, workers tend to perform those activities in which they have greatest distinctive strength relative to their co-workers. In the latter times, workers take up new activities through job rotation or special projects, the dominant intention of which is to upgrade skills of the workers through experiential learning from co-workers. Thus about half the time the focus is dominantly on upgrading the worker skills. New skill requirements are also coped with incremental training of the workers, and so set-up and commissioning costs and time-requirements are quite substantial. The dominant focus is therefore on continuous mechanization of lower-order tasks through process and equipment kaizen. As a whole, work heuristic in Japan has a potential of ensuring supreme-proficiency of human resource investments. The wage systems are defined much more with respect to the individual than to the job presently fulfilled.

2. Work Behavior: There are three aspects of work behavior system - work ethic (information sharing), work relations (sense of unity) and work method (small group).

Work ethic: Group consciousness

American work behavior is based on an entrepreneurial work-ethic. This ethic involves interest in the work that is a function of expectations of individual workers and their willpower to realize those expectations.

European work behavior is based on a strong professional work-ethic. This ethic involves a pragmatic interest in the work, a willingness to take comprehensive responsibility in return to reciprocal technical support in form of material and competence, and a devotion for maintaining the sanctity of self-regulation in carrying out that work. The underlying principle is to perform “fair day’s work”.

Japan work behavior is based on a family work-ethic manifested in group consciousness. This ethic involves a passionate interest in family or group relative position irrespective of the involved work, a determination in one’s competence in fulfilling any responsibility with the available technical support, and a strong emotional involvement and internal drive for successful realization of one’s goal whatever work that might entail. The underlying principle is complete “sacrifice” in ensuring relative standards of one’s corporate family. However with realization of the state of highest per capita income in the world, the drive to further upgrade corporate position is now showing signs of maturing.

Work relations: Sense of unity and labor mobility

In America work is decided on the principle of individual responsibility for one’s own performance. The adjustments to environmental conditions generally occur through hire and fire policy borne mainly by the junior workers, and not through significant adjustments of hours and wages which tend to be negotiated under collective agreements binding for a period of 3 years. Thus there is a strong adjustment of employment relations with the sales growth pattern of the corporations.

In Europe work relations are premised on semi-autonomous team responsibility, and are based on consensual negotiations. These negotiations are conducted primarily at the corporate level, based on central or industry agreements concerning wages, working hours and working conditions. The emphasis is on collective burden-sharing under environmental adversities, and on “humanization” of work.

In Japan work relations are premised on long-term relationships and mutual involvement. The junior employees are trained by the senior employees. The companies take active interest in employee welfare and development, and in turn employees are fully committed to ensuring high corporate performance. The negotiations for wages are conducted primarily at the corporate level, but are based on industry agreements. Compensation is significantly driven by long-term factors, manifested for example in high ratio of bonus. There is currently an emphasis on encouraging a

healthier extra-corporate life-style. Adjustments made to materials - in terms of improved processes or quality upgradation - have been the main instrument for adjustments to economic conditions manifested in increased mobility of workers to potential improvement areas within the factory or more often outside to subcontractors and affiliated firms. Also specific temporary contracts are entered with other employees who bear the adjustment process. The motivation of these employees is to obtain permanent employment, and so they also behave like the permanent employees. So the system is hierarchical that allows promotion from temporary to permanent.

Work method: Social and technical division of labor manifested in information sharing

There are three roles of work method: (a) inculcate corporate consciousness and facilitate perfection in current jobs using learning-by-doing [networking role] (b) mobilize potential [exchange role] (c) develop potential [diffusion role].

In America work method is selective “participation” targeted at reducing resistance to management decisions directly on a quid pro quo basis that often involves offering greater financial compensation, so that employees may agree to perform the work that otherwise they refuse under union agreements regarding job classifications. The technical experts decide the appropriate division of labor, and then the workers are assigned to perform required tasks. Potential is mobilized mainly by giving incentives based on career tracks and associated financial gains.

In Europe work method is professional “participation” through various small group activities such as quality circles, problem-solving groups, and voluntary study circles. The aim is to improve labor relations by inducing greater identification with corporate goals, and thence reduced resistance to management decisions. The realization of networking role requires explicit management power. In addition, the companies use participation to mobilize the potential of their employees, rooted in their skills and experience, for perfecting the system under conditions of new technology. For example, developing and presenting to management new ideas for product and process production, based on past experience and established work patterns, and potential in the plant, is emphasized. The potentiation of exchange role tends to be conditional on new technology, and saturates as the technology becomes older. Therefore participation is only semi-dynamic in fulfilling exchange role. Participation is not intended in the European approach as a tool for development of worker potential, rather development of worker potential is a cost to which companies agree in return for worker participation. Therefore, the European-style participation entails a competitive trade-off with the diffusion role of human capital formation.

In Japan work method is personal “involvement”. This is fostered through extensive information sharing and corporate philosophy. The devotional intensity to the company is very

strong, and the dominant focus of all employees is the corporate performance. There is a complete identification with corporate goals, and this results in high flexibility of all employees and voluntary efforts for improvement of corporate performance. Therefore, the dominant goal of work method is to use job rotation for developing the skills of the employee, so that the employee may be able to flexibly respond to all routine contingencies of repairs, maintenance, quality control, etc. and in addition could take-up greater responsibilities in form of skilled maintenance personnel as well as promotion to the position of first-line supervisors etc. The Japanese-style mutual involvement of company and employee is complementary in nature, and therefore results in greater dynamism than the western-style participation.

3. Work Administration: There are three aspects of work administration system - work agreement (union systems and first line supervisors), work control (job security) and work motivation (employment policy and grievance procedures).

Work agreements: Employment policy and union system

In America, management decisions are conditioned on bargaining with the unions and workers, based on current competitive standards plus factory or corporate specific factors. Increasingly work agreements emphasize “common survival interests” at the factory level, under threat of relocation of operations and under threat of loss of corporate competitiveness. The decisions over future investments are made conditional on demonstration of willingness to relax work rules and to allow greater managerial freedom on job classifications, seniority ladders, and work specifications.

In Europe, all substantive management decisions are taken within the framework of “co-determination” law, that specifies joint decisions by the management and the union based on prenegotiated standards. These standards are determined through precedents and laws, which specify not only standards for wages, classification and wage intensity, but also criteria for application, creation and modification in these standards. These negotiations are subject to appropriate modification at the factory or work group level for realizing compatibility with unique local conditions. When standards are insufficient, further information is collected so as to resolve problems consensually at the lowest possible level within the framework of pre-specified criteria. The information is shared by both labor groups as well as management groups at various levels through periodic meetings.

In Japan, work agreements seek to maintain stability in employment and technological growth in corporate activities. These agreements are characterized by a relatively informal mutual understanding, and are based on extensive information sharing by the companies with the employees. The primary focus of agreements is the corporate condition, but that is subject to

appropriate adjustment based on national-level agreements based on national conditions.

Work Control: First line supervisors

There are two kinds of control: technical or supervisory control and organizational or management control.

In America while organizational controls are strengthening through greater power of management relative to unions and workers using computers and threat of international relocation, the technical controls have not been relaxed commensurately. Only a limited range of technical decisions have been decentralized because of limited strategic awareness of the technical environment by the lower level employees. Even the decisions that have been decentralized (such as assignment of jobs within the team) are often subject to veto by the supervisor.

In Europe, there is an emphasis on “self-regulation” by the work groups under the principle of “responsible autonomy” wherein the group is responsible for the results of its activity given the technical and organizational requirements. The focus is on minimizing the impact of technical factors, while maximizing the impact of organizational factors. The former goal is realized by devolving all possible technical responsibilities for the assigned work range to the group, and to buffer the forward as well as backward linkages with other work segments through inventories. The role of supervisor is also reoriented to that of a coordinator, responsible for long-term planning, financial control, and assignment of non-regular tasks. The impact of organizational factors is further strengthened by using real-time computer-aided performance data across various factories of the company, in order to promote a greater sense of accountability for performance.

In Japan there is an emphasis on provision of detailed technical information to the employees on a real-time basis, and on slowly developing the management capabilities of the workers, so that they can use the technical information for appropriate work management. Standardized work information, such as machine capacity, manpower requirements, standardized work sequence, available cycle time, and standardized inventories, etc. are available to all employees at the work-site. Strong internal controls are used for technical quality. For example, defects and material wastage are controlled as much as possible through intelligent machine attachments and sensors that identify human errors at source. Other methods such as line-stop authority also facilitate self-control by the workers. The technical controls govern the job rotation and other promotional techniques. So the emphasis is on use of organizational planning along with technical controls. The organizational controls are quite weak, with role of management oriented more towards environment assessment.

Work Motivation: Grievance procedures and Job security system

There are three roles of work motivation: (a) inculcate ownership of the corporate goals

[universalization role] (b) alignment of individual actions with the corporate goals [micro role] (c) obtain emotional intensity and involvement in everybody's actions [macro role].

In US, greater freedom is being offered to the employees so that they may be more motivated for realizing a sense of fulfillment as part of a selected team. The teams are generally hand-picked and create a sense of chosen few. Normally offers of strong financial gains are made for good performance. This is being used to promote internal team-based competition in the corporation, so that demonstration-effect may ripple throughout the organization as other employees also follow to avoid employment losses.

European socio-technical approach was originally created in Britain and developed in Northern Europe (Germany, Italy and Sweden) to boost worker motivation through greater participation, amidst recruitment problems, high turnover and high absenteeism in the 1960s. The focus was on job enrichment through job enlargement and job rotation to match the higher ambitions of workers in a booming economy and through job upgradation to match higher capabilities of workers under conditions of rising proportion of skilled workers. The goal of job enlargement now is to realize greater organizational flexibility in introduction of new technology, supported by job rotation in form of systematic periodic change of work tasks “intended to reduce monotony, fatigue and injury”, and job upgradation intended to realize wage solidarity.

In Japan, the main tool for motivation is to inculcate a sense of being a member of a corporate team whose main intentionality is to help achieve the common group goals and aspirations. The strong sense of groupism stimulates healthy fanaticism, that in turn powers devotional intensity and emotional intensity of the employees.

However as individual cultural system is difficult to change, a more proficient approach under conditions of cultural differences is to begin at the hiring or even pre-hiring stage. Many Japanese companies in the US, for example, actively promote team-sense among students in the local schools and use elaborate hiring methods aimed at securing the best cultural fit between the employees and the company. The labor-union based participation approach is required in the western nations, and reliance on just voluntary involvement approach would fail to yield desired work organization system because of lower emotional involvement of the workers to the company. Japanese firms must secure western worker commitment by giving them explicit participation opportunities.

References

Kuwahara, Y., T. Harada, and Y. Mizuno, Employment Effects of Foreign Direct Investments in ASEAN Countries, Working paper no. 3, Geneva: ILO (1979).

Ozawa, T., "Europe 1992 and Japanese multinationals: transplanting a subcontracting system in the expanded market" in *Multinationals and Europe 1992*, Burgenmeier B. and J. L. Mucchielli, eds., London: Routledge (1990).

Hymer, S. H., "The efficiency contradictions of multinational corporations", *American Economic Review*, v. 60, pp. 441-48 (1970).

Perlmutter, H., "The tortuous evolution of the multinational enterprise", *Columbia Journal of World Business*, v 4 n 1, pp. 9-18 (1969).

Chakravarthy, B. S. and Perlmutter H. V., *Strategic Planning for a global business*, Columbia Journal of World Business, v. 20, pp. 3-10 (1985).

Negandhi A. and M. Welge, *Beyond Theory Z: Global Rationalization Strategies of American, German and Japanese Multinational Companies*, Greenwich, CN: JAI Press Inc. (1984).

Young S., N. Hood and J. Hamill, *Decision making in Foreign Owned Multinational Subsidiaries in the UK*, ILO Working Paper no. 35, Geneva: ILO (1985).

Ghoshal, S. and C. A. Bartlett, *The multinational corporations as an interorganizational network*, *Academy of Management Review*, v 15 n 4, pp. 603-25 (1990).

Buckley P. J., and M. Casson, "Multinational Enterprises in Less Developed Countries: Cultural and Economic Interactions", in *Multinational Enterprises in Less Developed Countries*, Buckley P. J. and J. Clegg, eds., London: Macmillan (1991).

Franke, R. H., G. Hofstede and M. H. Bond, "Cultural roots of economic performance: a research note", *Strategic Management Journal*, v 12, pp. 165-73 (1991).

Dunning, J. J., *Decision-making Structure in US and Japanese Manufacturing Affiliates in the UK: Some Similarities and Contrasts*, Working Paper no. 41, Geneva: ILO (1986).

Franke, L., *The European Multinationals*, New York: Harper (1976).

JETRO, *Current Management Structure of Japanese Manufacturing Enterprises in Europe*, Survey Report, various issues, Tokyo: JETRO.

Kogut, B. and H. Singh, "The effect of national culture on the choice of entry mode", *Journal of International Business Studies*, v. 19, pp. 411-32 (1988).

Kogut B., "Joint Ventures: theoretical and empirical perspectives", *Strategic Management Journal*, pp. 319-22 (1988).

Stopford J. M., and L. T. Wells Jr., *Managing the Multinational Enterprise: Organization of the firm and Ownership of the subsidiaries*, New York: Basic Books (1972).

Williamson O. E., *Markets and Hierarchies: Analysis and Antitrust Implications*, New York: The Free Press (1975).

Aoki, M., *Information, Incentives and Bargaining in the Japanese Economy*, Cambridge University Press, Cambridge, MA, 1988.

Arrow K., "The economic implications of learning by doing", *Review of Economic Studies*, v. 29

n 1, pp. 155-173, 1962.

Becker, G. S., *Human Capital: A theoretical and empirical analysis with special reference to education*, New York, NBER, 1964.

Becker, G. S. and K. M. Murphy, "The division of labor, coordination costs, and knowledge", *The Quarterly Journal of Economics*, v. 107 n 4, pp. 1137-1160.

Koike K, "Human resource development and labor-management relations", in *The Political Economy of Japan*, v. 1, *The Domestic Transformation*, Stanford University Press, Stanford, California.

Romer, P. "Increasing returns and long-run growth", *Journal of Political Economy*, v. 94, pp. 1002-1038.

Schultz, T., "Education and economic growth", in Henry B., *Social Forces influencing American Education*, *The 60th Yearbook of the National Society for the Study of Education*, Part II, Chicago: The University Press of Chicago, pp. 46-8