

Group Decision Making Characteristics in Korean Business Firms*

In Keun Chung

《目 次》

I . Introduction	IV . Research Model
II . Group Decision Making	1. Group Decision Making Model
1. Decision Making and the Process	2. Measuring the Decision Outcome
2. Characteristics of Group Decision Making	V . The Results
III . Factors Influencing Group Decision Making	1. Group Decision Making Behavior
	2. Group Decision-Making and Information Technology
	VI . Conclusions

I . Introduction

Individuals and groups routinely make decisions in any organizations. As the organizational environments become more complicated, group decision making is preferred because various information and expertise can be shared in addition to a synergy effect. It is generally known that managers spend some 25 ~ 50% of their time for communication through meetings(Mintzberg, 1983). A lot of research focused on improving the efficiency and effectiveness of decision making in all levels and functional areas of organization(Gallupe et al., 1988; Zigurs et al., 1988; Nunamaker et al., 1989(a, b)).

Several group decision making techniques have been developed such as brainstorming, the nominal group technique and the delphi method(Delbecq et al., 1975), but group decision making is not without negative dysfunctions such as air time fragmentation, attention blocking, concentration blocking, free riding and dominance by a

* Professor of Business Administration, Hankuk University of Foreign studies

few(Nunamaker et al., 1991). Research on the composition of the group, decision making process, characteristics of group, and so on have been performed and recently research on Group Decision Support Systems(GDSS) have been conducted extensively in the United States to improve group performance and simultaneously minimize dysfunctions(Steeb & Johnston, 1981; Lewis, 1982; Huber, 1984; Zigurs et al., 1988; Connolly et al., 1990; Eom, 1996; Ocker et al., 1996).

As these researches had been mostly conducted in the United States assuming American group decision making culture, it is very doubtful whether we could transfer group decision support tools in Korea and have desirable results. Because there is no research and basic understanding about group decision making in Korean business firms yet, we do not know whether characteristics of group decision making in Korea are culturally different from the ones in a western country, not to mention the applicability of information technologies in group decision making. Therefore, the purpose of this study is to empirically explore the peculiar characteristics and dysfunctional behavior of group decision making in unique cultural environments in Korea. To characterize group decision making, size, cohesiveness and performance of a group, functions of the leader, the group process and characteristics of group tasks have been studied.

II . Group Decision Making

1. Decision Making and the Process

Because decision making is the most important attribute in management functions, its nature should be properly understood to perform management functions successfully. Although decision making capabilities of managers could be limited at best, still the performance of managers would be evaluated in terms of decision making aspect of how effectively and efficiently resources are deployed to achieve the objectives of their organizations.

Decision making is a process of choosing the best alternative rationally among available ones(Barnard, 1938. There are many types of decision making in organizations. It is normally classified into individualistic vs. organizational, routine vs. nonroutine, formal

vs. informal, structured vs. unstructured, and certainty vs. uncertainty.

Decision making is a process which is composed of a series of activities, not a single and static activity. Lack of understanding of the decision making process and lack of knowledge and experiences on decision making techniques tend to lead to organizational inefficiencies and degradation in performance.

Dewey(1933) divided the process of decision making into three states; the first state is the collision and resolution stage, the second is the stage of arranging various opinions and the last one is the selection stage of an optimal solution and the finishing process. Simon(1961) also suggested a three level model, that is, intelligence, design, and choice. Mintzberg, et al.(1976) empirically studied the processes of decision making in real organizations and then suggested a model which is consisted of several steps; define the problem, search and develop alternatives, evaluate and select, implement the solution, and review and control.

2. Characteristics of Group Decision Making

A group is a meeting of two or more interdependent and interacting individuals who pursue common objectives(Szilagyi & Wallace, 1983). A group has group cohesiveness(Hicks, 1972), shared sentiments, common attitudes, and common goals(Deese, 1964). Groups can be classified by the existence of official authority, or characteristics of group members. Groups can be formal/informal, or apathetic /erratic/strategic/conservative.

Groups make decisions just like individuals do but through team efforts in order to solve problems. Individual and group decision making each has its own strengths. Neither mode of decision making is ideal for all situations. Introducing a group technique is based on the assumption that group decision making is superior to individual decision making. Most organizations are utilizing committees or various types of meetings for planning and implementing large projects. Group decision making portrays positive effects(process gains) such as synergy effect, precision, increased capability of solving problems, group learning, sound judgement, creativeness, risk taking, and higher motivation among members (Manners, 1975; Shaw, 1981; Nemeth, 1986; Maier, 1980; Gallupe et al., 1991;

Robbins, 1989).

The major disadvantages of group decision making (process losses) are as follows (Manners, 1975; Stoner, 1961; Robbins, 1989; Gallupe et al., 1991; Nunamaker et al., 1991). It takes much time to assemble a group and to adjust available speaking time among members. Thus, groups take more time to reach a conclusion than would be the case of individual decision making. There is also concentration blocking which members cannot think of new ideas and make fewer comments because they tend to concentrate on listening others' comments. Attention blocking is another problem, which new ideas are not generated because members think about what they are going to say when there are disputes. Free riding is frequently observed in groups which members become dependent on others when faced with tough problems. Group discussion can also be dominated by one or a few members. Another process loss is conformance pressure. The desire of group members to be accepted or considered as an asset to the group could result in squashing any overt disagreement, thus encouraging conformity despite different viewpoints. Because there are many people in a group, responsibility is dispersed and individuals in the group do not have a sense of responsibility on the decision outcomes and also it is hard to impose any responsibility to any individual.

III . Factors Influencing Group Decision Making

Research on decision making in organizations has been conducted from two different points of view. One is to discover the common behavioral tendencies which many people convey in most decision making situations, and another one is to identify factors which influence the process of decision making. Some of the relevant factors in decision making are; decision making environments, characteristics of the problems, the decision makers, decision making process and decision outcomes (Reitz, 1981).

The characteristics of decision makers are self-respect (Ryckman et al., 1972), dogmatism (Schultz & Divesta, 1972), age (Brinley et al., 1974), sex (Schwartz & Fattaleh, 1972), and others. The characteristics of problems are novelty, uncertainty, complexity and appropriateness (Reitz, 1981). Time pressure is a typical factor influencing group

decision making among environmental factors(Wright, 1974). Research on group decision making also revealed factors influencing group decision making such as group's cohesiveness(Murnighan, 1981; Nunamaker, 1989), types of communication(Numamaker et al., 1991; Nunamaker et al., 1989), leadership(Bales, 1950) and size of a group(Shaw, 1981; Cummings et al., 1974; Manners, 1975; Hare, 1976; DeSanctis & Gallupe, 1987).

When the cohesiveness of a group is high, group members tend to be more enthusiastic about the group action have more communication, and have a higher level of satisfaction(Shaw, 1981). A high cohesive group tends to show a normative conformance behavior and higher level of satisfaction, but not necessarily performance enhancement. Even though the level of cohesiveness is high, the productivity would be decreased if the objectives of the group do not coincide with the ones of individuals.

The size of decision making groups influences the process of decision making(DeSanctis & Gallupe, 1987; Cummings et al., 1974; Manners, 1975). When a few aggressive members dominate group discussions, the rest feel threatened and dissatisfied. The larger the group, the lower the cohesiveness(Thomas & Fink, 1963), the more diverse the objectives of the group(Hare, 1976; Shaw, 1981), the larger the potential conflicts. As the the size of a group influences group processes and outcomes, understanding and determining appropriate size of a group is a serious matter.

Communication is the process of integrating and coordinating various functions of management by sending and receiving information. Communication has intimate relationships to decision making, the structure of organizations, motivation, group dynamics, leadership, organizational culture and organizational development(Gibson et al., 1973).

A leader's role is discussed in relation to group decision making. Necessary functions for a leader as suggested by Maier(1980) are; perceive provided information well, acknowledge member's contribution without much criticism, summarize diverse opinions and stimulate exploratory behavior of group members, recognize members' problems, and provide appropriate information to members.

IV. Research Model

1. Group Decision Making Model

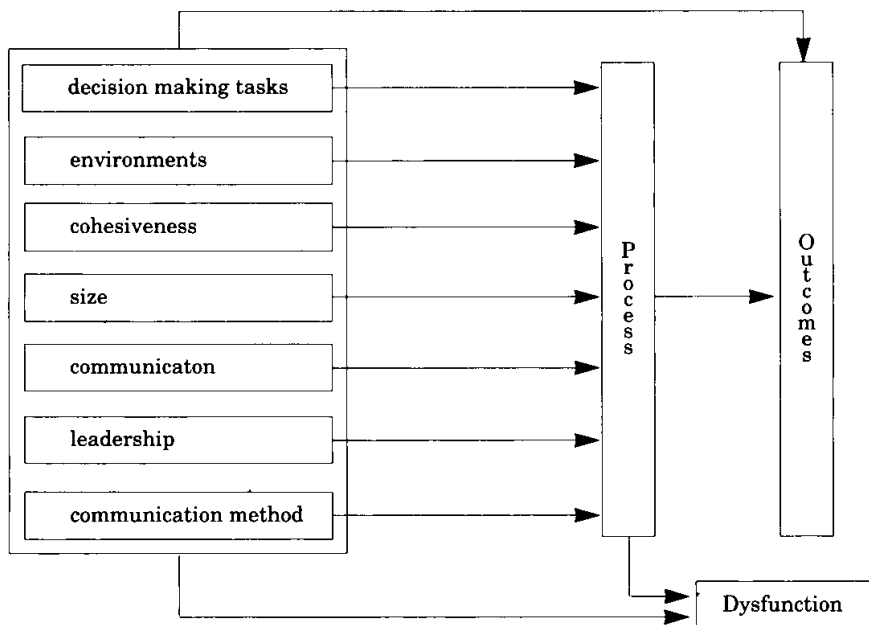
A research model was developed based on the literature for this exploratory study for group decision making in Korea. Factors influencing decision making suggested in the literature are decision making environments, decision making problem, decision maker and decision making process. Prior researches on group decision making which utilized information technologies chose communication(Nunamaker et al., 1991; Nunamaker et al., 1989), leadership(Bales, 1950) and group size (Cummings et al., 1974; Mantei, 1989) as research variables.

This paper selected characteristics of group tasks, decision making environments, cohesiveness, size, characteristics of communication, and role of a leader as independent variables based on the prior research. And communication method may be verbal or the use of information technology as a medium. These factors may directly effect decision outcomes or indirectly through the decision making process, and some dysfunctional behavior may be generated.

2. Measuring the Decision Outcome

There are quantitative methods and qualitative methods to measure decision making performance. In group decision making, group members' subjective satisfaction level is generally used as a surrogate measure for the performance. Jarvenpaa(1988) used the following to measure the performance of group decision making.

- ① Satisfaction on the outcomes-How much satisfaction do they have on the outcome of the meeting?
- ② Achivement of objectives - How much did you achieve the task objectives?
- ③ Agreement on opinions - How much did they agree among the group members?
- ④ Equality of participation - How much did they participate in the meeting?
- ⑤ Equity-How much time did each of the member have for their discussion?



<Figure 1> Group Decision Making Model

Gallupe et al.(1988) used similar questions to evaluate the level of satisfaction of decision making.

- ① How much do you feel satisfaction on the final solution to the task?
- ② How much do you rely on the final solution?
- ③ How difficult was the task to be solved?
- ④ How strongly did you feel conflicts among the members?

In this research, these questions are used to measure the decision outcome.

V . The Results

1. Group Decision Making Behavior

400 questionnaires were sent and 44 returned with a response rate of 11%. The sample companies are classified into 5 categories of business; 5 financial/banking(18.2%), 10 systems integration(22.7%), 5 retailing/service(11.4%), 15 manufacturing/construction

(34.1%), and 6 public institutes/research laboratories(15.7%). All the sample companies are big corporations. The analysis was undertaken in two parts. The first part contains descriptive analyses of group decision making characteristics and the second one deals with correlation analyses of the research variables.

1) Reliability analysis

Before the analysis, Cronbach alpha was calculated to examine the reliability of the measurement tool. Nunnally(1969) said that Chronbach alpha should be at least 0.6 for a developmental research and 0.7 for a confirmatory research. Because this study is basically exploratory in nature, the Chronbach alpha should be at least 0.6. Some variables are excluded to enhance the value of Cronbach alpha to a satisfactory level(Table 1). And Table 2 shows correlation among the variables used in the study.

The factors excluded are as follows;

- cohesiveness → difficulty to obtain membership(COH3)
- communication → hugeness of communication contents(COM4)
 - proximity(COM9)
- satisfaction → difficulty of tasks(RST6)

Variables;

1. decision making task-novelty	2. decision making task-uncertainty
3. decision making task-complexity	4. decision making environment(time)
5. cohesiveness	6. communication
7. leadership	8. group size
9. decision making process	10. decision making outcome

2) Descriptive analyses

(1) Types of group

There are four types of groups; departmental meetings, task force teams, project teams and committees. In the case of official departmental meetings, the average number of groups is 12 and the average number of members per group is 18. But average number of other types of groups is less than 5 with an average membership of less than 10. Departmental meetings are maintained permanently due to their official nature. But the

<Table 1> Reliability of the Measurement Tool

variables	before deletion	after deletion
1) cohesiveness	0.5862	0.6910
Deleted Factor	Correlation with Total	Alpha
COH1	0.318579	0.544009
COH2	0.353383	0.527860
*COH3	0.008389	0.691026
COH4	0.521372	0.437808
COH5	0.591231	0.380699
2) communication	0.5114	0.6467
Deleted Factor	Correlation with Total	Alpha
COMM1	0.592530	0.359175
COMM2	0.160243	0.501483
COMM3	0.077574	0.525616
*COMM4	-.118242	0.579134
COMM5	0.354850	0.440867
COMM6	0.376722	0.433709
COMM7	0.413925	0.421370
COMM8	0.444106	0.411206
* COMM9	-.116542	0.578690
COMM10	0.090861	0.521800
3) leadership	0.7902	
4) communication	0.8646	
5) outcome	0.5700	0.7207
Deleted Factor	Correlation with Total	Alpha
RST1	0.562896	0.448099
RST2	0.299195	0.530536
RST3	0.553355	0.451256
RST4	0.315749	0.525648
RST5	0.358963	0.512710
* RST6	-.474332	0.720724
RST7	0.195245	0.560385
RST8	0.339013	0.518715
RST9	0.423246	0.492984

* : deleted factors

<Table 2> Decriptive Statistics

var.	mean	std	CH-alpha	1	2	3	4	5	6	7	8	9
1	3.59	0.76	N/A									
2	3.30	0.76	N/A	.29*								
3	3.43	0.87	N/A	.03	.12							
4	2.61	0.89	N/A	.04	-.07	-.29*						
5	3.53	0.69	.6910	.28***	.12	.07	.17					
6	3.26	0.47	.6467	.38**	.13	-.13	.43***	.54***				
7	3.55	0.62	.7902	.32**	.22	.13	.14	.53***	.64***			
8	9.37	6.61	N/A	.09	-.18	-.10	.17	-.04	-.03	.06		
9	3.54	0.67	.8646	.34**	.06	-.03	.45***	.62***	.69***	.62***	.02	
10	3.39	0.49	.7207	.53***	.06	-.08	.33**	.66***	.64***	.65***	.00	.64***

N = 44, *: p < .10, **: p < .05, ***: p < .01

average life of the other groups is less than one year indicating that these groups are dynamically organized and disappeared.

Average age of the group members is mid 30' s except the case of committees(the average age is 41. This seems due to the fact that high ranking officials generally participate in the committees, and other groups seem to be working groups for specific tasks.

Organizations do not give high marks to the groups they are running, and there are no significant differences in the importance scale among different types of groups.

(2) Group decision making problems & Environments

Since the process of decision making starts from the point of perceiving a problem, a proper amount of attention should be given to the characteristics of decision making task itself and the decision making environments. The characteristics of decision making tasks are explained with novelty, uncertainty, appropriateness and complexity of the task(Reitz, 1981) and time pressure is the most important factor for decision making environments(Wright, 1974).

Survey results show that group tasks seem to be generally noble, uncertain and complex. Also appropriateness of tasks is relatively high, and time pressure for decision making seems to be high.

(3) Cohesiveness and Size of the groups

Cohesiveness is measured with the level of interactions, external threats, cooperation and enthusiasm of the members. The survey shows a rather high level of cohesiveness. It seems that group members frequently interact and actively participate in the group process and are cooperative. Since the external pressures and threats are comparatively low, it seems that these factors are not very serious ones for improving the group cohesiveness.

Average number of group members is 9~10 with a wide distribution of between 3 and 32 members. Groups with 5 members are the most prevalent. Attendance rate is generally greater than 80%. It seems that high level of cohesiveness and high attendance rate go together.

(4) Communication

Communication is measured with clarity, consistency, process rules, focus, rationality, paying attention to other members, use of jargon, bias due to specialization, proximity and work load of the members. Survey shows that precision, clarity, consistency and acceptance of communication are rated high, and less than 50% of the responding organizations are managing the meetings according to specific rules and guidelines. But excessive burden from workload seems to inhibit them from actively participating in the meetings.

(5) Leadership

Group leaders are overwhelmingly chosen by the rank(84.2%) followed by natural selection(6.8%) and voting(4.5%). In only a few cases, experts lead meetings. If it is necessary to dynamically form a group and choose a leader for the group due to profound changes of business environments, there seems to be a need for a change of selection method of leaders.

Functions of leaders are measured with stimulating others, acknowledging achievement, attending to members' problems and providing information. According to our survey, respondents generally evaluate their leaders positively, especially in stimulating members and providing information.

(6) Group decision making process

The decision making process is investigated with the levels of efficiency, cooperation, equity, understandability of the process, satisfaction and punctuality. Understandability of the process is very high(3.73) followed by the level of cooperation(3.68). The levels of efficiency and equity are relatively high(3.45 and 3.48 respectively), but the satisfaction level on the process is comparatively low(3.35) and meeting schedules seem to be less punctual.

Traditional interaction technique(3.5) and brainstorming technique(3.4) are most widely used, and a relatively small number of groups utilize nominal group technique and delphi. Although the quality of the usage of these techniques is not known because the survey did not cover how these techniques were actually used following the guidelines, a mix of interactive group technique and brainstorming seems to be most popular.

(7) Satisfaction level on group decision making

The level of satisfaction is measured with the levels of satisfaction on the result, attainment of goal, degree of consensus, equity, reliability of the result, dogmatism, conflicts, and members' intention to work again with the same group.

Reliability of decision outcome shows the highest mark(3.64) followed by the reliability of the result(3.64), degree of consensus(3.41) and attainment of goal(3.39). And the level of conflicts is low(2.66) and the level of equity also seems to be relatively low(3.23). People generally would like to work together with the same members in the future again, which may indicate a high level of implicit satisfaction on the group and the group process.

(8) Dysfunction

The following dysfunctions are surveyed; air time fragmentation, attention blocking, concentration blocking, coordination problems, conformance pressure, free riding, domination by a few, cognitive inertia and dependence on seniors. The most serious problems in Korean groups are coordination problems(3.77) and dependence on seniors(3.66). The fact that seniors tend to lead the group decision making might result in the high level of dependence. Low air time fragmentation is ascertained by the equity and equality found in the previous analysis of satisfaction. Attention blocking and concentration blocking seem not to be serious and free riding and cognitive inertia also

should not be neglected.

3) Correlation analyses

This section tries to find possible inter-relationships among the factors through correlation analyses of various variables shown in Figure 1. Figure 1 shows four paths how group decision making factors affect decision making outcome and dysfunctions as follows;

- ① Group decision making factors → decision making process → satisfaction(indirect effects)
- ② Group decision making factors → satisfaction(direct effects)
- ③ Group decision making factors → decision making process → dysfunction(indirect effects)
- ④ Group decision making factors → dysfunction(direct effects)

(1) Decision making factors and decision making process

Figure 3 shows the correlation of group decision making factors with the process and the outcome. The decision making process has positive relationships with time pressure, level of cohesiveness, level of communication and capability of the leader. Among the characteristics of decision making problems, only the novelty of decision making tasks turns out to be significantly related with the process and the outcome, and complexity and uncertainty do not seem to affect the decision making process and the outcome. The size of group also does not have any relationship with the decision making process.

(2) Group decision making factors and decision making outcome

According to Table 3, factors which seemingly impact the decision outcome are exactly the same as those found for decision making process. This means that decision making factors have direct impact on the outcome not through the decision making process. Therefore, it is possible to suggest that group decision making factors affect the decision outcome directly, and among these factors novelty, time pressure, cohesiveness, level of communication and leadership are most significant.

Additional analysis has been conducted on the group size. As shown in Table 4, the size of group does not have any significant relationship with the decision making process and the level of satisfaction of the group members. Only the attendance rate has significant

<Table 3> Correlation of decision making factors with process/outcome

	Decision making task			time pressure	cohesiveness	communication	leadership	group size
	novelty	uncertainty	complexity					
process	0.3353**	0.0605	0.0284	0.4494***	0.5928***	0.6922***	0.6247***	0.0183
outcome	0.5933***	0.1206	-0.1036	0.3557**	0.6757***	0.6864***	0.6795***	0.0477

<Table 4> Correlation of Size and Attendance Rate with Process and Satisfaction

	process	satisfaction
group size	0.0183	0.0310
attendance rate	0.1749	0.2698*

relationship with the level of satisfaction.

There are contradictory arguments about the proper size of a group. Some suggest that the size of a group must be three to five for effective decision making, but Cummings et al.(1974) insist that there are not any relationship between the size of group and the level of satisfaction, and if there exists any relationship at all, significance level would be very low. Nunamaker et al.(1989) argue that the size of group depends on contingency factors(decision making tasks, characteristics of group, and information technology) in the case of utilizing information technology. So a temporary conclusion can be made such that the size of group does not affect the level of group members' satisfaction.

(3) Group decision making factors and Dysfunction

Leadership, communication and cohesiveness affect most dysfunctions according to the analysis of the relationship between the group decision making factors and nine dysfunctions(Figure 5). Therefore, it is necessary to promote cohesiveness and more communication among the members, and the leader should play its role properly to minimize dysfunctions in group decision making. Also novelty and complexity of decision making tasks seem to be contributing factors to dysfunction. Therefore, it is possible to suggest that group decision making factors affect dysfunction directly, and leadership, communication and cohesiveness have greater impact on dysfunctions. The novelty and

<Table 5> Correlation of Decision Making Factors with Dysfunction

dysfunction	decision making task			time pressure	cohesiveness	communication	leadership	group size
	novelty	uncertainty	complexity					
1	.0180	-.2217	-.1889	-.0818	-.2646*	-.1388	-.3706**	.0588
2	-.0542	-.1252	-.1975	-.1162	.0258	-.1241	-.1902	-.1700
3	-.1343	-.1239	-.0580	.0192	-.0282	-.0820	.0091	-.1316
4	.0376	.1209	.2623	-.2401	-.1945	-.2410	-.1406	.0114
5	-.0815	-.0714	-.1481	-.0695	-.1246	-.0642	-.1452	-.1854
6	-.3181**	-.0852	-.0143	-.0588	-.2653*	-.3599**	-.2710*	.0137
7	-.2136	-.0900	.0466	-.2358	-.2777*	-.5625***	-.4463***	-.1579
8	-.1587	.1072	-.2507*	.0584	-.1235	-.3309**	-.2448*	.0630
9	-.1155	-.0936	-.1125	-.2430	-.634	-.2774*	-.3727**	

* : P < 0.10, ** : P < 0.05, *** : P < 0.01

complexity of the task also may lead to dysfunction.

Dysfunction:

- 1: air time fragmentation 2: attention blocking 3: concentration blocking
 4. coordination problems 5: conformance pressure 6: free riding
 7: domination 8:cognitive inertia 9: dependence on seniors

(4) Decision making process and satisfaction

The level of satisfaction and dysfunction are correlated depending on the quality of decision making process. As group decision making process and the level of satisfaction have a high level of correlation(coefficient = 0.62), it can be interpreted that the level of satisfaction is getting higher if group decision making process is proper and positive. But only two items among the dysfunctions, which are free riding and domination by a few, show significant relationship with decision making process(coefficient is -0.33 respectively). This means that if the decision making process is properly managed, free riding and domination could be reduced significantly. This will probably lead to a higher level of equity and equality.

2. Group Decision-Making and Information Technology

As the information technologies(IT) have been rapidly developing, the number of

individuals, groups, and organizations which utilize IT are increasing.

There have been continuous research and development efforts for decision support systems for years by scholars and practitioners. And recently research on group decision support systems have been widely conducted to facilitate effective group decision making with the help of IT so that performance and satisfaction of groups may be enhanced. Jarvenpaa, et al.(1988) claimed that information sharing and performance are enhanced when group decision making is supported by a GDSS, particularly for unstructured tasks, compared to a traditional group decision making without computer support. There is a research which indicates that using a kind of groupware(eg., networked workstations, electronic blackboard etc.) is much more effective than a low-tech conference. However, other studies suggest rather a negative and inconclusive picture of groupware's usefulness. Watson, et al.(1988) found that groups with computer support lack in reaching a group consensus and equality compared to groups with only conventional paper and pencil support. Similarly, in a series of experiments with distributed groups, both Turoff & Hiltz(1982) and Siegel, et al.(1986) found that because participants in groups with computer support engage in fewer verbal communications, they tend to spend more time to reach a conclusion and the level of consensus is lower than when no computer support was available.

The current status of IT utilization in Korean corporations and its implications are follows.

About 48% of the responding companies were not using IT in communications. The reasons why they do not introduce IT are 'lack of basic computer equipment,' 'no needs for IT,' and 'inconvenience of IT.' Because there is no response for 'reluctance of employees' and there are only two responses for 'inconvenience of IT' compared to face to face communication, it seems that almost all the groups have already recognized the efficiency and effectiveness of IT and seem to be ready to utilize IT in group decision making and communications. E-mail is most widely used followed by EDI, and a very few cases of video conferencing for group decision making are found.

Diverse methods are used for communication in organizations. Verbal, telephone, paper and E-mail are almost equally widely used for communications. E-mail is used at a

comparable ratio with the other conventional ways of communication such as verbal, paper and telephone. It will become much more important in the future judging from the fact that E-mail has been introduced in Korean companies relatively recently.

Benefits of utilizing IT are surveyed. Time savings and paper reduction are the most important benefits followed by clarity of messages. But there is only one response to 'anonymity.' We might tentatively conclude that anonymity may not be regarded as an important and necessary feature in our culture as is in the west, or benefit of anonymity can not be realized with the current technology implemented in Korean companies. Therefore, a more careful study on the issues of desirable features of group support systems including anonymity should be conducted in the future.

VI. Conclusions

As the organizational environments are changing rapidly and uncertainty is increasing, much attention has been given to improving the effectiveness and efficiency of decision making in organizations. On the other hand, it is true that we do not know much about group decision making in our specific cultural environments, because there is virtually no comprehensive and practical research on the status and behavior of group decision making in Korean business firms. This research is an empirical and exploratory study to lay a foundation for future research in this area. It is necessary to understand cultural differences of Korean businesses in group decision making and communication in order to successfully introduce various IT and group decision support systems in our culture.

This paper describes characteristics of group decision making in Korean companies and explores relationships among the variables studied. These are described with some characteristics of group tasks, time pressure, cohesiveness of a group, size of a group, level of communication, leadership, decision making process and the level of satisfaction on the group process as a whole. In addition group dysfunctions are studied. Departmental meetings which follow the formal structure of organizations are the most prevalent. There are less number of task force teams and committees than expected.

Decision making variables have direct and indirect relationships with the group

decision making process, satisfaction level and dysfunctions as summarized in the following.

- ① group decision making factors → satisfaction(direct effects)
- ② group decision making factors → dysfunction(direct effects)
- ③ group decision making factors → decision making process → satisfaction(indirect effects)
- ④ group decision making factors → decision making process → dysfunction(indirect effects)

It seems that there is potential of utilizing IT for effective group decision making. Although only some 50% of surveyed companies are using IT for communications, a foundation for IT utilization and group support systems research is laid down.

There are some obstacles, such as conventional business practices preferring verbal communications and the culture which prefers face to face communication especially between high and low ranking personnel. And also low level of information utilization by employees and lack of standardization hinder the proliferation of IT in business organizations.

It is suggested to conduct a comparative study between IT-based companies/groups and other conventional ones. Also GDSS research which incorporates our cultural characteristics should be performed to effectively and efficiently introduce information technologies in the group process.

References

- Bales, R. *Interaction Process Analysis: A Method for the Study of Small Group*, New York: Addison-Wesley, 1950.
- Barnard, C.I. *The Functions of the Executives*, Cambridge, Mass.: Harvard Press, 1938.
- Brinley, J.F., T.J. Jovick, & L. M. McLaughlin, "Age, Reasoning, and Memory in Adults," *Journal of Gerontology*, Vol.25, March 1974, pp.182-189.
- Connolly, Y.L., L.M. Jessup, & J. S. Valacich, "Effects of Anonymity and Evaluative Tone on Idea Generation in Computer-Mediated Groups," *Management Science*, Vol. 36, No.

- 6, June 1990, pp.689-703.
- Cummings, L.L., G.P. Huber, & E. Arendt, "Effects of Size and Spatial Arrangements on Group Decision Making," *Academy of Management Journal*, Vol. 17, No. 3, 1974, pp.460-475.
- Deese, J. *Principles of Psychology*, Boston: Allen & Bacon, 1964.
- Delbecq, A.L., A.H. Van de Ven, & D.H. Gustafson, *Group Techniques for Program Planning: A Guide to Nominal Group and Delphi Processes*, Glenview, Ill: Scott, Foresman & Co., 1975.
- Dewey, J., *How We Think*, Boston: Health, 1933.
- Gallupe, R.B., Bastianutti, L.M. & Cooper, W.H. "Unblocking Brainstorms," *Journal of Psychology*, Vol. 76, No. 1, 1991, pp.137-142.
- Gallupe, R.B., G. DeSanctis, & G.W. Dickson, "Computer-Based Support Problem Finding: An Experimental Investigation," *MIS Quarterly*, Vol. 12, No. 2, June 1988, pp.277-298.
- Gibson, J.L., J.M. Ivancevich, & J. Donnelly, Jr., *Organizations: Structure, Processes, Behavior*, Dallas: Business Publications, Inc., 1973.
- Hare, A.P. *Handbook of Small Group Research*, New York: Free Press, 1976, adapted from D. Cartwright, & A. Zander, *Group Dynamics*, New York: Haper Row, 1968.
- Hicks, H.G. *The Management of Organizations*, Tokyo: McGraw-Hill Kogakusha, 1972.
- Huber, G.P. "Issues in the Design of Group Decision Support Systems," *MIS Quarterly*, September 1984, pp.195-204.
- Jarvenpaa, S.L., Rao, V.S. & Huber, G.P. "Computer Support for Meetings of Groups Working on Unstructured Problems: A Field Experiment," *MIS Quarterly*, Vol. 12, No. 4, December 1988, pp.645-666.
- Lewis, F.L. "Facilitator: A Micro-Computer Decision Support System for Small Groups," unpublished Ph.D. dissertation, University of Louisville, 1982.
- Maier, N.R. F. "Assests and Liabilities in Group Problem Solving: The Need for an Integrated Function," in D. Mankin, R.E. Ames, and M.A. Grodsky(eds), *Classics of Industrial and Organizational Psychology*, Moore Publishing Company, Inc. 1980.
- Manners, G.E., Jr. "Another Look at Group Size, Group Problem Solving, and Member Consensus," *Academy of Management Journal*, Vol. 18, No. 4, 1975, pp.715-724.

- Mantei, M. "Observation of Executives Using a Computer Supported Meeting Environment," *Decision Support Systems*, Vol. 5, 1989, pp.153-166.
- Mintzberg, H., D. Raisinghani, & A. Theoret, "The Structure of Un-structured Decision Processes," *Administrative Science Quarterly*, June 1976, pp.246-275.
- Mintzberg, H. *The Nature of Managerial Work*, New York: Harper & Row, 1983.
- Murnighan, J.K. "Group Decision Making: What Strategy Should You Use?," *Management Review*, February 1981, pp.55-62.
- Nemeth, C.J. "Differential Contributions if Majority and Minority Influence," *Psychology Review*, Vol. 93, No. 1, 1986, pp.23-32.
- Nunnally, J.C. Jr., *Tests and Measurements: Assessment and Prediction*, New York: McGraw-Hill, 1969.
- Nunamaker, J.F. Jr., A.R., Dennis, J.S., Valacich, D.R. Vogel, & J.F. George, "Electronic Meeting Systems to Support Group Work," *Communications of the ACM*, Vol .34, No. 7, July 1991, pp.40-61.
- Nunamaker, J.F. Jr. "Experience with and Future Challenges in GDSS(Group Decision Support Systems): Preface," *Decision Support Systems*, Vol. 5, 1989, pp.115-118.
- Nunamaker, J.F. Jr., D., Vogel, A. Heminger, & B. Martz, "Experiences at IBM with Group Support Systems: A Field Study," *Decision Support Systems*, Vol. 5, 1989a, pp.183-196.
- Nunamaker, J., D. Vogel, & B. Konsynski, "Interaction of Task and Technology to Support Large Groups," *Decision Support Systems*, Vol. 5, 1989b, pp.139-152.
- Reitz, H.J. *Behavior in Orgazations*, rev. ed., Homewood, Ill.: Richard D. Irwin, Inc., 1981.
- Robbins, S.P., *Organization Behavior*, 4th ed, Englwood Cliffs, NJ: Prentice-Hall, 1989.
- Ryckman, R.M. & W.C. Rodda, "Confidence, Maintenance, and Performance as a Function of Chronic Self-Esteem, and Initial Task Performance," *Psychological Record*, Vol. 22, Spring 1972.
- Schultz, C.B. & F.J. Divesta, "Effects of Expert Endorsement of Beliefs on Problem Solving Behavior of High and Low Dogmatics," *Journal of Educational Psychology*, Vol. 63, No. 3, 1972, pp.194-201.
- Schwartz, S.M. & D.L. Fattaleh, "Representation in Deductive Problem Solving: The Matrix," *Journal of Experimental Psychology*, Vol. 95, October 1972, pp.343-348.

- Shaw, M.E. *Group Dynamics: The Psychology of Small Group Behavior*, 3rd ed., New York: McGraw-Hill, 1971.
- Siegel, J., V., Dubrovsky, S. Kiesler, & T.W. McGuire, "Group Processes in Computer-Mediated Communication," *Organizational Behavior and Human Processes*, Vol. 37, 1986, pp.157-187.
- Simon, H.A. *Administrative Behavior*, New York: Macmillan, 1961.
- Steeb, R. & S.C. Johnston, "A Computer-Based Interactive System for Group Decision Making," *IEEE Transactions on Systems, Man and Cybernetics*, August 1981, pp.544-552.
- Szilagyi, A.D. & M.J. Wallace, *Organizational Behavior and Performance*, 3rd ed., Glenview, Ill: Scott, Foresman and Co., 1983.
- Thomas, E.J. & C.J. Fink, "The Effects of Group Size," *Psychological Bulletin*, Vol. 60, 1963, pp.371-384.
- Turoff, M. & S.R. Hiltz, "Computer Support for Group versus Individual Decisions," *IEEE Transactions on Communications*(Com-30:1), January 1982, pp. 82-90.
- Watson, R.T., G.DeSanctis, and M.S. Poole, "Using a GDSS to Facilitate Group Consensus: Some Intended Consequences," *MIS Quarterly*, September 1988, pp.463-477.
- Wright, P. "The Harassed Decision-Maker: Time Pressures, Distractions, and the Use of Evidence," *Journal of Applied Psychology*, Vol. 59, No. 5, 1974, pp.555-561.
- Zigurs, I., M.S. Poole, & G. DeSanctis, "A Study of Influence in Computer-Mediated Communication," *MIS Quarterly*, Vol. 12, No. 4, December 1988, pp.625-644.