

15. Decision-making and multi-phase socio-technical adaptations in Chinese industrial organizations

Abstract

This paper summarizes the main findings from a longitudinal research project on organizational decision-making and new technology. This organizational decision-making is characterized by power shifts across organizational levels as well as among different management groups. It could also be seen as a multi-phase power distribution while socio-technical adaptation was achieved. Some theoretical and methodological considerations of research on cross-cultural decision-making are highlighted.

Introduction

Since China adopted an 'open-door' policy and launched its economic reforms program in 1978, nationwide organizational reforms have taken place in compensation systems, personnel systems and the management system as a whole. This resulted in a pressing need for a more scientific and democratic decision-making procedure for Chinese organizations and management (Wang 1993). A number of studies on organizational decision-making and participation have been conducted in Chinese enterprises (e.g., Lockett 1983, Laaksonen 1988, Wang 1989, Wang 1992). From 1986 to 1993, a longitudinal joint research project on organizational decision-making, industrial relations and new technology was developed and implemented by a research team coordinated by Frank Heller from the Tavistock Institute of Human Relations in the United Kingdom, and

Zhong-Ming Wang from the Hangzhou University of China. The project was partially sponsored by the British Council and partially supported by the Chinese State Education Commission. This project focused on the organizational decision-making patterns, power structures and new technology in eleven Chinese companies and ten British ones from the longitudinal perspective, so as to formulate a cross-cultural model of organizational decision-making and propose effective organizational and managerial strategies. In discussing the influence and power-sharing in organizational decision-making, Heller and Wilpert (1980) distinguish three levels of analysis: (1) macro-level analysis, concerning country context; (2) meso-level analysis, dealing with industrial sectors and dominant technology; and (3) micro-level analysis, examining individual, task and organizational features. This provides a general framework for analyzing patterns of organizational decision-making. This paper summarizes some findings on the dynamics of decision-making power shifts and the process of socio-technical adaptation in decision-making. It also discusses the theoretical and methodological implications of these issues in relation to the current developments in international joint ventures and economic reforms in China.

Chinese management systems and current reform

In considering patterns of organizational decision-making and the socio-technical features of Chinese organizations, some important characteristics of management structures and practices need to be mentioned. In most Chinese industrial organizations, there are three systems influencing decision-making: (1) the factory management responsibility system; (2) the Communist Party organizations; and (3) trade unions and Workers' Congress. As opposed to the two basic systems in the West: management and trade unions. However, the hierarchical management structure is quite similar across different cultures: (1) ordinary worker; (2) first-line supervisor; (3) middle manager; (4) top

management; and (5) level above plant (industrial bureaus in China). There are also trade unions within the companies and external groups such as banks or other governmental agencies who may influence organizational decision-making.

After 1949, and especially since 1978, the 'director management system' consisting of Party leadership with trade union participation has been the major management structure in Chinese organizations. A popular concept and major nationwide industrial practice in Chinese management was 'two-way participation' which consisted of workers participating in medium- and long-term decision-making of top management and managers/supervisors participating in the short-term decision-making on daily tasks at shopfloor level. This proved to be successful in promoting management, technical innovation and work motivation (Wang 1991). Nationwide decentralization and participation in managerial decision-making have enhanced the formation of new organizational structures in Chinese enterprises. In the last 15 years, Chinese management systems reforms have gone through four stages. (1) An experimental stage (1979–83) of decentralising some management power to enterprises such as management power concerning reward systems. (2) An expansion stage (1983–5) of trying out various management responsibility systems in some large- and medium-sized enterprises and giving the decision-making power to enterprises in ten areas such as production, sales, product pricing, disposal of assets, organization, personnel decisions, and monetary incentives. (3) A stage of management systems reforms (1986–91) realizing the implementation of contract management responsibility systems in about 90 percent of large- and medium-sized enterprises under the 1988 'Enterprise Law'. (4) A stage of managerial operation, mechanism transformation and legalisation (1992–4). This is a stage of implementing the 1992 'Regulations of changing the management mechanism', the 1993 'Trade Union Law' and the 1993 'Decision on the establishment of a socialist market economic structure' to fully delegate various decision-making powers and responsibilities to State-owned enterprises in all management

areas, especially in some major managerial operations such as import and export, investment, after-tax profits distribution, joint-ventures, merging, labour recruiting, and wage systems. These reforming activities led to significant increases in output values, profits and taxes in enterprises. Some major new initiatives of management reforms include (a) separating management power from ownership, (b) changing management into shareholding and contract systems and (c) developing international management functions.

The Chinese trade unions and Workers' Congress have actively participated in democratic management. The focus of participation shifts from workers' daily interests (e.g. housing, bonus/benefits) to higher level participation in management selection, production planning, investment evaluation, and upholding the legitimate rights and interests of the workers and staff. These structural factors have profound impact on organizational decision-making patterns in Chinese organizations.

Given the tradition of group work and the early practice of 'two-way participation' in industries, participative management would result in positive psychological effects, such as improving togetherness and the quality of supervisor-subordinate relationships, enhancing a sense of mastery and organizational commitment, and increasing performance. This was shown both in recent organizational reforms involving the application of new technology, as well as in the establishment of director responsibility contract systems.

Decision-making power shifts and participation

In recent years, much attention has been paid to participative decision-making and leadership skills, both in Chinese managerial practice and organizational studies. Organizational decision-making and participation form an important area in industrial and organizational psychology (e.g., Heller and Wilpert 1980, IDE research group 1981, Hickson et al 1986, Chen 1986, Wang 1989). In general, decision-making tasks could be classified into three categories: (1) long-term decisions, concerning long-term

development of the organization, for instance, large investments, new product development and major technological innovations; (2) medium-term decisions, relating to actions or changes at the departmental level, for example, departmental personnel selection, wage and bonus systems, work analysis and production procedures; and (3) short-term decisions, concerning daily tasks of employees, such as working conditions, task assignments, etc. It is useful to investigate general decision-making patterns underlying different types of decision-making tasks across various organizational levels. As the relationship between management and trade unions is crucial to the effectiveness of leadership in the organization, and because the differences in their perceptions of sharing influence and power may affect the coordination between these two groups, it is important to obtain and compare their views about the decision-making patterns and power structures in relation to different types of decision tasks, i.e., long-, medium- and short-term decisions. The results of our recent studies demonstrated that participative decision-making had positive effects on management effectiveness, and that there were clear shifts of decision-making power across organizational levels and among different decision tasks (Wang and Heller 1993).

Power shifts across organizational levels

The influence distribution across organizational levels strongly characterizes the typical decision-making pattern in the Chinese organization. The decision-making power of short-term decision-making tasks was more often located at middle and top management levels. For medium-term decisions, decision-making power had a similar pattern. For the long-term decision tasks, the level above plant was much more powerful while the external groups also possessed more power. In general, there was a shift of decision-making power from middle and top management levels having power over short-term decisions towards the level-above-the-plant (e.g., industrial bureaus) having power over medium-term decisions, and towards the trade union and the external groups

(e.g., banks) having power over long-term decisions.

Power Shifts between Management and Trade Unions

The results of perceptions of management and trade unions concerning their decision-making power indicated that there was small disagreement in perceptions of decision-making power between Chinese managers and trade union representatives. They seemed to have common objectives and interests in achieving organizational effectiveness. They work closely with each other and both are part of the management responsibility system. It was expected that the differences in perceptions of decision-making power would affect subsequent decision-making behaviors in the organizations. Chinese trade unions apparently had more influence on long-term decisions than on short- and medium-term decisions. A power shift, from a more decentralized power pattern in short-term decisions to a more centralized pattern in medium- and long-term decisions, was found.

The styles of managerial decision-making differed for different decision-making tasks. The participative decision-making style was found to be related to the decision-making tasks concerning the department and employees, whereas decisions related to subordinates were more centralized (IDE research group, 1981; Wang 1989). Managers generally have positive attitudes toward participation and change. The main reason for participation is to improve communication and motivation. It was also shown that workers generally had a high need for participation in organizational decision-making and that participative decision-making had positive effects on management practices (Wang 1989).

Multi-phase power structure and socio-technical adaptation

Power distribution in four decision-making phases

The pattern of organizational decision-making was also strongly affected by the rapid changes

in the social and economic environment. The changes stemming from the technological innovations and social-economic reforms have been characterized as significant trends toward diversity and complexity, autonomy and competition, internationalization and information-based decision-making. As part of the aforementioned joint research project, the distribution of influence on decisions among different groups in different decision phases was investigated from a longitudinal perspective using the influence-power-continuum. The decision-making tasks concerned with technical changes have four phases: (1) introduce the new technology, (2) consider different alternatives, (3) choose the specific kind of technology, and (4) implement the new technology.

The results from eight Chinese companies (four manufacturers, two national banks, one joint venture hotel and one insurance company) indicated that a hierarchical structure of influence distribution dominated almost all four phases of decision-making, which was compatible with the structure of responsibility in organizations. Specifically, the Chinese worker, foreman and middle management tended to have more influence in the first three phases. In phase 4, the Chinese top management's influence was significantly higher and the representative body appeared to have less influence. Therefore, the decision-making process in Chinese organizations showed a centrally controlled tendency in phase 4 with a wider distribution of influence over lower-level groups in other phases, especially in phase 3. An analysis of influence changes over decision-making phases showed significant changes of influence over phases. The highest scores were found in phase 4. These were significantly different from the other three phases, with no differences found between phases 1, 2, and 3. This highlights the importance of implementation as an integrated phase of decision-making. There was a tendency towards redistribution of influence over decision-making phases, particularly in phase 4 where large influence transfers from top management towards other organizational groups occurred. The phase-lagged interrelationships of influence between top management and subordinates revealed that high in-

fluence of top management in decision phase 1 had a negative impact on participation of worker, foreman and representative body in decision phase 2, whereas the influence of top management in phases 2 and 3 had positive correlation with the worker's influence in phase 4.

Socio-Technical Adaptation in Joint Venture Decisions

By the end of 1993, more than 150,000 multinational joint-ventures had been established in China. The focus of international human resource management shifted from traditional topics such as internal selection and rewards to concepts like globalisation, power, technological innovations and strategy. In three recent field research projects, Wang (1992, 1994) investigated the management and decision-making patterns among 65 Chinese-foreign joint ventures and found that the transformation and establishment of joint-venture organizations did not automatically lead to the compatibility of decision-making styles between partners in the joint venture. However, the results showed that the development of Chinese-foreign joint ventures had provided a strong momentum for technological innovation and hence to multi-phase socio-technical adaptation. Many companies (e.g. WuXi Medical Firm) started introducing new technology in order to improve production and marketing. But managers soon realized that the traditional organization of the State-owned company did not fit the requirements of the new technology in terms of management styles, flexibility, delegation and skills. With a significant progress in developing new products, actions were taken to achieve better socio-technical adaptation, e.g., to develop the company into a real Chinese-American joint venture, so that an overall organizational change could be implemented and a more effective management system could be established. The new organizational structure and management styles in the joint venture then created a positive organizational decision-making mechanism for a higher-level technological innovations. This was also the case in a Chinese-Italian Joint Venture in Hangzhou

where negotiations started with introducing Italian shoe design and technology and ended up with an adaptive joint venture organization, now among China's top ten most profitable Joint Ventures.

While many overseas managers adopted a certain task-oriented 'one-man' leadership style, i.e., making decisions by themselves and implementing the decisions mainly through line-managers, most Chinese managers were more relationship-oriented and task process-oriented in decision-making. Many joint-ventures had their 'manager office meeting' once a week to make managerial decisions, adopting a form of collective decision-making. In fact, our field survey showed that decision-making styles in joint-ventures were strongly affected by management traditions of managers' home countries. For instance, in one Chinese-Japanese joint-venture, ahierarchical management decision-making procedure was introduced, whereas in a small joint-venture with Taiwan, a family style of decision-making was adopted. The overseas partners generally had more say over long-term decisions, while Chinese partners had a stronger influence on medium- and short-term decisions. In some joint-ventures under the 'one company, two management systems' condition (both joint-ventures and non-joint-ventures), an interactive decision-making became crucial for successful management.

Methodological considerations for cross-cultural decision-making research

Cross-cultural studies can result in highly comprehensive understanding of organizational behavior if they are conducted by a cross-national research team. The Chinese part of the joint research project focused on the organizational decision-making in eleven Chinese companies (seven from the manufacturing industry and four from the service industry). The companies under investigation were from different industries in the southeastern part of China. Field interviews, questionnaire surveys and in-depth ideographic case analyses were used in the data collection. Both executive managers and trade union leaders participated

in the study. The questionnaire instrument was adapted from a previous twelve country study (IDE research group, 1981) to include short-, medium- and long-term decisions.

Instrument development and adaption

In using a cross-cultural research instrument, the following modifications were made to adapt it to the Chinese situation: (1) Parallel translations and team modification. First, two researchers translated the instrument into Chinese and a third researcher checked the translation. Then, a joint meeting was held by Chinese researchers and foreign collaborators to discuss and modify the two versions of the instrument and finalize the Chinese version of measures. (2) Item screening and modification. The contents of items needed to be modified to suit the local cultural context. For instance, one of the long-term decisions in our research was 'decision on dismissing a substantial number of employees' which was not applicable to the Chinese management situation. It was replaced in the Chinese version with a 'decision on important welfare issues such as assigning housing' which is a significant aspect of working life in Chinese organizations.

Multi-method approach in decision-making studies

The constructs in the measures and instruments need to be tested using multiple methods such as questionnaire, interviews, in-depth ideographic case analysis, and group feedback analysis (Heller 1969). The group feedback analysis was especially effective in terms of construct validation and hypothesis testing in the cross-cultural context. In order to examine the dynamic process of organizational decision-making and socio-technical adaptation, a longitudinal perspective was adopted in case analysis and decision-making phase analysis.

Theoretical Implications for Decision-making and Competence Utilization

An important result of this research was that decision-making power is contingent upon several organizational factors, such as the type of

decision-making tasks, management systems, industry and ownership. The decision-making power pattern is dynamic rather than static. While decision-making tasks and management systems can be seen as micro- and meso-organizational factors, type of industry and ownership are more macro-organizational factors. In short-term decisions concerning daily management activities, task uncertainty is relatively low, so that micro- and meso-organizational factors play a more important role than macro-organizational factors. Here, task uncertainty is a lack of information about future events so that alternatives of decisions and their outcomes are unpredictable. The decision-making power for short-term decisions was found to be located at the middle- and top-levels in the Chinese companies. When decision-making tasks were more important and concerned medium-term and even long-term interests of the organizations, this resulted in much higher task uncertainty. To cope with the increased task uncertainty, the macro-organizational factors can exert more influence on decision-making and change the power pattern in decision-making. The higher level groups then shared more power in organizational decision-making, which causes the power in decision-making to shift towards higher organizational levels. Notice that in the Chinese industries, this power shift was relatively moderate: while top and middle management remained their high power in decision-making, the level above plant and other groups gained more power in decision-making. It was, to some extent, a 'non-zero-sum game' in which the increments of one group's power did not result in decrements of another group's power, rather than a 'zero-sum game' which was found abroad (IDE research group, 1981). We can assume that macro-organizational factors (e.g., different ownership) affected the nature of power shifts in decision-making in organizations.

Effective decision-making strategies for socio-technical adaptation in Chinese organizations

In improving the quality of organizational decision-making and managing industrial organizations, it is important to take the effects of

power shifts in decision-making into consideration, especially in joint ventures where there are more interactions among different cultural factors and managerial styles. Several managerial strategies have been proposed to promote socio-technical adaptation in relation to organizational decision-making (Wang 1992):

(1) Personnel strategy, focusing on employees' values, cross-cultural interaction skills and competence utilization, so as to achieve compatibility in values and decision-making styles. This strategy includes various kinds of management development programmes, adaptive rewards and career development schemes.

(2) System and structural strategy, aiming at structural management compatibility across organizational levels. This could include interventions such as establishing formal decision-making networks, constructing decision support systems, and setting up new mechanisms for coordination among management departments.

(3) Participation and organizational strategy, emphasizing group responsibility and organizational culture through participative decision-making. This strategy could largely modify the locus of decision-making and power sharing, and lead to high-level skill utilization.

References

- Chen, L. New directions in managerial psychology. *Chinese Journal of Applied Psychology*, Vol.1, No.1, 1986.
- Heller, F.A. Group feedback analysis: A method of field research. *Psychological Bulletin*, 72, 108–117, 1969.
- Heller, F.A. and B. Wilpert. *Competence and power in managerial decision-making*. New York: Wiley, 1980.
- Hickson, D.J., R.J. Butler, D. Cray, G.R. Mallory and D.C. Wilson. *Top decisions: Strategic decision-making in organizations*. San Francisco: Jossey-Bass Publishers, 1986.
- IDE research group. *Industrial democracy in Europe*. Oxford: Clarendon Press, 1981.
- Laaksonen, O. *Management in China: During and after mao*. Berlin: Walter de Gruyter, 1988.

- Lockett, M. Organizational democracy and politics in China. In C. Crouch and F.A. Heller (Eds.), *International yearbook of organizational democracy, Volume 1: Organizational democracy and political processes*. London: Wiley, 1983.
- Wang, Z.M. Participation and skill utilization in organizational decision-making in Chinese enterprises. In B.J. Fallon, H.P. Pfister and J. Brebner (Eds.), *Advances in industrial organizational psychology*, pp. 19–26. Amsterdam: Elsevier Science Publishers B.V., 1989.
- Wang, Z.M. Recent developments in industrial and organizational psychology in people's republic of China. In C. Cooper and I.T. Robertson (Eds.), *International review of industrial and organizational psychology*. London: Wiley, 1991.
- Wang, Z.M. Managerial psychological strategies for Chinese-foreign joint-ventures. *Journal of Managerial Psychology*, Vol. 7, No. 3, pp. 10–16, 1992.
- Wang, Z.M. Culture, economic reform and the role of industrial and organizational psychology in China. In M.D. Dunnette and L.M. Hough (Eds.), *Handbook of industrial and organizational psychology*, Vol. 4, 2nd ed., Consulting Psychologists Press, Inc, 1993.
- Wang, Z.M. and F.A. Heller. Patterns of power distribution in managerial decision-making in Chinese and British industrial organizations. *International Journal of Human Resource Management*, Vol. 4, No. 1, pp. 113–28, 1993.
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