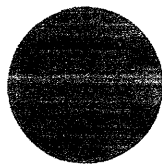


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**FAIRNESS, RATIONALITY AND INTEGRATION:
SUCCESS FACTORS TOWARDS A NEW
ORGANIZATIONAL MODEL**

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MITJP 96-18

Center for International Studies
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and its Working Paper Series

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The MIT Japan Program Working Paper Series provides an important means to achieving these ends.

The issue of intercultural transferability of a management system is both old and new. Recent debates on the transferability of the Japanese management system to a foreign environment have rekindled this traditional problem.

During a speculative period, when the influence, if any, of Japanese management practice was limited mainly to cheap manufactured exports, culturalist explanations prospered (Benedict, 1946; Nakane, 1970). The implication was that Japanese organization was so much ingrained in its own distinctive culture and employment relationships derived thereof, let alone the support from "docile" and "feudal" Japanese workers, it should by no means be transferable if any of its advantages were to be maintained. Echoing this was the contentions of organizational theory and industrial sociology which suggested the inseparability or "embeddedness" of organizations within their societal environments. It was presumed that the transference of organizations to a foreign environment would affect their performance as they gradually assumed attributes of the new environment. More specifically, it was argued that the primary advantage of Toyotaism over Fordism was a stronger labor process control of the workforce in Japan which could not be replicated in the West where more "advanced" forms of industrial relations existed (Dohse, Juergens and Malsch, 1985).

However, a wave of Japanese "transplants" in various parts of the world has produced overwhelming counterevidence that the Japanese management system, especially its production organization, is interculturally transferable with few practical constraints (Takamiya, 1979; White and Trevor, 1983; Krafcik, 1986; Dunning, 1986; Walker, 1988; Abo et al., 1990; Florida and Kenney, 1991).

The issue now appears -- not whether or not it is transferable but -- whether the diffusion of a new system, or according to some authors "lean production" (Womack, Jones and Roos, 1990), can be successfully made without direct involvement of Japanese management. Existing evidence of successful transfers invariably appears to be associated with direct involvement of the Japanese -- be they "transplants" or contract technical teaching. An examination of the question is critical for mapping out future trajectories of the competing paradigms of productive organization in industrial societies. Moreover, the issue can be a crucial test for the contention that the Japanese model could be a potentially generalizable successor to Fordist mass production (Florida and Kenney, 1991) and in particular for the generalizability of the Japanese paradigm with or without Japanese agents.

Dysfunctionality

Recent evidence demonstrates that it is not so difficult for Western producers to import and implement institutional artifacts of the Japanese system, prima facie at least. For example, automotive producers in the U.S. and Europe have introduced a whole shopping list of the "Japanese techniques": teams, quality circles, kaizen activities, fewer job classifications, suggestion systems, buttons for workers to stop the assembly line, multi-machine operations, U-shaped lines, suppliers' early involvement in design, self-certified suppliers, "black-box" design of components, simultaneous engineering, project managers, cost targeting, profit sharing, joint product design, just-in-time supply of manufacturing, etc.

It has proven to be difficult, however, to successfully implement and maintain the new system. The author's field interviews in the U.S. and Europe with assemblers and suppliers alike have consistently suggested difficulties in gaining expected results. It has often been implied that the new system's transfer without direct involvement of Japanese producers could be categorically difficult. Would this lead to a revival of the culturalist contentions after all?

In what follows, theoretically-informed propositions on the issues of intercultural transfer of management practice and constraints thereof will be presented. These draw mainly on the qualitative side of an empirical study being conducted by the author with regard to supplier relations, particularly collaborative components development, in the world's automotive industry.

Reconstruct of Fairness

On the basis of both historical and comparative evidence, it has been demonstrated that the current practice of Japanese supplier relations is a long-standing evolutionary product of socioeconomic, technological, political and producer-level strategic factors. There is no direct evidence that the Japanese culture in itself can explain its emergence, development and prosperity. Moreover, it has been argued that by providing formerly laissez-faire trading patterns with structures and governance mechanisms, through which high-quality, low cost products are continuously produced, the new paradigm is found to have disentangled economic rationality from cultural myths (Nishiguchi, 1992).

Through this study, as well as the author's ongoing field research, there have emerged three key norms that may account at a more non-

technical and generalized level for varying degrees of performance in adaptation to the new paradigm: fairness, rationality and integration.

When trading behavior is assumed to be dictated by market forces in the tradition of neoclassical economic theory, the application of the concept of fairness, if any, is simple. Give fair opportunities to competing agents in the market place, let them bid, and give contracts to those who bid the cheapest.

The traditional bidding pattern of U.S. automotive producers was just like that. Earlier in history, as parts were made fully interchangeable, so were workers at Ford's Highland Park factory. In a similar vein, the classical mass production system perfected the interchangeable supplier (Nishiguchi, 1988).

While Detroit was perfecting the concept of fairness on the market, Japanese automotive producers were working on their own version of a "fair" trading system based on radically different principles. Along with the development of contract assembly and systems components outsourcing, which made it dysfunctional to rely on market prices, the cost targeting method was developed. Increasingly, complex cost structure was decomposed into parts and cost-sensitive elements were identified item by item. For this purpose, assemblers and suppliers shared cost data. Rather than negotiating price downstream, assemblers and suppliers alike began step by step to look at the possibility of reducing costs at the source by means of joint problem solving based on the objective value analysis (VA) method. Moreover, suppliers became involved in design to further reduce costs using joint value engineering (VE) techniques. As a result, continuous cost reduction was

systematized during the course of a product cycle, and the fifty-fifty "profit sharing" rules were established.

The cost targeting and profit sharing rules work as follows. The cost targeting of product development is based on the market-price-minus, rather than cost-plus, principles. The sale price of a new car model is first determined: for example, X dollars, with Y profits and Z costs. The cost of each part is then evaluated. Through this process, the cost for a console box, for example, is determined as C dollars, within which the required specifications for this part, such as performance, quality, durability, feel and appearance, must be met. By jointly evaluating various possibilities -- in view of functional necessities for the consumer -- in design, materials, surface treatment, mechanisms, manufacturing methods and the like, the aggregate of individual part costs must be reduced step by step to the target while keeping the required specifications constant. VE techniques are particularly useful in this process. Suppliers' proposals are encouraged because of their intimate professional knowledge of the part concerned. After Job 1 (i.e., the roll-off of a new car model), design modifications to further reduce costs are continuously pursued. VA techniques are especially helpful at this stage.

Concomitant with the cost targeting of new product development was the emergence of "profit-sharing rules" between purchaser and supplier during the 1960s in Japan. If, for example, as shown in Figure 1, the price for an instrument cluster in the dash board was agreed on as 120 points for the first car model year, during which time 110 points, a target price for the second year, was in fact achieved by their "joint" efforts, then, the assembler paid the supplier 115 points, thus sharing

the incremental profit evenly. If, however, further cost reduction was achieved during that period, say, down to 108 points, then, the balance went to the supplier. In other words, the assembler did not ask for a cheaper price than the second-year target price. In the second year, the assembler paid either 109 or 110 points net, and further cost reduction was continuously pursued by encouraging additional supplier proposals.

Figure 1 about here

This rule setting was a significant departure from the traditional practice in which supplier incentives for improvement were frequently negated by the purchaser's attempts to try to monopolize the benefits of its suppliers' new ideas. In contrast, the new arrangements kindled supplier entrepreneurship and lead to a virtuous circle of purchaser-supplier competition and cooperation (Nishiguchi, 1992).

Referring to the profit sharing norm, a manager of a European multinational brake supplier remarked: "The Japanese customers are tough negotiators. But at the same time they are the most fair." Similarly, a sales director of a Japanese multinational wire harness supplier located in the U.S. commented: "We do business with almost all the major assemblers in the world. On an operational level, our Japanese customers are perhaps the most demanding. But unlike Western customers who tend to sever business relationships lightheartedly, we can be one hundred percent sure that as long as we show them the result of our continuous improvement, the Japanese customers never say, 'Hey, we no

longer need you next year. Good-bye.'" (The author's interviews in May 1991 and March 1988 respectively.)

Institutionalizing Rationality

In a way, it is striking how little the Japanese model has added to the classical notion of "rationality" as defined by Max Weber: the use of the most efficient means to achieve objectives. In Weberian terms, rationality, as embodied in his classical notion of "bureaucracy," is the strongest ground for authority in modern society. Bureaucracy, in its original meaning at least, is proposed as the most rational form of organization, characterized by such attributes as appointment by qualification, clear definition of rules and responsibilities, and a continuous striving for efficiency. In this type of organization, descriptive rather than ascriptive attributes, defines the qualification of the occupants of the office, and the exercise of authority is strictly restricted to what is necessary for the successful achievements of the objectives of the organization. This is similarly echoed in one of the principles of the Toyota Production System: "Make only necessary rules, teach them effectively, and carefully monitor how they are followed."

Applied to the Japanese paradigm of employment and trading relations, particularly pronounced when the system is "transplanted" in a foreign industrial soil, the following can be readily observable: 1) recruitment of well-qualified managers, workers and suppliers, 2) carefully elaborated rules and procedures, 3) orderly systems of grading and feedback, and 4) clear lines of command.

The notion of just-in-time production itself (i.e., providing only the necessary amount of the necessary items at the right time and place) is a sheer manifestation of economic rationality. If a firm is more rational in production organization than its competitors, then it will naturally be the most efficient and the most profitable. Toyota is a case in point.

The striking success of NUMMI, despite the counterproductive pre-conditions that accompanied it (Krafcik, 1986; Paul Adler, 1991; Nishiguchi, 1991), and the similar categorical successes of the Japanese automotive transplants in the U.S. (Abo et al., 1990; Florida and Kenney, 1991) clearly demonstrate that the advantages of the Japanese paradigm are embedded not in any particular national culture but in its institutional rationality. Therefore, the practice is not substantively affected by transference to even a non-conducive environment.

Integration

While there may or may not be any distinctive elements in terms of rationality in the Japanese system, a radically new value is arguably created by Japanese producers in the process of a new model building: integration or unification of apparently contradictory factors as conventionally perceived.

Traditional Western thought has emphasized manifestly dichotomous forces. For example:

- capital and labor (Marx, 1977; Braverman, 1974)
- large and small firms (Edwards, 1979; Piore and Sabel, 1984)
- productivity versus quality

- group orientation and individual creativity
- physical capabilities as opposed to intelligence of workers
- assemblers and suppliers
- carrots and sticks
- Theory X and Theory Y (McGregor, 1960)
- top-down and bottom-up decision making
- markets and hierarchies (Williamson, 1975)

In sharp contrast, the Japanese management system is characterized by "unifying" and "integrating" forces to accommodate prima facie unreconcilable and exclusionary entities. For example:

- harmonious labor-management relations
- efficiency as well as quality
- intelligent and physically capable workers
- creativity and conformity
- collaborative design and manufacturing between assembler and supplier (Nishiguchi, 1992)
- synergistic co-existence of large and small firms (Ibid.)
- Theory Z as a sublime form of Theory X and Y (Ouchi, 1982)
- "integrating" project manager (Clark and Fujimoto, 1991)
- "middle-up-down" management and lines of organizational decision making (Nonaka, 1988)
- "clustered control" (Nishiguchi, 1992) or "intermediate" organization rather than spot contracting or vertical integration (Imai, Itami and Koike, 1982)

Inasmuch the information process school of thought reduced the human agent to an ant and transaction cost economics reduced the economic man to a wicked, opportunistic agent, traditional Western approach has thus trivialized the potential of human capabilities. They have been confined to the domain of "time motion" studies (e.g., Taylor, 1947) or at best "commodified" (e.g., the "human resource" school).

In sharp contrast, the Japanese approach has enlarged the potential for human labor and interorganizational collaboration by unifying or integrating forces rather than dividing or atomizing them within the boundaries of specialization. This clearly indicates that the Japanese model entails the emergence of a new logic that sustains an organization of a third kind, the essence of which cannot be adequately captured within traditional frameworks - be they related to decision making processes, human resource management, supplier relations or product development organization.

It can be argued that to unlock the secret of the new paradigm arisen from Japan may well serve at the same time to account for the apparent failure of the traditional American paradigm. The paradigm that emphasized mass production and vertical integration (Chandler, 1962; Williamson, 1975) could no longer be considered the organizational model of dominance (Womack, Jones and Roos, 1990).

Legitimizing Authority

However much emphasis is placed on harmony between management and labor or on partnership and collaboration between assembler and supplier, it is ultimately management and the assembler which exercise authority in business relationships. Orders are always given from management to

workers and from assemblers to suppliers, not in a reversed manner. Final decisions are invariably made by management and the purchaser.

What concerns in practice, especially in a situation whereby radically new systems are transplanted, is how this authority is legitimated. Put bi-modally, on what basis is it justified by those who exercise it, and on what basis is it accepted by those who obey it?

It is predictable that if there is a decay or shortage of justification and acceptance of management authority, the institutional imitation alone (be it a long-term contract or early supplier involvement in product development) would be almost irrelevant to the objectives of new institutional programs. Should there be no fair rules or procedures equally shared between trading partners, or no rationality in the behavior of those who command authority in the eyes of those who receive it, the whole project could potentially collapse. The shortage of rationality and hence fragility in authority would surely lead to dysfunctionality. The predictable result would be that new practices sooner or later would revert to the domain of old mechanisms which were sustained by other means of support.

Management Effectiveness

Arguably, there has been a recognizable decay in management authority and effectiveness over the recent Anglo-American business culture. For example, White and Trevor (1983: 10) argue: "In Britain the insistence by workers and unions on a measure of control over their work, and the existence of high levels of industrial conflict, can be interpreted as a weakening of belief in the legitimacy of management authority.

Management can no longer expect its decisions or actions to remain

unquestioned." Similarly, Hayes (1981: 66) claims: "The lack of managerial elitism in the United States used to be a source of wonder to Europeans, whose managerial traditions reflected the deep divisions between social classes. With some shock, we recognize the emergence of elitism and lack of trust in the United States -- managers who isolate themselves from workers, both physically and emotionally; who have no direct experience in the businesses they manage; who see their role as managing resource allocation and other organizational processes rather than as leadership by example."

Innovative management in both intra- and inter-organizational relations is likely to be accepted only if workers and suppliers perceive it as reasonable and effective. Consistent breach of this expectation is likely to institutionalize failure to the detriment of the parties concerned. Undermined expectations and loss of trust and respect, due to ineffective management, cannot easily be recovered. A deterioration of trading and industrial relations will follow.

It should be recalled that Toyota took forty years to develop and perfect the Toyota Production System (TPS) to the current level with Japanese workers and suppliers. In contrast, NUMMI, a Toyota-GM joint venture in California, was almost an instant success with allegedly the most militant U.S. workers and many local suppliers. Over the last forty years in Japan, Toyota's productivity and product quality increased from a negligible level to the world's best. By the time the NUMMI project was put into operation, the efficacy of TPS had been tested out at least in Japan. Almost instantaneously, NUMMI proved itself to be among the most efficient and highest-quality assembly plants in North America (Krafcik, 1986). When a system can yield

results that are manifestly superior to those of a previous one, the apparently least conducive or most adversarial conditions should not constitute a barrier to obtaining support from those involved.

Despite the contentions of radical dualists who claim the fracturing effects on the working class (e.g., Edwards, 1979), the Japanese transplants, which brought in Japanese employment and supplier management practices to the U.S. and the U.K., appear to be serving to "unite" the "two nations", to bridge the division between middle-class and working-class (White and Trevor, 1983) and to reconcile previously antagonistic supplier relations (Dunning, 1986; Florida and Kenney, 1991). Furthermore, workers and suppliers, previously perceived as problem generators, came to be increasingly treated as problem solvers - another departure from the traditional Western paradigm.

Problems of Western Learning

Early evidence of the author's research on automotive components development in the U.S., Japan and Europe indicates that insofar as new institutional arrangements are concerned Western, and in particular U.S., producers are already fairly advanced (e.g., long-term contracts, suppliers' early involvement, resident engineers). What is problematic, as frequently voiced by managers of assemblers and suppliers alike, is that there is a recognizable shortage of socio-human infrastructure for the successful implementation of the new system. Distrust and timidity, a result of long-standing adversarial relations, still linger. A director of a U.S. independent brake manufacturer commented: "On official occasions, our customers trumpet the benefits of concurrent engineering and supplier involvement. But in reality harsh

relationships still exist. For example, one of our customers did not inform us of a design change in the suspension system of a car model. A juddering problem occurred in steering. But the same brake unit is used in another car model of this customer, and there's absolutely no problem. You see, increased responsibility has often been used for covering up inefficiencies in our customer's own organization." Also, a manager of an independent car electronics components supplier in the Midwest remarked: "Unlike the court system in this country, suppliers are guilty until they are found to be innocent. Even the most harmonious supplier relations in the U.S. are very adversarial compared to Japan." In a similar vein, a director in charge of quality at a French assembler commented: "We have installed all the new programs, from early involvement to supplier suggestions to profit sharing. But our suppliers never respond. They are afraid they may be preyed upon in a new way. More seriously, they don't know how to suggest a new idea, not even how to create a new idea."

Evidence from the research suggests, furthermore, that there is almost irreconcilable "social distance" between assemblers and suppliers in the U.S. As part of the questionnaire survey (the more technical and hard-evidence side of which will be reported on another occasion), evaluation of trading partners is included. Figure 2 shows how assemblers as customers are evaluated on a 1-5 scale by their automotive components suppliers in the U.S. and Japan.

Figure 2 about here

Between the two national groups, Japanese assemblers are perceived by their suppliers as recognizably more problem-solving oriented, well organized, dependable and technically oriented, whereas U.S. assemblers are seen as more short-term business oriented and extremely adversarial. The degree to which U.S. assemblers are reported as adversarial compared to Japan is particularly worthy of note.

How, then, the suppliers are evaluated by the assemblers? Figure 3 below provides a clue.

Figure 3 about here

Forming a corresponding pair with what is demonstrated in Figure 2, it is indicated that between the two national groups the U.S. suppliers are perceived by their customers on a 1-5 scale as less problem-solving oriented, well organized, dependable and far less compliant than the Japanese suppliers.

While interpretations of these preliminary results could be modified or influenced by further evidence that will be produced in the course of the current research, one tendency seems to be clear. As it stands, the social distance between assemblers and suppliers in the U.S. appears to be prohibitively great. This means that there are recognizable shortcomings of socio-human infrastructure in the U.S. which is essential to the smooth implementation of the new paradigm. Possibly, this could also apply to Western industrial societies at large. Putting aside the debate about the necessity of direct Japanese influence or Japanese culture for the successful transfer of management

practice, it is inconceivable that the new model could work meaningfully in such an antagonistic environment as indicated by the above two-way evaluation data. This is because the new practice relies by design so heavily on trusting interaction of trading partners.

Implications from Japan

The Japanese management paradigm is not in itself a panacea. As it draws, too often excessively, on human commitment, the Japanese model is exhausting and could be fragile (Nonaka, 1990: 243-4 & 265). Moreover, if irreversible socioeconomic cracks occur in Japan either from within (e.g., decay in work ethic, especially in management) or from without (e.g., chronic labor shortage, unpredictable political and societal crises), it could collapse.

Recent trends in Japan suggest, furthermore, that the traditional paradigm of lean production may have reached a saturation point. In the summer of 1990, for example, Mr. Tokumoto of JAW released an official statement that JAW would not likely accept further pressure from management to undertake more overtime work to meet the demand -- and in particular to shorten already short enough product cycles. Parts of Japanese management, led in part by Mr. Morita of Sony, have echoed this in the general context of international pressure to reduce long working hours in Japan. More recently, MITI has initiated an "administrative guidance" to steer excessively competitive Japanese producers towards lengthening their current short product cycles especially in electronics and automobiles (Nihon Keizai Shinbun, March 11, 1992). Finally, recent recession has forced many Japanese manufacturers to cut down their

impressive "full product line" inventories and discontinue many of the existing models with no replacements.

All in all, these new trends in Japan suggest that the traditional model of lean production itself is under revision. Western producers need to re-examine what they perceive as lean production and be cautious about uncritically pursuing what may well be becoming obsolete.

Conclusion

The question of transferability of the Japanese paradigm and whether or not it could be a third form of organizing labor and production entails complex issues and ramifications. While fairness, rationality and integration are identified as important norms for the new model to work meaningfully, a recognizable decay in management authority and effectiveness in the Western business culture, as suggested by significant social distance between assembler and supplier, is problematic. Japan is also found to be re-examining its own paradigm in adaptation to change. The dynamic and complex nature of the issues concerned warrants further discussion and examination.

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FIGURE 1. PROFIT SHARING

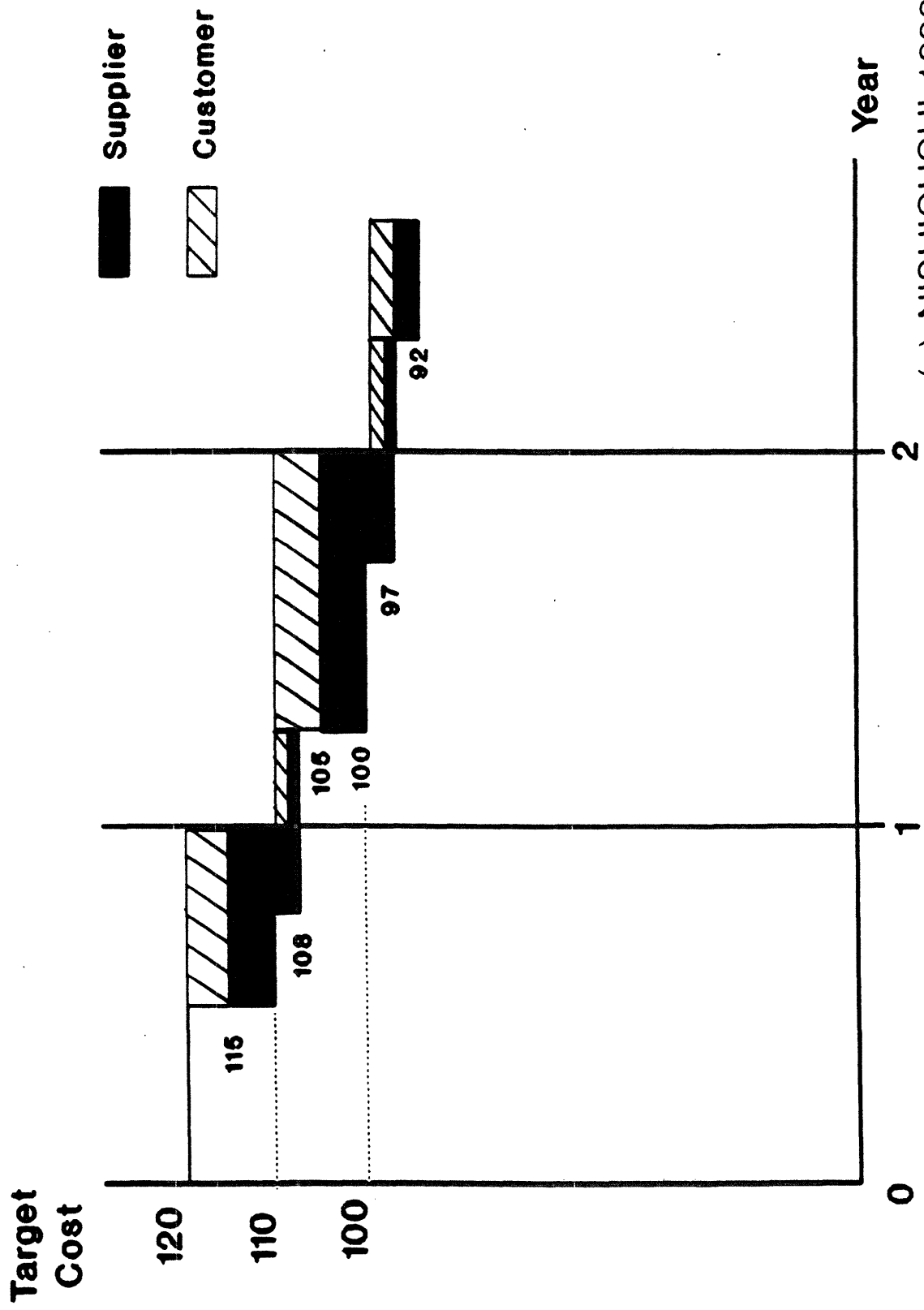


FIGURE 2. EVALUATION OF ASSMBLERS

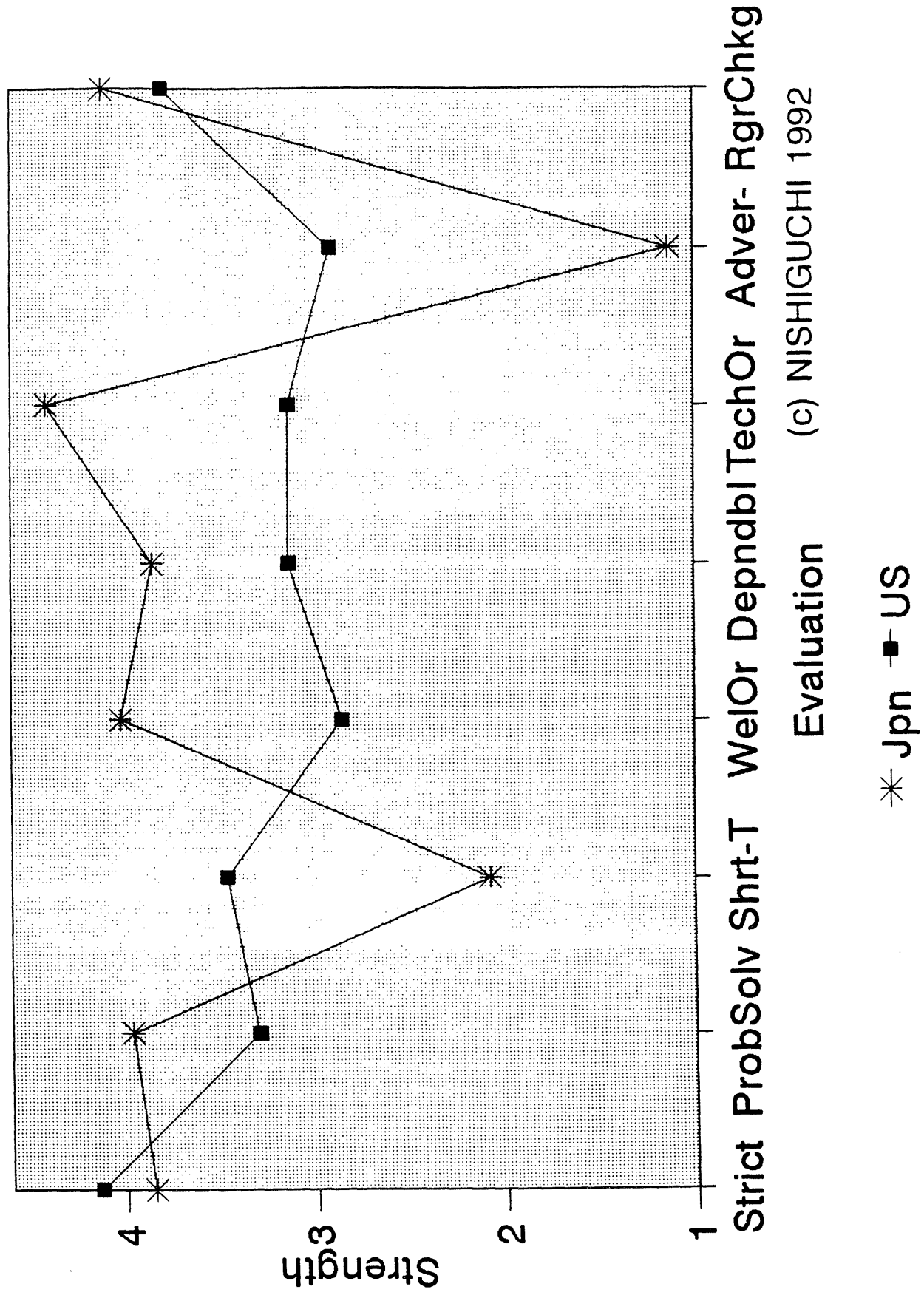


FIGURE 3. EVALUATION OF SUPPLIERS

